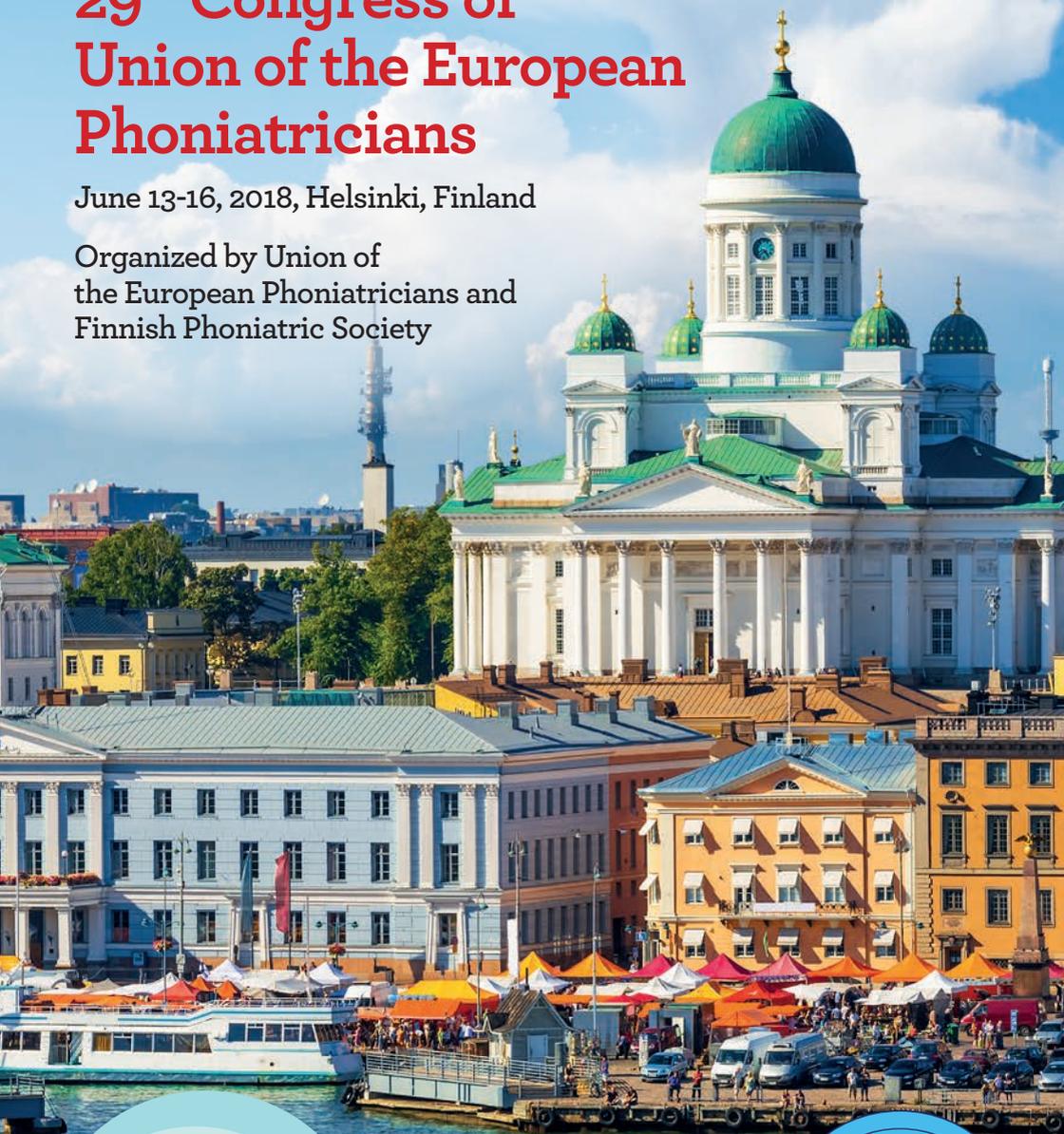


# 29<sup>th</sup> Congress of Union of the European Phoniatricians

June 13-16, 2018, Helsinki, Finland

Organized by Union of  
the European Phoniatricians and  
Finnish Phoniatric Society



Program and  
abstract book



# Welcome

## WELCOME TO HELSINKI AND THE 29<sup>TH</sup> UEP CONGRESS.

While writing this welcome message to our participants, it came to my mind how challenging and pleasant the arrangement of this congress has been to the members of the organizing committee and to me. UEP congresses always give the feeling of meeting your extended family, and we are always happy to meet our old friends and make new ones.

This time we are happily in Helsinki, Finland, also known as the happiest country in the world. This comes after 40 years from last time we hosted a UEP congress in Finland, and 70 years from the start of our specialty in this happy country.

We already crossed the number of 410 participants and this is, so far, the biggest number of participants achieved in any UEP Congress. Also, the diversity of countries from which our participants are coming is just showing another example of how International the UEP has become.

All this would not have been possible without the support of the Finnish organizing committee that exerted excellent effort for this meeting and its arrangement. I am very happy by the positive feedback we have been getting from colleagues on the rich program we have. I am indebted to the Faculty of the congress who worked hard to construct the wonderful scientific program that you will enjoy during the congress.

The commercial exhibition and sponsorship have been planned in an excellent spirit of scientific responsibility and friendship. I am thankful to all our sponsors and exhibitors for their cooperation.

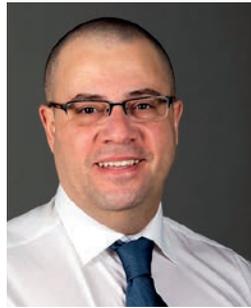
Thanks also to the Federation of Finnish Learned Societies, City of Helsinki and Finair for their support. The congress bureau Confedent proved again to be an excellent companion for arranging international congresses in Finland.

Poster tours are designed to draw attention to the posters. Kindly find information on them in this program book. The congress also includes an Art Gallery with installation (Vocological studies), please try to pass by, I am sure you will like it.

I know that the timetable is tight, and the program is rich. However, the venue is chosen just to make you close to the Senate Square, market place and of course to the sea breeze. Try to take a quick visit during the busy program. Also, do not forget to try the Finnish sauna, a wonderful experience by itself.

So again, welcome to happy Finland, it is a pleasure to meet you here.

Ahmed Geneid  
President of the 29th UEP Congress  
Head of the Department of Phoniatics  
Helsinki University Hospital and University of Helsinki



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# Welcome

## DEAR COLLEAGUES, DEAR FRIENDS

It is a great pleasure to see the prospering of the Union of the European Phoniatrians, UEP, with more than 320 members from four continents. Our main task is to bring together colleagues from all countries who have put the European model of Phoniatics into practice. Besides solving professional problems, the UEP aims at scientific cooperation and the exchange of expert knowledge and clinical experience in close collaboration with the European Academy of Phoniatics, EAP, its new President Prof. Tadeus Nawka and his team. Together with the European Union of Medical Specialists we will do further work on training programs and training standards.

It makes me very happy and proud that, in the forefront of the congress in Helsinki, the Congress President Assoc. Prof. Ahmed Geneid and his team already have managed to attract about 410 registrations. An overwhelming multitude of abstracts was submitted. Congratulations!

Let us gratefully and festively celebrate – together with all our interdisciplinary friends – this upcoming congress, 40 years since the Finnish Phoniatrians Association hosted the last UEP Congress in Finland and let us celebrate 70 years of Phoniatics in Finland.

Cordially, yours,  
Prof. Antoinette am Zehnhoff-Dinnesen, President of UEP

## DEAR FRIENDS,

The medical specialty of Phoniatics in Europe is almost 120 years old. In Finland it is 70 years old. Our history is the history of great personalities, e.g. Hermann Gutzmann sn, who had the vision and the means to make the plans true. In Finland one of the great persons was Professor Aatto Sonninen who was active in the phoniatic science as well as in making international connections. Thanks to him and his colleagues, our Phoniatic Society was born in January 1972 and the previous UEP congress in Finland was held in Jyväskylä in 1978.

Since the 1978 UEP congress, the number of phoniatic professionals has grown greatly and the variety of the disciplines in our phoniatic teams has become wide. Still, our specialty is small in terms of the number of medical doctors specialized in it. We definitely need international co-operation to develop the phoniatic science and treatment for the best of our patients.

Welcome to Helsinki and let us learn to know and learn from each other!

Mari Qvarnström, MD, Ph.D., Phoniatician  
President of the Finnish Phoniatic Society  
Head of the phoniatic department of Kuopio University Hospital



## FINNISH ORGANIZING COMMITTEE

President of the Congress:  
*Ahmed Geneid*

Treasurer of the Congress:  
*Teemu Kinnari*

Secretary of the Congress:  
*Anu Jyrkkä*  
*Miia Ruuskanen*

Scientific Program Committee:  
*Mari Qvarnström*  
*Erkki Vilkman*  
*Juha Vintturi*  
*Sanna Häkli*  
*Marja Asikainen*  
*Kerttu Huttunen*  
*Leenamajja Kleemola*

Social Program Committee:  
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*Annika Laaksonen*  
*Eija-Riitta Lauri*  
*Jonna Kuuskoski*

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Representative of UEP members of the Middle East  
Prof. *Nasser Kotby*, Egypt

Representative of UEP members in Russia, former Soviet Republics and Asian-Pacific Region  
Assoc. Prof. *Ekaterina Osipenko*, Russia

# Partner Organizations

## THE ORGANIZING COMMITTEE

is thankful to the organizations below for the help they offered in the organization of the scientific program and/or the announcement of the congress to their members.



**THE FINNISH SOCIETY FOR LARYNGOLOGY**



KORVA-, NENÄ- JA KURKKUTAUDIT  
- PÄÄN JA KAULAN KIRURGIA RY



# EACCME Accreditation

## THE 29<sup>TH</sup> CONGRESS OF THE UNION OF THE EUROPEAN PHONIATRICIANS

Phoniatrics: The Medical Specialty of Communication and Swallowing, Helsinki, Finland, 13/06/2018-16/06/2018” has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with **20 European CME credits** (ECMEC®s).

Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits. Information on the process to convert EACCME® credit to AMA credit can be found at [www.ama-assn.org/education/earn-credit-participation-international-activities](http://www.ama-assn.org/education/earn-credit-participation-international-activities)



# Information

## REGISTRATION DESK OPENING TIMES

**HELSINKI UNIVERSITY GREAT HALL, Aleksanterinkatu 5**  
Wednesday 13.6. 16.00-19:00

## VENUE

**MARINA CONGRESS CENTER, Katajanokanlaituri 6**  
Thursday 14.6. 7:30-17:30  
Friday 15.6. 8:30-17:30  
Saturday 16.6. 8:30-13:00

## INSURANCE AND LIABILITY

The Congress organizers cannot accept liability for personal injuries sustained, for loss of, or damage to property belonging to participants (or their accompanying persons), either during or as a result of the Congress. The registration fees do not include insurance of any kind so please check the validity and coverage of your own travel insurance.

## IMPORTANT NUMBERS

General emergency number 112  
Helsinki taxi booking +358 100 0700

## WI-FI

Marina Congress Center features complimentary wireless internet access (“scandic\_easy”) in all the public and conference areas as well as hotel Scandic Gran Marina. No password is required. To log in, select “Click to Connect”, then use your name and phone number and accept the terms of use before you Click to Connect.

## MEETINGS OF THE UEP BOARD AND COMMITTEES

**PLACE:** meetings are to be held in Meeting room 4

<b>14.6.2018</b>	Educational committee of phoniatrics of the IALP .....	13:30-14:30
	Voice Committee .....	15:00-16:00
	UEP Board Meeting .....	17:00-18:00
<b>15.6.2018</b>	Swallowing Committee .....	07:00-08:30
	Language Speech Literacy Committee .....	13:45-14:30
<b>16.6.2018</b>	Hearing Committee .....	10:15-11:15

## FACULTY OF THE 29TH UEP CONGRESS

### A

Leena-Maija Aaltonen *Finland*  
 Antti Aarnisalo *Finland*  
 Tamer Abou El Saad *Egypt*  
 Sevtaç Akbulut *Turkey*  
 Wael Al-Dakrouy *Saudi Arabia, UK*  
 Samirah Al-Ghamdi *Saudi Arabia*  
 Rana Alkhamra *Jordan*  
 Antoinette Am Zehnhoff-Dinnesen *Germany*

Wolfgang Angerstein *Germany*  
 Terhi Ansamaa *Finland*  
 Helene Antoine *Belgium*  
 Minna Apajalahti *Finland*  
 Eva Arkkila *Finland*  
 Perttu Arkkila *Finland*  
 Marja Asikainen *Finland*  
 Safinaz Azab *Saudi Arabia*

### B

Doris-Eva Bamiou *UK*  
 Jose Juan Barajas de Prat *Spain*  
 Samia Bassiouny *Egypt*  
 Michael Benninger *USA*  
 Erika Biavati *Italy*  
 Hakan Birkent *Turkey*  
 Jörg Bohlender *Switzerland*  
 Meike Brockmann-Bauser *Switzerland*  
 Eleonora Bruni *Italy*

### C

Eugenia Chavez *Mexico*  
 Mathias Colpaert *Belgium*  
 Lise Crevier-Buchman *France*

### D

Ana Danic Hadzibegovic *Croatia*  
 Felix De Jong *Belgium*  
 Michel de Kort *Netherlands*  
 Philippe DeJonckere *Belgium*  
 Gilles Delahaut *Belgium*  
 İter Denizoglu *Turkey*  
 Gauthier Desuter *Belgium*  
 Dirk Deuster *Germany*  
 Jakub Drsata *Czech Republic*

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Brigitte Eisenwort *Austria*  
 Martine Elie *USA*  
 Leena Ervast *Finland*

### F

Jérôme Farinas *France*  
 Daniele Farneti *France*  
 Secundino Fernandez *Spain*  
 Pascale Fichaux Bourin *France*  
 Hanna Freiberg *Finland*  
 Franco Fussi *Italy*

### G

Donna Geffner *USA*  
 Ahmed Geneid *Finland*  
 Alain Ghio *France*  
 Antoine Giovanni *France*  
 Pedro Gómez Vilda *Spain*  
 Markus Gugatschka *Austria*

### H

Tamas Hacki *Hungary*  
 Liyan Han *China*  
 Ramil Hashimli *Azerbaijan*  
 Ramón Hernández Villoria *Venezuela*  
 Markus Hess *Germany*  
 Irena Hocevar Boltezar *Slovenia*  
 Sofia Holmqvist *Finland*  
 Kerttu Huttunen *Finland*  
 Sanna Häkli *Finland*

### I

Taru Ilmarinen *Finland*

### J

Bertrand Joly *France*  
 Anu Jyrkkä *Finland*  
 Pia Järvenpää *Finland*

### K

Kristel Kalling *Estonia*  
 Natallia Kanoika *Belarus*  
 Yakubu Karagama *UK*  
 Sergey Karpishchenko *Russia*  
 Irina Katsarava *Georgia*  
 Erna Kentala *Finland*  
 Robert Kesmarszky *Hungary*  
 Teemu Kinnari *Finland*  
 Norbert Kleinsasser *Germany*  
 Tuomas Klockars *Finland*  
 Joanna Kosonen *Finland*  
 Nasser Kotby *Egypt*  
 Peter Kummer *Germany*  
 Sari Kunnari *Finland*

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Marja-Leena Laakso *Finland*  
 Marja Laasonen *Finland*  
 Pekka Lahti-Nuuttila *Finland*  
 Lou-Ann Land *USA*  
 Anne-Maria Laukkanen *Finland*  
 Miika Leminen *Finland*  
 Matthias Leonhard *Austria*  
 Sari Levänen *Finland*  
 Jacob Lieberman *UK*  
 Per-Åke Lindestad *Sweden*  
 Maria Andrea Lopez Salcedo *Spain*  
 Soile Loukusa *Finland*  
 Ulrika Löfkvist *Norway*

### M

Hans Mahieu *Netherlands*  
 Elina Mainela-Arnold *Finland*  
 Jean-Paul Marie *France*  
 Mari Markkanen-Leppänen *Finland*  
 Silvia Martinez *USA*  
 Ana Martínez Arellano *Spain*  
 Anita McAllister *Sweden*  
 Mieke Moerman *Belgium*  
 Staffan Morén *Sweden*  
 Rodica Elena Muresan *Romania*  
 Dirk Mürbe *Germany*  
 Antti Mäkitie *Finland*  
 Sira Määttä *Finland*

### N

Tadeus Nawka *Germany*  
 Katrin Neumann *Germany*  
 Christiane Neuschaefer-Rube *Germany*  
 Elina Niemitalo-Haapola *Finland*  
 Johanna Nokso-Koivisto *Finland*

### O

Haldun Oguz *Turkey*  
 Ekaterina Osipenko *Russia*

### P

Leila Paavola-Ruotsalainen *Finland*  
 Judith Page *USA*  
 Lisa Popeil *USA*  
 Claus Pototschnig *Austria*

### Q

Alberto Quarello *Italy*  
 Mari Qvarnström *Finland*

### R

Leena Rantala *Finland*  
 Sabrina Regele *Germany*  
 Petri Reijonen *Finland*

Heikki Rihkanen *Finland*  
 John Rubin *Britain*  
 Anar Rustamov *Azerbaijan*  
 Miia Ruuskanen *Finland*  
 Kaarina Ruusuvirta *Finland*

### S

Nina Sajaniemi *Finland*  
 Eeva Sala *Finland*  
 Eva-Kristina Salameh *Sweden*  
 Wiebke Scharff- Rethfeldt *Germany*  
 Antonio Schindler *Italy*  
 Josef Schlömacher-Thier *Austria*  
 Berit Schneider-Stickler *Austria*  
 Jean Schoentgen *Belgium*  
 Mariam Shadi *Egypt*  
 Sini Smolander *Finland*  
 Suvi Stolt *Finland*  
 Deborah Swain *USA*

### T

Emel Cadalli Tatar *Turkey*  
 Rami Taulu *Finland*  
 James Thomas *USA*  
 Elin Thordardottir *Canada, Iceland*  
 Monika Tigges *Germany*  
 Dinara Toguzbayeva *Kazakhstan*  
 Louisa Traser *Switzerland*

### U

Virgilijus Ulozas *Lithuania*

### V

Sebastien Van der Vorst *Belgium*  
 Suvi Vehkavuori *Finland*  
 Erkki Vilkmán *Finland*  
 Taina Välimaa *Finland*

### W

Krista Wallenius *Finland*  
 Chrostopher Watts *USA*  
 Matthias Weikert *Germany*  
 Greta Wistbacka *Finland*  
 Virginie Woisard *France*  
 Bozena Woznica *Poland*

### Y

Reinaldo Yazaki *Brasil*  
 Kursat Yelken *Turkey*  
 Anneli Yliherva *Finland*

### Z

Patrick Zorowka *Austria*

# Sponsors & Exhibitors

The organizers of the 29th Congress of Union of The European Phoniaticians would like to warmly thank the following companies that have contributed to the success of the congress.

## GOLD SPONSOR



## SILVER SPONSOR



## EXHIBITORS



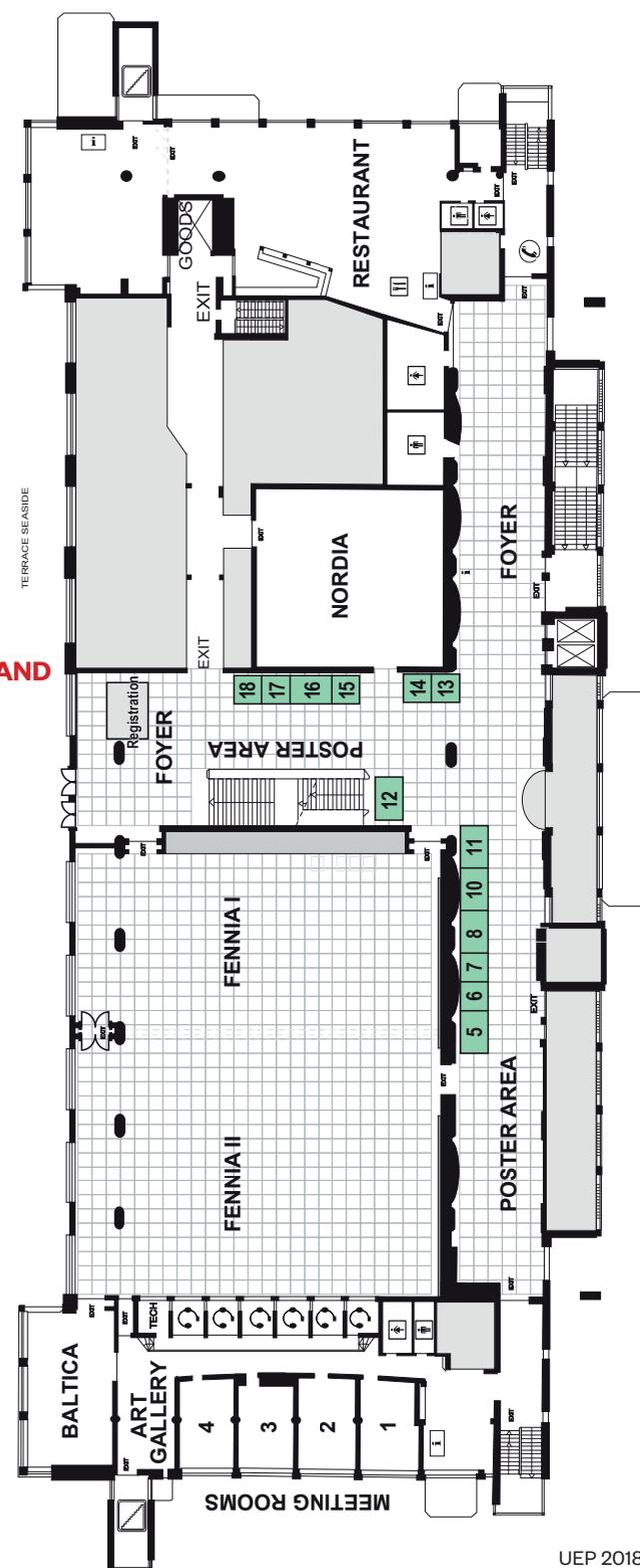
# Venue

## MARINA CONGRESS CENTER

Katanokanlaituri 6,  
00160 Helsinki

### ORGANIZATION STAND

- Olympus 5
- Aurimed As 6
- UEP 7
- FAHL 8
- Dual Laser Ltd Oy 10
- Oticon Medical 11
- Soluvos Medical BV 12
- A.R.C. Laser GmbH 13
- Xion GmbH 14
- Atos Medical 15
- Karl Storz Se & Co. Kg 16
- WEVOSYS 17
- Immuno Diagnostic Oy 18



VENUE

## Wednesday 13/6/2018

### Time

17:00-18:30 **Opening ceremony:** Helsinki University Great Hall, Aleksanterinkatu 5, Helsinki.

Walking to the City Hall, about 400 meters

19:00-20:30 **Get together,** Helsinki City Hall, Pohjoisesplanadi 11-13, Helsinki

## Thursday 14/6/2018

Time	Fennia 1	Fennia 2	Nordia	Baltica
8:30-9:15	KEYNOTE: CARE OF THE PROFESSIONAL VOICE			
9:15-9:30	Break			
9:30-11:00	ROUNDTABLE: MANAGEMENT OF BENIGN VOCAL FOLD LESIONS.	ROUNDTABLE: A MULTIDISCIPLINARY LENS ON DEVELOPMENTAL LANGUAGE DISORDER - HELSINKI LONGITUDINAL SLI STUDY (HELSLI)	ROUNDTABLE: FINDINGS OF ESSENTIAL INSTRUMENTAL ASSESSMENT OF SWALLOWING IN NORMAL AND DISTURBED CONDITIONS	RESEARCH FORUM ON TUBES AND HUMIDIFICATION IN VOICE THERAPY.
11:00-11:30	Coffee, Posters and Exhibition. Poster tours 1 and 2 from 11:00 to 11:20			
11:30-12:10	ROUNDTABLE: VOICE ERGONOMICS, WHAT IS NEW?	ROUNDTABLE: ARE PARENTS' AND PROFESSIONALS' PERCEPTIONS ON CHILD'S DEVELOPMENT CONGRUENT WITH EACH OTHER?	ROUNDTABLE: ASSESSMENT OF PEDIATRIC SWALLOWING DISORDERS, STATE OF THE ART (50 min)	RESEARCH FORUM: AUDIOLOGY
12:15-13:00		RESEARCH FORUM: NEW IN LARYNGEAL SURGERY AND INTUBATION	ROUNDTABLE: MANAGEMENT OF PEDIATRIC SWALLOWING DISORDERS, WHAT IS NEW? (40 min)	RESEARCH FORUM: ON SINGING, VOCAL TRACT AND REHABILITATION: WHAT IS NEW?
13:00-14:00	Lunch			
14:00-14:45	KEYNOTE: LANGUAGE DISORDERS AMONG MULTICULTURAL CHILDREN			
14:45-15:00	Break			
15:00-15:40	ROUNDTABLE: ALTERATION OF THE VOICE PITCH (60 min)	RESEARCH FORUM: ASSESSMENT AND MANAGEMENT IN MULTILINGUALISM	RESEARCH FORUM: SWALLOWING DIAGNOSTICS	RESEARCH FORUM: WHAT IS NEW IN VOICE AND LARYNGEAL SURGERY?
15:45-16:30	WORKSHOP: CLINICAL APPROACH OF VOICE PROBLEMS (30 min)	ROUNDTABLE: BEYOND THE IDENTIFICATION OF LANGUAGE IMPAIRMENT IN MULTILINGUAL CHILDREN: CURRENT ISSUES IN EFFECTIVE SERVICE DELIVERY	ROUNDTABLE: LOW DYSPHAGIA: ASSESSMENT IN A MULTIDISCIPLINARY PERSPECTIVE	ROUNDTABLE: LARYNGEAL LASER SURGERY AND ITS OUTCOMES ON VOICE
16:30-17:00	Coffee, Posters and Exhibition. Poster tours 3 and 4 from 16:30-16:50			
17:00-18:00	ROUNDTABLE: NEW FIELDS OF APPLICATION FOR ELECTRODIAGNOSTICS AND ELECTROTHERAPY	ROUNDTABLE: SPEECH AND LANGUAGE DEVELOPMENT IN CHILDREN WITH HEARING IMPAIRMENT	ROUNDTABLE: MULTIDISCIPLINARY TEAMS IN SWALLOWING CENTERS	WORKSHOP: USING YOUR EAR FOR ACCURATE DIAGNOSIS OF HOARSENESS WORKSHOP: APDVOICE - AN EASILY ONLINE AVAILABLE DATABASE SYSTEM FOR A PHONiatric CLINICS
18:00-18:45	GENERAL ASSEMBLY OF UNION OF THE EUROPEAN PHONiatricIANS			
19:00-23:00	Optional Social Program			

VOICE

SPEECH AND LANGUAGE

SWALLOWING

AUDIOLOGY

# Thursday 14/6/2018

## INVITED KEYNOTE SPEAKERS

HALL: FENNIA 2

**TIME**      **ABSTRACT HALL**  
**REFERENCE FENNIA 2**

8:30-9:15    **S074**      **CARE OF THE PROFESSIONAL VOICE, MICHAEL BENNINGER (USA)**  
Chair: Ahmed Geneid (Finland)

9:15-9:30    **Break**

14:00-14:45    **LANGUAGE DISORDERS AMONG MULTICULTURAL CHILDREN, ELIN THORDARDOTTIR (CANADA, ICELAND)**  
Chair: Dirk Deuster (Germany)

14:45-15:00    **Break**

## UEP GENERAL ASSEMBLY AND SOCIAL PROGRAM

**TIME**      **HALL**  
**FENNIA 1**

18:00-18:45    **General assembly of Union of the European Phoniaticians**

19:00-23:00    **Optional Social Program**

## FENNIA 1

**TIME**      **ABSTRACT HALL**  
**REFERENCE FENNIA 1**

9:30-11:00    **S157**      **ROUNDTABLE: MANAGEMENT OF BENIGN VOCAL FOLD LESIONS**  
Moderator: Teemu Kinnari (Finland)

Speakers:  
Michael Benninger (USA)  
Markus Hess (Germany)  
Heikki Rihkanen (Finland)  
John Rubin (UK)

With Keynote presentation by Norbert Kleinsasser, Management of Reinke edema with flaps (Germany)

11:00-11:30    **Coffee, Posters and Exhibition**  
**Poster tours 1 and 2 from 11:00 to 11:20**

11:30-13:00    **S066**      **ROUNDTABLE: VOICE ERGONOMICS, WHAT IS NEW?**  
Moderator: Leena Rantala (Finland)

Speakers:  
Leena Rantala (Finland)  
Sofia Holmqvist (Finland)  
Anita McAllister (Sweden)  
Eeva Sala (Finland)

13:00-14:00    **Lunch**

15:00-16:00    **S155 & S141**    **ROUNDTABLE: ALTERATION OF THE VOICE PITCH**  
Moderator: Teemu Kinnari (Finland)

Speakers:  
Teemu Kinnari (Finland)  
Gauthier Desuter (Belgium)  
James Thomas (USA)

With Keynote presentation by Dirk Deuster, Voice in female-to-male transsexuals  
**Deuster Dirk**, Peter Matulat, Antoinette am Zehnhoff-Dinnesen (Germany)

16:00-16:30    **S197**      **WORKSHOP: CLINICAL APPROACH OF VOICE PROBLEMS**

Speaker:  
Felix De Jong (Netherlands, Belgium)

16:30-17:00    **Coffee, Posters and Exhibition**  
**Poster tours 3 and 4 from 16:30-16:50**

17:00-18:00    **S192**      **ROUNDTABLE: NEW FIELDS OF APPLICATION FOR ELECTRO-DIAGNOSTICS AND ELECTROTHERAPY**  
Moderator: Berit Schneider-Stickler (Austria)

Speakers:  
Berit Schneider-Stickler (Austria)  
Claus Pototschnig (Austria)  
Markus Gugatschka (Austria)  
Virginie Woisard (France)

## FENNIA 2

TIME	ABSTRACT REFERENCE	HALL FENNIA 2
9:30-11:00	<b>S092</b>	<b>ROUNDTABLE: A MULTIDISCIPLINARY LENS ON DEVELOPMENTAL LANGUAGE DISORDER - HELSINKI LONGITUDINAL SLI STUDY (HELSLI)</b> Moderator: Marja Laasonen (Finland)  Speakers: Marja Laasonen (Finland) Eva Arkkila (Finland) Sini Smolander (Finland) Pekka Lahti-Nuuttila (Finland) Miika Leminen (Finland) Sari Kunnari (Finland)
11:00-11:30		<b>Coffee, Posters and Exhibition</b> <b>Poster tours 1 and 2 from 11:00 to 11:20</b>
11:30-12:10	<b>S035</b>	<b>ROUNDTABLE: ARE PARENTS' AND PROFESSIONALS' PERCEPTIONS ON CHILD'S DEVELOPMENT CONGRUENT WITH EACH OTHER?</b> Moderator: Kerttu Huttunen (Finland)  Speakers: Wiebke Scharff Rethfeldt (Germany) Elin Thordardottir (Canada, Iceland) Kerttu Huttunen (Finland)
12:15-13:00		<b>RESEARCH FORUM: NEW IN LARYNGEAL SURGERY AND INTUBATION</b> Chair: Hans Mahieu (Netherlands) Moderator: Sergey Karpishchenko (Russia)
12:15-12:30	<b>R096</b>	Keynote speaker Size does matter. First experiences in laryngological cases with a small 2.4 mm endotracheal tube <b>Hans Mahieu</b> , Derrek Heuveling, Jose van der Hoorn (Netherlands)
12:30-12:40	<b>R211</b>	Endoscopic management of Laryngotracheal Stenosis Using Diode Laser and Balloon Dilation Sergey Karpishchenko, Marina Ryabova, <b>Mikhail Ulupov</b> (Russia)
12:40-12:50	<b>R079</b>	Laryngeal Findings after Prolonged Endotracheal Intubation in adult patients Hatem Ezzeldin Hassan, <b>Ayman Mohamed Shawky</b> , Hossam Eldosouky, Mohamed Saud (Egypt and Saudi Arabia)
12:50-13:00	<b>R213</b>	Surgery of Laryngeal Cancer Using Diode Laser Sergey Karpishchenko, <b>Marina Ryabova</b> , Mikhail Ulupov (Russia)
13:00-14:00		<b>Lunch</b>

15:00-15:40		<b>RESEARCH FORUM: ASSESSMENT AND MANAGEMENT IN MULTILINGUALISM</b> Chair: Elina Mainela-Arnold (Finland) Moderator: Brigitte Eisenwort (Austria)
15:00-15:10	<b>R027</b>	Multilingual assessment of language impairment: Searching for markers for specific language impairment <b>Brigitte Eisenwort</b> (Austria)
15:10-15:20	<b>R153</b>	Assessing and describing simultaneous bilingual development of hearing children of Deaf parents <b>Laura Kanto</b> (Finland)
15:20-15:30	<b>R093</b>	Cognitive language learning mechanisms in bilingual and monolingual children with and without developmental language disorder <b>Elina Mainela-Arnold</b> , Ji Sook Park, Carol Miller, Janet van Hell, Daniel Weiss, David Rosenbaum, Teenu Sanjeevan (Finland, Canada and USA)
15:30-15:40	<b>R180</b>	Bilingual intervention using ABA methods in United Arab Emirates: Preliminary findings <b>Saleh Shaalan</b> , Kerry Egan, Dan Gould, Pam Olsen (United Arab Emirates)
15:45-16:30	<b>S112</b>	<b>ROUNDTABLE: BEYOND THE IDENTIFICATION OF LANGUAGE IMPAIRMENT IN MULTILINGUAL CHILDREN: CURRENT ISSUES IN EFFECTIVE SERVICE DELIVERY</b> Moderator: Elin Thordardottir (Canada, Iceland)  Speakers: Elin Thordardottir (Canada, Iceland) Wiebke Scharff-Rethfeldt (Germany) Eva-Kristina Salameh (Sweden)
16:30-17:00		<b>Coffee, Posters and Exhibition</b> <b>Poster tours 3 and 4 from 16:30-16:50</b>
17:00-18:00	<b>S067</b>	<b>ROUNDTABLE: SPEECH AND LANGUAGE DEVELOPMENT IN CHILDREN WITH HEARING IMPAIRMENT</b> Moderator: Sanna Häkli (Finland)  Speakers: Ulrika Löfkvist (Norway) Sari Kunnari (Finland) Taina Välimaa (Finland) Krista Wallenius (Finland) Dirk Mürbe (Germany)

**NORDIA**

TIME	ABSTRACT REFERENCE	HALL NORDIA
9:30-11:00	<b>S208</b>	<b>ROUNDTABLE: FINDINGS OF ESSENTIAL INSTRUMENTAL ASSESSMENT OF SWALLOWING IN NORMAL AND DISTURBED CONDITIONS</b> Moderator: Antonio Schindler (Italy)  Speakers: Tamer Abou El Saad (Egypt) Daniele Farneti (Italy) Antonio Schindler (Italy) Perttu Arkkila (Finland) Sébastien Van der Vorst (Belgium)  <b>S223</b> With oral presentation on Globus and the need for investigations: what research tells us? Pia Järvenpää (Finland)
11:00-11:30		<b>Coffee, Posters and Exhibition</b> <b>Poster tours 1 and 2 from 11:00 to 11:20</b>
11:30-12:20	<b>S144</b>	<b>ROUNDTABLE: ASSESSMENT OF PEDIATRIC SWALLOWING DISORDERS, STATE OF THE ART</b> Moderator: Johanna Nokso-Koivisto (Finland)  Speakers: Mariam Shadi (Egypt) Samia Bassiouny (Egypt) Maria Andrea Lopez Salcedo (Spain)
12:20-13:00	<b>S123</b>	<b>ROUNDTABLE: MANAGEMENT OF PEDIATRIC SWALLOWING DISORDERS, WHAT IS NEW?</b> Moderator: Pascale Fichaux Bourin (France)  Speakers: Pascale Fichaux Bourin (France) Tamer Abou-Elsaad (Egypt) Daniele Farneti (Italy)
13:00-14:00		<b>Lunch</b>
15:00-15:40		<b>RESEARCH FORUM: SWALLOWING DIAGNOSTICS</b> Chair: Samia Bassiouny (Egypt) Moderator: Mariam Shadi (Egypt)  Speakers:
15:00-15:10	<b>R111</b>	Anatomical based FEES residue rating scale <b>Tamer Abou-Elsaad</b> , Ashraf El-Mitwalli, James Coyle, Aliaa Sabry (Egypt and USA)
15:10-15:20	<b>R183</b>	The endoscopic evaluation of the oral phase of swallowing (Oral-FEES, O-FEES): a new procedure proposal. <b>Daniele Farneti</b> , Bruno Fattori, Luca Bastiani (Italy)
15:20-15:30	<b>R184</b>	Aspiration: diagnostic contributions from bedside swallowing evaluation and endoscopy. <b>Daniele Farneti</b> , Valentina Turrone, Elisabetta Genovese (Italy)

15:30-15:40	<b>R120</b>	Transdisciplinary Assessment of Dysphagia in Clinical Settings <b>Tarja Kukkonen</b> (Finland)
15:45-16:30	<b>S181</b>	<b>ROUNDTABLE: LOW DYSPHAGIA: ASSESSMENT IN A MULTIDISCIPLINARY PERSPECTIVE</b> Moderator: Daniele Farneti (Italy)  Speakers: Daniele Farneti (Italy) Perttu Arkkila (Finland) Gilles Delahaut & H�el�ene Antoine (Belgium)
16:30-17:00		<b>Coffee, Posters and Exhibition</b> <b>Poster tours 3 and 4 from 16:30-16:50</b>
17:00-18:00	<b>S219</b>	<b>ROUNDTABLE: MULTIDISCIPLINARY TEAMS IN SWALLOWING CENTERS</b> Moderator: Antonio Schindler (Italy)  Speakers: Antonio Schindler (Italy) Leena-Maija Aaltonen (Finland) Kaarina Ruusuvirta (Finland) Minna Apajalahti (Finland) Perttu Arkkila (Finland) Gauthier Desuter (Belgium)

**BALTICA**

TIME	ABSTRACT REFERENCE	HALL BALTICA
9:30-11:00		<b>RESEARCH FORUM ON TUBES AND HUMIDIFICATION IN VOICE THERAPY</b> Chair: Franco Fussi (Italy) Moderator: Anne-Maria Laukkanen (Finland)
9:30-9:50	<b>R202</b>	Keynote speaker Tubes in voice therapy? What research tells us. <b>Anne-Maria Laukkanen</b> (Finland)
9:50-10:05	<b>R083</b>	Keynote speaker Semi Obstructive Vocal Tract Exercises: A Multidimensional Approach <b>Ilter Denizoglu</b> (Turkey)
10:05-10:15	<b>R087</b>	Modelling study of the physical background for voice therapy with tubes <b>Jaromír Horáček</b> , Vojtěch Radolf, AM Laukkanen (Czech Republic and Finland)
10:15-10:25	<b>R048</b>	The bubble-mask: application of a new SOFT device for vocal warm-up <b>Franco Fussi</b> (Italy)
10:25-10:35	<b>R034</b>	Warmed and humidified air and counter pressure in alleviating voice symptoms Kerttu Huttunen, <b>Leena Rantala</b> (Finland)
10:35-10:45	<b>R080</b>	A New Treatment Method for Puberphonia: DoctorVox Therapy with High Backpressure <b>Ilter Denizoglu</b> and Mustafa Sahin (Turkey)
10:45-11:00		Roundtable: The present and future of tubes and humidification in voice therapy. Marketta Sihvo (Finland) Anne-Maria Laukkanen (Finland) Ilter Denizoglu (Turkey) Jaromír Horáček (Czech Republic) Franco Fussi (Italy) Leena Rantala (Finland)
11:00-11:30		<b>Coffee, Posters and Exhibition</b> <b>Poster tours 1 and 2 from 11:00 to 11:20</b>
11:30-12:10		<b>RESEARCH FORUM: AUDIOLOGY</b> Chair: Katrin Neumann (Germany) Moderator: Jakub Dršata (Czech Republic)
11:30-11:40	<b>R101</b>	Speakers: The band-aid-fixed bone conduction hearing aid ADHEAR – useful for children with conductive hearing loss. <b>Katrin Neumann</b> , Jan Peter Thomas, Christiane Völter, Stefan Dazert (Germany)
11:40-11:50	<b>R139</b>	Impact of radiation technique and fraction dose on hearing impairment in platinum-treated pediatric medulloblastoma patients. <b>Amelie Tillmanns</b> , Sergiu Scobioala, Ross Parfitt, Peter Matulat, Mohammed Channaoui, Heidi Wolters, Hans Theodor Eich, Antoinette am Zehnhoff-Dinnesen (Germany)
11:50-12:00	<b>R143</b>	Factors Influencing Hearing Aid Use in Old Age. <b>Libor Černý</b> , Jan Vokřál, Olga Dlouhá (Czech Republic)

12:00-12:10	<b>R161</b>	Acute Unilateral Vestibular Failure - a pilot study of Rheohaemapheresis and Steroid therapy. <b>Jakub Dršata</b> , Milan Bláha, Jan Mejzlik, Michal Janouch, Milan Košťál, Viktor Chrobok (Czech Republic)
12:15-13:00		<b>RESEARCH FORUM: ON SINGING, VOCAL TRACT AND REHABILITATION: WHAT IS NEW?</b> Chair: Rodica Elena Muresan (Romania) Moderator: Louisa Traser (Switzerland)
12:15-12:25	<b>R188</b>	Adaptations of the respiratory system for phonation of pitch jumps – a real-time MRI study <b>Louisa Traser</b> , Fabian Burk, Ali Caglar Özen, Michael Burdumy, Michael Bock, Daniela Blaser, Bernhard Richter, Matthias Echternach (Switzerland and Germany)
12:25-12:35	<b>R119</b>	Laryngeal and pharyngeal movements during inner singing <b>Carmen Unterhofer</b> , Maria Buchberger, Lena Richter, Simone Graf (Germany)
12:35-12:45	<b>R116</b>	Visual feedback in voice rehabilitation for professional singers <b>Rodica Elena Muresan</b> , Alexandra Sabina Pop (Romania)
12:45-12:55	<b>R124</b>	Vocal tract adjustment without Phonation – A prospective Study <b>Simone Graf</b> , Lena Richter, Patrick Hoyer (Germany)
12:55-13:00		Discussion
13:00-14:00		<b>Lunch</b>
15:00-15:40		<b>RESEARCH FORUM: WHAT IS NEW IN VOICE AND LARYNGEAL SURGERY?</b> Chair: Antoine Giovanni (France) Moderator: Yakubu Karagama (UK)
15:00-15:15	<b>R125</b>	Keynote speaker Spasmodic Dysphonia: Botox injection vs Surgical options <b>Yakubu Karagama</b> (UK)
15:15-15:30	<b>R097</b>	Keynote speaker Adipose-derived stromal vascular fraction in scarred vocal folds: first results of a phase I/II trial <b>Alexia Mattei</b> , Jérémy Magalon, Baptiste Bertrand, Cécile Philandrianos, Julie Veran, Patrick Dessi, Florence Sabatier, Antoine Giovanni (France)
15:30-15:40	<b>R212</b>	Diode Laser in Recurrent Respiratory Papillomatosis Surgery Sergey Karpishchenko, <b>Marina Ryabova</b> , Mikhail Ulupov, Gleb Portnov (Russia)
15:45-16:30	<b>S182</b>	<b>ROUNDTABLE: LARYNGEAL LASER SURGERY AND ITS OUTCOMES ON VOICE</b> Moderator: Lise Crevier Buchman (France)
		Speakers: Lise Crevier Buchman (France) Sergey Karpischenko (Russia) Yakubu Karagama (UK)
16:30-17:00		<b>Coffee, Posters and Exhibition. Poster tours 3 and 4 from 16:30-16:50</b>
17:00-17:30	<b>S043</b>	<b>WORKSHOP: USING YOUR EAR FOR ACCURATE DIAGNOSIS OF HOARSENESS</b> James Thomas (USA)
17:30-18:00	<b>S075</b>	<b>WORKSHOP: APDVOICE - AN EASILY ONLINE AVAILABLE DATABASE SYSTEM FOR A PHONiatric CLINICS</b> Ramil Hashimli and Anar Rustamov (Azerbaijan)

**POSTER TOUR 1 (VOICE)****GUIDE: Hans Mahieu** (Netherlands)

REF	TITLE
P013	<b>Incidence of vocal cord paresis as a consequence of a surgical complication</b> Maria Heikkinen, Svante Halttunen, Markku Terävä, Jussi Kärkkäinen, Heikki Löppönen, Elina Penttilä (Finland)
P018	<b>Laryngeal granuloma under Phoniatrix umbrella</b> Sanja Krejovic Trivic, Milan Vukasinovic, Jovica Milovanovic, Vojko Djukic, Aleksandar Ugrinovic, Aleksandar Trivic (Serbia)
P049	<b>Treatment of Ventricular Dysphonia by Botulinum Toxin Injection</b> Reham Abdelwakil Ibrahim Mohamed (Egypt)
P131	<b>Association between aggressive recurrent respiratory papillomatosis and HLA-DQ alleles</b> Olga Kolesnikova, Sergey Karpishchenko, Marina Ryabova (Russian Federation)
P108	<b>Significance of Pepsin from Saliva in Diagnosis and Treatment of Laryngopharyngeal Reflux</b> Zeljka Laksar Klaric, Darija Birtic (Croatia)
P094	<b>Irritable larynx syndrome and problems with indoor air at work – preliminary results</b> Sarkku Vilpas, Eliina Kankare, Jussi Karjalainen, Lauri Lehtimäki, Jura Numminen, Pia Nynäs, Antti Tikkakoski, Jukka Uitti, Leenamajja Kleemola (Finland)
P163	<b>Boost irradiation as a treatment option of the recurrent carcinoma in situ of the larynx</b> Antonia Nolte, Cornelia Hornberger, Peter K. Plinkert, Nikolaus Bosch (Germany)

**POSTER TOUR 2 (MISCELLANEA)****GUIDE: Suvi Stolt** (Finland)

P185	<b>Good rehabilitation practice - Group Counselling and Augmentative and Alternative Communication</b> Jaana Reuter (Finland)
P008	<b>Aspiration and treatment of dysphagia in adults with intellectual disability: Research plan</b> Minttu Sauna-aho, Ahmed Geneid, Leena Tuomiranta, Kaisa Launonen (Finland)
P127	<b>Scale of assessment of myofunctional disorders of the maxillofacial region in children</b> Galina Tarasova, Olga Orlova (Russian Federation)
P099	<b>Text analyser for efficient generation of Mandarin oral reading test materials for hearing impaired children</b> Yu-Chen Hung, Wen-Jet Wang, Yi-Chih Chan, Pei-Chun Li (Taiwan)
P109	<b>A longitudinal research of 10 years of hearing screening in athletes with an intellectual disability</b> Rupal Mehta (Belgium)
P085	<b>The attitude of teachers on referring learning disabilities students to speech therapy</b> Akram Ahmadi, Neda Tahmasebi, Peyman Zamani, Ehsan Naderifar, Ebtesam Hozeyli, Negin Moradi (Iran)

P186	<b>Language development of children with cortical visual impairment and additional disabilities</b> Amal Ezzat (Egypt)
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**POSTER TOUR 3 (VOICE)****GUIDE: Mieke Moerman** (Belgium)

P082	<b>MaskVOX: A New Device for Voice Therapy and Vocal Training</b> Ilter Denizoglu (Turkey)
P138	<b>The first experience of use of voice analysis in voice laboratory in Kazakhstan</b> Dinara Toguzbayeva (Kazakhstan)
P167	<b>The significance of clinical voice examination to vocal music teaching</b> Liyang Han, Feng Jiang (China)
P170	<b>World Voice Day in Russia</b> Ekaterina Osipenko, Maria Isaeva (Russian Federation)
P073	<b>Voice disorders in children</b> Elena Radtsig, Olga Orlova, Yana Bulyanko (Russian Federation)
P130	<b>Additional fibrolaryngoscopic tests: clinical significance</b> Sergey Karpishchenko, Olga Vershchagina (Russian Federation)
P179	<b>Study on the Subjective and Objective Evaluation of the Vocal Tone of Beijing Opera</b> Jiang Yongmei (China)

**POSTER TOUR 4 (VOICE)****GUIDE: James Thomas** (USA)

P024	<b>Efficacy of video-provided Home Vocal Function Exercises in People with Functional Dysphonia</b> Sarah-Jane Thiemann, Hermann Opitz, Wiebke Scharff Rethfeldt (Germany)
P052	<b>Gender-related distribution of benign vocal fold lesions: A 13-years single institution review</b> Elke Brunner, Markus Gugatschka (Austria)
P070	<b>VHI scores and acoustic features in street vendors as occupational voice users</b> Thair Odeh, Yasser Natour, Wissam Darawshe, Juhayna Taha, Majd Waari, Sara Bashiti (Jordan)
P071	<b>Coping strategies in Persian speaking patients with voice disorders: a new instrument</b> Maryam Faham, Akram Ahmadi, Shamim Hosseinifar (Iran)
P205	<b>A Comparative Study of the pVHI-TR and the TR-CVHI-10 Among Children with Vocal Nodules</b> Arzu Tüzüner, Elçin Tadihan Özkan, Ali Çağlı (Turkey)
P176	<b>Differences in vocal tract dimensions between female classical singing, kulning and edge</b> Tero Ikävalko, Anita McAllister, Robert Eklund, Eveliina Lammentausta, Mari Leppävuori, Anne-Maria Laukkanen (Finland and Sweden)
P081	<b>DoctorVox Voice Therapy Method</b> Ilter Denizoglu (Turkey)

# Friday 15/6/2018

Time	Fennia 1	Fennia 2	Nordia	Baltica
8:30-9:15	KEYNOTE: TREATMENT OF UNILATERAL VOCAL FOLD PARALYSIS			
9:15-9:30	Break and Group Photo of the 29 <sup>th</sup> UEP Congress			
9:30-10:10	INSTRUCTIONAL COURSE: OFFICE-BASED PHONOSURGERY	ROUNDTABLE: AUDITORY PROCESSING DISORDER – THE DIAGNOSTICS, CO-MORBIDITIES AND EFFECTS OF NOISE ON LANGUAGE DEVELOPMENT	WORKSHOP: PHYSIOLOGY OF REGISTERS AND LARYNGEAL MECHANICS (WITH LIVE DEMONSTRATIONS) (60 min)	RESEARCH FORUM: NEW ASPECTS IN VOICE ASSESSMENT (1)
10:15-11:00	WORKSHOP: LARYNGEAL EMG	KEYNOTE: AN EVIDENCE-BASED APPROACH TO TONGUE-TIE (20 min) 10:35-11:00 INDUSTRY-SPONSORED SESSION, please see page 55	ROUNDTABLE: NON-ORGANIC VOICE DISORDERS: DIAGNOSIS AND TREATMENT (30 min)	RESEARCH FORUM: NEW ASPECTS IN VOICE ASSESSMENT (2)
11:00-11:20	Coffee, Posters and Exhibition. Poster tours 5 and 6			
11:30-12:10	11:30-12:00 INDUSTRY-SPONSORED SESSION, please see page 55	ROUNDTABLE: PROBLEMS IN LANGUAGE DEVELOPMENT – DOES THE ICD-11 GIVE US NEW ASPECTS?	RESEARCH FORUM ON SWALLOWING, WHAT IS NEW? (55 min)	RESEARCH FORUM: MISCELLANEOUS
12:15-13:00	12:00-13:00 ROUNDTABLE: PROFESSIONAL SINGING - NEW PHYSIOLOGICAL INSIGHTS	ROUNDTABLE: OPTICAL AND ACOUSTICAL DIAGNOSTICS OF VOICE DISORDERS	12:30-13:00 WORKSHOP: USING PEER-MEDIATED STRATEGIES TO ENHANCE COMMUNICATION FOR STUDENTS WITH SEVERE DISABILITIES	ROUNDTABLE: THE HUMAN RECURRENT LARYNGEAL NERVE AND CERVICAL SURGERY. PREVENTION, DIAGNOSIS AND TREATMENT
13:00-14:00	Lunch			
14:00-14:45	KEYNOTE: DYSPHAGIA BY SCREENPLAYS			
14:45-15:00	Break			
15:00-15:40	ROUNDTABLE: UNILATERAL VOCAL FOLD PARALYSIS: EXPERIENCE ON AUGMENTATION	ROUNDTABLE: SWALLOWING AND HEAD AND NECK CANCER	ROUNDTABLE: DEVELOPMENTAL DISABILITIES: PERSPECTIVES AND CONSIDERATIONS	RESEARCH FORUM: ASSESSMENT AND TREATMENT EFFICACY IN COMMUNICATION DISORDERS
15:45-16:30	ROUNDTABLE: EXPERIENCE OF THYROID PLASTY IN TREATING GLOTTAL GAPS	WORKSHOP: TUBES IN VOICE THERAPY? – WHAT – WHY – HOW? HANDS-ON WORKSHOP WITH DISCUSSION		RESEARCH FORUM: ACOUSTICS AND ASSESSMENT OF VOICE AND SPEECH
16:30-17:00	Coffee, Posters and Exhibition			
17:00-18:00	ROUNDTABLE: THE FUTURE OF MANAGEMENT OF VOICE DISORDERS	ROUNDTABLE: CONTROVERSY: HOARSENESS AND REFLUX - IS THERE ANY SCIENTIFIC RELATIONSHIP?	ROUNDTABLE: IAPA SESSION: BRAIN DISEASES AND HEARING IMPAIRMENT (IAPA)	RESEARCH FORUM: MOTOR SPEECH DISORDERS, WHAT IS NEW?
18:00-18:45	GENERAL ASSEMBLY OF EUROPEAN ACADEMY OF PHONIATRICS			
19:30-23:30	Gala dinner in Nobility House			

VOICE

SPEECH AND LANGUAGE

SWALLOWING

AUDIOLOGY

# Friday 15/6/2018

## INVITED KEYNOTE SPEAKERS HALL: FENNIA 2

TIME	ABSTRACT REFERENCE	HALL FENNIA 2
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8:30-9:15	<b>S222</b>	<b>TREATMENT OF UNILATERAL VOCAL FOLD PARALYSIS, HEIKKI RIHKANEN (FINLAND)</b> Chair: Ahmed Geneid (Finland)
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9:15-9:30		<b>Break and Group Photo of the 29th UEP Congress</b>
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14:00-14:45		<b>DYSPHAGIA BY SCREENPLAYS, GAUTHIER DESUTER (BELGIUM)</b> Chair: Pia Järvenpää (Finland)
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14:45-15:00		<b>Break</b>
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## EAP GENERAL ASSEMBLY AND SOCIAL PROGRAM

TIME	HALL FENNIA 1
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18:00-18:45	<b>General assembly of The European Academy of Phoniatics</b>
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19:30-23:30	<b>Gala dinner in Nobility House</b>
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## FENNIA 1

TIME	ABSTRACT REFERENCE	HALL FENNIA 1
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9:30-10:10	<b>S133</b>	<b>INSTRUCTIONAL COURSE: OFFICE-BASED PHONOSURGERY</b> Speaker: Markus Hess (Germany)
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10:15-11:00	<b>S038</b>	<b>WORKSHOP: LARYNGEAL EMG</b> Moderator: Berit Schneider-Stickler (Austria)  Speakers: Matthias Leonhard (Austria) Claus Pototschnig (Austria) Berit Schneider-Stickler (Austria)
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11:00-11:30		<b>Coffee, Posters and Exhibition</b> <b>Poster tours 5 and 6 from 11:00-11:20</b>
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11:30-12:00		<b>INDUSTRY SPONSORED SESSION</b> , please see page 55
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12:00-13:00	<b>S047</b>	<b>ROUNDTABLE: PROFESSIONAL SINGING - NEW PHYSIOLOGICAL INSIGHTS</b> Moderator: Dirk Murbe (Germany)
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Speakers:  
Dirk Murbe (Germany)  
Lisa Popeil (USA)  
Franco Fussi (Italy)

13:00-14:00		<b>Lunch</b>
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15:00-15:40	<b>S187</b>	<b>ROUNDTABLE: UNILATERAL VOCAL FOLD PARALYSIS: EXPERIENCE ON AUGMENTATION</b> Moderator: Rami Taulu (Finland)
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Speakers:  
Michael Benninger (USA)  
Markus Hess (Germany)  
Petri Reijonen (Finland)

15:45-16:30	<b>S209</b>	<b>ROUNDTABLE: EXPERIENCE OF THYROPLASTY IN TREATING GLOTTAL GAPS</b> Moderator: Miia Ruuskanen (Finland)
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Speakers:  
Michael Benninger (USA)  
Gauthier Desuter (Belgium)  
Hans Mahieu (Netherlands)

16:30-17:00		<b>Coffee, Posters and Exhibition</b>
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17:00-18:00	<b>S115</b>	<b>ROUNDTABLE: THE FUTURE OF MANAGEMENT OF VOICE DISORDERS</b> Moderator: Taru Ilmarinen (Finland)
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Speakers:  
Markus Gugatschka (Austria)  
Antoine Giovanni (France)  
Jean-Paul Marie (France)  
Tadeus Nawka (Germany)

**FENNIA 2**

**TIME**      **ABSTRACT HALL**  
**REFERENCE FENNIA 2**

9:30-10:10    **S154**      **ROUNDTABLE: AUDITORY PROCESSING DISORDER – THE DIAGNOSTICS, CO-MORBIDITIES AND EFFECTS OF NOISE ON LANGUAGE DEVELOPMENT**  
Moderator: Leena Ervast (Finland)

Speakers:  
Bozena Woznica (Poland)  
Donna Geffner (USA)  
Elina Niemitalo-Haapola (Finland)

10:15-10:35    **S128**      **KEYNOTE: AN EVIDENCE-BASED APPROEACH TO TONGUE-TIE**  
Moderator: Anu Jyrkkä (Finland)

Speaker:  
Tuomas Klockars (Finland), (20 min)

10:35-11:00      **INDUSTRY SPONSORED SESSION**, please see page 55

11:00-11:30      **Coffee, Posters and Exhibition**  
**Poster tours 5 and 6 from 11:00-11:20**

11:30-12:10    **S129**      **ROUNDTABLE: PROBLEMS IN LANGUAGE DEVELOPMENT – DOES THE ICD-11 GIVE US NEW ASPECTS?**  
Moderator: Mari Qvarnström (Finland)

Speakers:  
Elina Mainela-Arnold (Finland)  
Katrín Neumann (Germany)  
Marja Asikainen (Finland)

12:15-13:00    **S196**      **ROUNDTABLE: OPTICAL AND ACOUSTICAL DIAGNOSTICS OF VOICE DISORDERS**  
Moderator: Felix De Jong (Netherlands and Belgium)

Speakers:  
Felix De Jong (Netherlands and Belgium)  
Secundino Fernández (Spain)  
James Thomas (USA)

13:00-14:00      **Lunch**

15:00-15:40    **S190**      **ROUNDTABLE: SWALLOWING AND HEAD AND NECK CANCER**  
Moderator: Mari Markkanen-Leppänen (Finland)

Speakers:  
Mari Markkanen-Leppänen (Finland)  
Gauthier Desuter (Belgium)  
Virginie Woisard (France)

15:45-16:30    **S203**      **WORKSHOP: TUBES IN VOICE THERAPY? – WHAT – WHY – HOW? HANDS-ON WORKSHOP WITH DISCUSSION**  
Moderator: Anne-Maria Laukkanen (Finland)

Speakers:  
Anne-Maria Laukkanen (Finland)  
Ilter Denizoglu (Turkey)  
Greta Wistbacka (Finland)

16:30-17:00      **Coffee, Posters and Exhibition**

17:00-18:00    **S177**      **ROUNDTABLE: CONTROVERSY: HOARSENESS AND REFLUX - IS THERE ANY SCIENTIFIC RELATIONSHIP?**  
Moderator: James Thomas (USA)

Speakers:  
James Thomas (USA)  
Markus Hess (Germany)  
Yakubu Karagama (UK)  
Gauthier Desuter (Belgium)

**NORDIA**

**TIME ABSTRACT HALL  
REFERENCE NORDIA**

9:30-10:30 **S046** **WORKSHOP: PHYSIOLOGY OF REGISTERS AND LARYNGEAL MECHANICS (WITH LIVE DEMONSTRATIONS)**  
Moderator: Franco Fussi (Italy)

Speakers:  
Franco Fussi (Italy)  
Eleonora Bruni (Italy)  
Erika Biavati (Italy)  
Alberto Quarello (Italy) (60 min)

10:30-11:00 **S218** **ROUNDTABLE: NON-ORGANIC VOICE DISORDERS: DIAGNOSIS AND TREATMENT**  
Moderator: Hanna Freiberg (Finland)

Speakers:  
Reinaldo Yazaki (Brazil)  
Yakubu Karagama (UK)  
(30 min)

11:00-11:30 **Coffee, Posters and Exhibition**  
**Poster tours 5 and 6 from 11:00-11:20**

11:30-12:25 **RESEARCH FORUM ON SWALLOWING, WHAT IS NEW?**  
Chair: Patrick Zorowka (Austria)  
Moderator: Irena Hocevar Boltezar (Slovenia)

11:30-11:40 **R107** Eating disorders of early childhood (EDEC): oral motor versus sensory aversions.  
**Samia Bassiouny (Egypt)**

11:40- 11:55 **R126** Keynote speaker  
The causes for dysphagia in infants and toddlers  
**Irena Hocevar Boltezar (Slovenia)**

11:55-12:10 **R160** Keynote speaker  
Impact of a customizable and flexible transportable seated positioning device on swallowing disorders ( DATP-DEG)  
**Virginie Woizard, Mireille Costes (France)**

12:10-12:20 **R171** Study on the physiological difference between standing and sitting positions in the Duration for Normal Swallowing  
**Ahlam El-adawy, Eman Ahmed, Ahmed Emam, Rasha Hashem (Egypt)**

12:20-12:25 Discussion

12:30-13:00 **S026** **USING PEER-MEDIATED STRATEGIES TO ENHANCE COMMUNICATION FOR STUDENTS WITH SEVERE DISABILITIES**  
Moderator: Lou-Ann Land (USA)

Speakers:  
Lou-Ann Land (USA)  
Judith Page (USA)

13:00-14:00 **Lunch**

15:00-16:30 **S005** **ROUNDTABLE: DEVELOPMENTAL DISABILITIES: PERSPECTIVES AND CONSIDERATIONS**

Moderator: Wael Al-Dakrouy (Saudi Arabia, UK)

Speakers:  
Wael Al-Dakrouy (Saudi Arabia, UK)  
Silvia Martinez (USA)  
Martine Elie (USA)  
Samirah Al-Ghamdi (Saudi Arabia)

16:30-17:00 **Coffee, Posters and Exhibition**

17:00-18:00 **S207** **ROUNDTABLE: IAPA SESSION: BRAIN DISEASES AND HEARING IMPAIRMENT (IAPA)**

Moderator: Jose Juan Barajas De Prat (Spain)

Speakers:  
Jose Juan Barajas De Prat (Spain)  
Doris-Eva Bamiou (UK)  
Jakub Drsata (Czech Republic)

**BALTICA**

TIME	ABSTRACT REFERENCE	HALL BALTICA
9:30-10:10		<b>RESEARCH FORUM: NEW ASPECTS IN VOICE ASSESSMENT (1)</b> Chair: Virgilijus Ulozas (Lithuania) Moderator: Meike Brockmann-Bauser (Switzerland)
9:30-9:40	<b>R011</b>	Carcinologic Handicap Index: disability self-assessment questionnaire for head and neck cancer patients <b>Mathieu Balaguer-Navarro</b> , Josiane Percodani, Virginie Woisard (France)
9:40-9:50	<b>R088</b>	Dysphonia Severity Index and Acoustic Voice Quality Index measures differentiating normal/dysphonic voices <b>Virgilijus Ulozas</b> , Ben Barsties v. Latoszek, Nora Ulozaite-Staniene, Tadas Petrauskas, Youri Maryn (Lithuania and Belgium)
9:50-10:00	<b>R114</b>	The current situation and future of Vocal Arts Medicine in China <b>Liyan Han</b> (China)
10:00-10:10	<b>R159</b>	Validation and Reliability of the Turkish version of singing voice handicap index short form (SVHI-10) <b>Fatma Esen Aydınli</b> , Sevtap Akbulut, Esra Özcebe, Oğuz Kuşçu, Taner Yılmaz, Clark Rosen, Jackie Gardtner-Schmidt (Turkey and USA)
10:15-11:00		<b>RESEARCH FORUM: NEW ASPECTS IN VOICE ASSESSMENT (2)</b> Chair: Sevtap Akbulut (Turkey) Moderator: Safinaz Azab (Saudi Arabia and Egypt)
10:15-10:25	<b>R019</b>	Voice of teachers <b>Viktoria Shilenkova</b> , Varvara Pevtsova (Russia)
10:25-10:35	<b>R173</b>	Effect of voice therapy with phonemicsurgery on voice outcomes for vocal fold polyps <b>Gokhan Toptaş</b> , Kemal Keseroglu, <b>Emel Cadalli Tatar</b> , Mustafa Şahin, Elife Barmak, Sevilay Karahan, Mehmet Hakan Korkmaz (Turkey)
10:35-10:45	<b>R137</b>	Reliability and Clinical Validity of the Turkish Reflux Symptom Index <b>Sevtap Akbulut</b> , Fatma Esen Aydınli, Oğuz Kuşçu, Esra Özcebe, Taner Yılmaz, Clark Rosen, Jackie Gardtner-Schmidt (Turkey and USA)
10:45-10:55	<b>R055</b>	Can Cochlear Implantation Improve Voice Quality In Arabic Speaking Children? <b>Safinaz Azab</b> , Rabee El Sabeela (Saudi Arabia)
10:55-11:00		Discussion
11:00-11:30		<b>Coffee, Posters and Exhibition</b> <b>Poster tours 5 and 6 from 11:00-11:20</b>
11:30-12:15		<b>RESEARCH FORUM: MISCELLANEOUS</b> Chair: Ekaterina Osipenko (Russia) Moderator: Dirk Deuster (Germany)
11:30-11:45	<b>R142</b>	Keynote speaker Psychological stress and strain at work among phoniatricians <b>Dirk Deuster</b> , Antoinette am Zehnhoff-Dinnesen, Peter Matulat (Germany)
11:45-11:55	<b>R050</b>	Vocal mucosal oedema in children <b>Inna Vorobeva</b> , Victoria Shilenkova, Andrey Zinkin (Russia)

11:55-12:05	<b>R169</b>	Comprehensive treatment of vocal fold nodules in children <b>Maria Isaeva</b> , Ekaterina Osipenko (Russia)
12:05-12:15	<b>R063</b>	Long-term follow-ups of Persian ADSD Patients - Studying QOL and Voice changes <b>Maryam Faham</b> , Farhad Torabinezhad, Payman Dabirmoghaddam, Jamileh Abolghasemi (Iran)
12:15-13:00	<b>S010</b>	<b>ROUNDTABLE: THE HUMAN RECURRENT LARYNGEAL NERVE AND CERVICAL SURGERY. PREVENTION, DIAGNOSIS AND TREATMENT</b> Moderator: Robert Kesmarszky (Hungary)  Speakers: Robert Kesmarszky (Hungary) Bertrand Joly (France) Ekaterina Osipenko (Russia)
13:00-14:00		<b>Lunch</b>
15:00-15:40		<b>RESEARCH FORUM: ASSESSMENT AND TREATMENT EFFICACY IN COMMUNICATION DISORDERS</b> Chair: Sanna Häkli (Finland) Moderator: Sabrina Regele (Germany)
15:00-15:10	<b>R068</b>	Reliability and validity of the new instrument for assessment of speech sound production in Persian speaking children <b>Akram Ahmadi</b> , <b>Maryam Faham</b> , Reyhane Mohammadi, Mohammad Kamali, Abbas Ebadi, Talieh Zarifian, Mehdi Dastjerdi Kazemi (Iran)
15:10-15:20	<b>R021</b>	Development, standardization, and application of Luttas computer based Arabic Language Skills Test <b>Safinaz Azab</b> , Khalid El Nagar, Mahmoud Othman (Egypt)
15:20-15:30	<b>R140</b>	Intrafamilial phenotypic variability of Specific Language Impairment <b>Sabrina Regele</b> , Lisa Bartha-Doering, Antoinette am Zehnhoff-Dinnesen (Germany and Austria)
15:30-15:40	<b>R122</b>	Cases study (3 cases) in the Autistic Spectrum and the possibility of a syndrome's existence <b>Evangelos Bochatziar</b> (Greece)
15:45-16:30		<b>RESEARCH FORUM: ACOUSTICS AND ASSESSMENT OF VOICE AND SPEECH</b> Chair: Bożena Woźnica (Poland) Moderator: Christopher Watts (USA)
15:45-15:55	<b>R089</b>	Spectral acoustic measures improve with increasing vocal intensity <b>Meike Brockmann-Bauser</b> , Jarrad H. Van Stan, Jörg E. Bohlender, Daryush D. Mehta (Switzerland and USA)
15:55-16:05	<b>R204</b>	Smoothed Cepstral Peak Prominence (CPPS), Voice Activity and Participation Profile (VAPP) and Vocal Health <b>Caitriona Munier</b> , Meike Brockmann Bauser, Irma Ilomäki, Elina Kankare, Anne-Maria Laukkanen, Ahmed Geneid (Finland and Switzerland)
16:05-16:15	<b>R045</b>	Acoustic characterization of speech intonation in Parkinson's disease. <b>Christopher Watts</b> (USA)

16:15-16:25	<b>R054</b>	Objective assessment of dysphonia in girls suffered from anorexia nervosa. <b>Barbara Maciejewska</b> , Aleksandra Rajewska-Rager, Zofia Maciejewska-Szaniec, Bogna Małaczyńska, Michał Michalak, Piotr Świdziński, Bożena Woźnica (Poland)
16:25-16:30		Discussion
16:30-17:00		<b>Coffee, Posters and Exhibition</b>
17:00-18:00		<b>RESEARCH FORUM: MOTOR SPEECH DISORDERS, WHAT IS NEW?</b> Chair: Terhi Ansamaa (Finland) Moderator: Pedro Gómez Vilda (Spain)
17:00-17:10	<b>R030</b>	SPI in assessment of stuttering severity and chronicity among Arabic speaking children <b>Reham Ahmed</b> (Egypt)
17:10-17:20	<b>R103</b>	Oral placement therapy: The importance of the jaw function in feeding and speech <b>Rehab Zaytoun</b> (Egypt)
17:20-17:30	<b>R031</b>	Jaw-tongue neuromechanical modelling from sEMG activity for dysarthric speech evaluation <b>Andrés Gómez-Rodellar</b> , Agustín Álvarez-Marquina, <b>Pedro Gómez-Vilda</b> (Spain)
17:30-17:40	<b>R032</b>	Estimating neuromotor degeneration from voice and speech correlates <b>Pedro Gómez Vilda</b> , Jiri Mekyska, Andrés Gómez-Rodellar, Daniel Palacios-Alonso (Spain and Czech Republic)
17:40-17:50	<b>R193</b>	Speech in adults treated for unilateral cleft lip palate <b>Staffan Morén</b> , Per-Åke Lindestad, Lilian Stålhammar, Mats Holmström, Maria Mani (Sweden)
17:50-18:00		Discussion

**POSTER TOUR 5 (SPEECH AND LANGUAGE)****GUIDE: Wiebke Scharff-Rethfeldt** (Germany)

REF	TITLE
<b>P172</b>	<b>Speech therapy in comprehensive rehabilitation and resocialization of patients with head and neck tumors</b> Madrudin Magomed-Eminov, Olga Orlova, Dmitriy Reshetov, Daria Uklonskaya, Olga Sokolova, Yulia Pokrovskaya, Victoria Agaeva, Yulia Khoroshkova, Anastasia Guretc (Russian Federation)
<b>P095</b>	<b>Non-Verbal Communication in Speech-Impaired Persons: Two Case Studies</b> Seamus Hallahan, Barbara Hallahan (Ireland)
<b>P210</b>	<b>Methodological decisions in consistent selectivity in data collection about the impact of aphasia rehabilitation</b> Tarja Kukkonen (Finland)
<b>P036</b>	<b>Acoustic measurement of prosody in normal and dysarthric Egyptian adults</b> Engy Elhakeem, Yehia Aboras, Manal Elbanna (Egypt)
<b>P162</b>	<b>Dual Coding Theory: The imagery-language connection</b> Rehab Zaytoun (Egypt)

**POSTER TOUR 6 (SPEECH AND LANGUAGE AND VOICE)****GUIDE: Tamer Abou El Saad** (Egypt)

REF	TITLE
<b>P098</b>	<b>Corpus of the oral language of Mandarin-speaking typically developing and language-delayed children</b> Shang-Yu Wu, Re-Jane Huang, I-Fang Tsai (Taiwan)
<b>P104</b>	<b>Apraxia of Speech in adolescents and adults with Down syndrome</b> Sandra Cristina Fonseca Pires, Carolina Fonseca de Freitas (Brazil)
<b>P105</b>	<b>Assessment of Fluency in Down syndrome adolescents and adults</b> Sandra Cristina Fonseca Pires, Flavia Perez de Freitas (Brazil)
<b>P217</b>	<b>A Multi Therapeutic Methodologies to Improve Specific Language Deficit in ADD Children</b> Tahany Ahmad, Enas Salem (Egypt)
<b>P216</b>	<b>Congenitally Missing Teeth (Hypodontia) In Children with Can Cause Severe Speech Production-A Case Study</b> Tahany Ahmad, Enas Salem (Egypt)
<b>P064</b>	<b>Fibrous mass of the vocal folds: clinical characteristics, treatment and voice results.</b> Beata Miaškiewicz, Elżbieta Gos, Agata Szkiełkowska (Poland)
<b>P065</b>	<b>Acoustic characteristics of voice in patients treated for sulcus vocalis</b> Beata Miaškiewicz, Agata Szkiełkowska, Elżbieta Gos, Aleksandra Panasiwicz (Poland)

# Saturday 16/6/2018

Time	Fennia 1	Fennia 2	Nordia	Baltica
8:30-9:15	KEYNOTE: UNDERSTANDING AUDITORY PROCESSING DISORDER: MULTIDISCIPLINARY COLLABORATION FOR ASSESSMENT AND MANAGEMENT			
9:15-9:30	Break			
9:30-10:15	INSTRUCTIONAL COURSE: PHOTOANGIOLYTIC LASERS	ROUNDTABLE: LATE TALKERS: BACKGROUND FACTORS AND THE PREDICTIVE VALUE OF LATE LANGUAGE EMERGENCE	ROUNDTABLE: VOICE AND SPEECH PERCEPTION: HUMAN VS. AUTOMATIC	UEP 2020 SESSION: CASE DISCUSSIONS IN PHONiatrics & LARYNGOLOGY
10:15-11:00	UEP VOICE COMMITTEE SESSION: "WHERE ARE WE NOW AND WHERE ARE WE GOING?" DIAGNOSTICS AND DEFINITIONS		RESEARCH FORUM: VOCAL FOLD PARALYSIS, WHAT IS NEW?	
11:00-11:30	Coffee, Posters and Exhibition			
11:30-12:15	COMET SESSION: EMERGENCY VOICE MEDICINE AND WHEN TO CANCEL A CONCERT	ROUNDTABLE: LANGUAGE AND SOCIO-EMOTIONAL SKILLS	WORKSHOP: OSTEOPATHIC APPROACH TO EXAMINATION AND TREATMENT OF MUSCLE TENSION DYSPHONIA	INSTRUCTIONAL COURSE: REVISITING SOME BASIC MECHANISMS OF VOCAL FOLD VIBRATION
12:15-13:00	INSTRUCTIONAL COURSE: PERMANENT AUGMENTATION OF VOCAL FOLD PARALYSIS WITH FASCIA		ROUNDTABLE: MANAGEMENT OF THE PROFESSIONAL VOICE BACK STAGE, IN THE OFFICE, AND IN THE OPERATING ROOM	WORKSHOP: TeleFON, AN INTERACTIVE SOFTWARE SERVICE FOR COMMUNICATION AND SWALLOWING THERAPY INSTRUCTIONAL COURSE: FEES SCORING PROTOCOL, THE "WHATS", THE "WHENS" AND THE "WHERE'S"
13:00-14:00	Lunch			
14:00-14:45	KEYNOTE: HOLISTIC VIEW OF AUDITORY SYSTEM: AN ELECTROPHYSIOLOGICAL STUDY			
14:45-15:00	Break			
15:00- 16:30	WORKSHOP: 3-ZONES VOICE MODEL  WORKSHOP: LARYNGEAL MECHANISMS IN VARIOUS SINGING STYLES	ROUNDTABLE: UEP HEARING COMMITTEE: CURRENT ISSUES OF PEDIATRIC AUDIOLOGY  UEP VOICE COMMITTEE SESSION: "WHERE ARE WE NOW AND WHERE ARE WE GOING?" THERAPY	RESEARCH FORUM: NEUROBIOLOGICAL AND NEUROPSYCHIATRIC LANGUAGE DISORDERS  RESEARCH FORUM: SENSORY AND PERCEPTUAL IMPAIRMENTS AND LANGUAGE	WORKSHOP: ULTRASOUND IN PHONiatrics
16:30-17:00	Coffee break			
17:00-18:00	CLOSING CEREMONY			

SATURDAY 16/6/2018

SATURDAY 16/6/2018

VOICE

SPEECH AND LANGUAGE

SWALLOWING

AUDIOLOGY

## Saturday 16/6/2018

### INVITED KEYNOTE SPEAKERS HALL: FENNIA 2

#### TIME ABSTRACT HALL REFERENCE FENNIA 2

8:30-9:15 **S221** **UNDERSTANDING AUDITORY PROCESSING DISORDER: MULTIDISCIPLINARY COLLABORATION FOR ASSESSMENT AND MANAGEMENT**  
**DEBORAH SWAIN AND DONNA GEFFNER (USA)**  
Chair: Katrin Neumann (Germany)

9:15-9:30 **Break**

14:00-14:45 **S220** **HOLISTIC VIEW OF AUDITORY SYSTEM: AN ELECTROPHYSIOLOGICAL STUDY, JOSE BARAJAS (SPAIN)**  
Chair: Antoinette am Zehnhoff-Dinnesen (Germany)

14:45-15:00 **Break**

### CLOSING CEREMONY

#### TIME HALL FENNIA 2

17:00-18:00 **Closing Ceremony of the 29th UEP Congress**

### FENNIA 1

#### TIME ABSTRACT HALL REFERENCE FENNIA 1

9:30-10:15 **S134** **INSTRUCTIONAL COURSE: PHOTOANGIOLYTIC LASERS**  
Markus Hess (Germany)

10:15-11:00 **S118** **UEP VOICE COMMITTEE SESSION: "WHERE ARE WE NOW AND WHERE ARE WE GOING?" DIAGNOSTICS AND DEFINITIONS**  
Moderator: John Rubin (UK),  
Mieke Moerman (Belgium)

Speakers:  
John Rubin (UK)  
Mieke Moerman (Belgium)  
Ekaterina Osipenko (Russia)  
Tamas Hacki (Hungary)  
Bozena Woznica (Poland)

11:00-11:30 **Coffee, Posters and Exhibition**

11:30-12:15 **S195** **COMET SESSION: EMERGENCY VOICE MEDICINE AND WHEN TO CANCEL A CONCERT**  
Moderator: Josef Schlömicher-Thier (Austria)

Speakers:  
Josef Schlömicher-Thier (Austria)  
Markus Hess (Germany)  
Louisa Traser (Switzerland)

12:15-13:00 **S053** **INSTRUCTIONAL COURSE: PERMANENT AUGMENTATION OF VOCAL FOLD PARALYSIS WITH FASCIA**  
Heikki Rihkanen (Finland)

13:00-14:00 **Lunch**

15:00- 15:45 **S028** **WORKSHOP: 3-ZONES VOICE MODEL**  
Michel de Kort (Netherlands)  
Felix de Jong (Netherlands, Belgium)

15:45-16:30 **S033** **WORKSHOP: LARYNGEAL MECHANISMS IN VARIOUS SINGING STYLES**  
Lisa Popeil (USA)

16:30-17:00 **Coffee break**

17:00-18:00 **Closing ceremony**

**FENNIA 2**

TIME	ABSTRACT REFERENCE	HALL FENNIA 2
9:30-11:00	<b>S017</b>	<b>ROUNDTABLE: LATE TALKERS: BACKGROUND FACTORS AND THE PREDICTIVE VALUE OF LATE LANGUAGE EMERGENCE</b> Moderator: Suvi Stolt (Finland)  Speakers: Suvi Stolt (Finland) Leila Paavola-Ruotsalainen (Finland) Sira Määttä (Finland) Suvi Vehkavuori (Finland)
11:00-11:30		<b>Coffee, Posters and Exhibition</b>
11:30-13:00	<b>S084</b>	<b>ROUNDTABLE: LANGUAGE AND SOCIO-EMOTIONAL SKILLS</b> Moderator: Kerttu Huttunen (Finland)  Speakers: Marja-Leena Laakso (Finland) Nina Sajaniemi (Finland) Joanna Kosonen (Finland) Soile Loukusa (Finland)
13:00-14:00		<b>Lunch</b>
15:00- 15:45	<b>S100</b>	<b>ROUNDTABLE: UEP HEARING COMMITTEE: CURRENT ISSUES OF PEDIATRIC AUDIOLOGY</b> Moderator: Katrin Neumann (Germany)  Speakers: Katrin Neumann (Germany) Monika Tigges (Germany) Peter Kummer (Germany) Jakub Dršata (Czech Republic)
15:45-16:30	<b>S117</b>	<b>UEP VOICE COMMITTEE SESSION: "WHERE ARE WE NOW AND WHERE ARE WE GOING?" THERAPY</b> Moderator: Mieke Moerman (Belgium), John Rubin (UK)  Speakers: Mieke Moerman (Belgium) John Rubin (UK) Josef Schlömicher-Thier (Austria) Ilter Denizoglu (Turkey)
16:30-17:00		<b>Coffee break</b>
17:00-18:00		<b>Closing ceremony</b>

**NORDIA**

TIME	ABSTRACT REFERENCE	HALL NORDIA
9:30-10:15	<b>S158</b>	<b>ROUNDTABLE: VOICE AND SPEECH PERCEPTION: HUMAN VS. AUTOMATIC</b> Moderator: Virginie Woisard (France)  Speakers: Virginie Woisard (France) J�rome Farinas (France) Alain Ghio (France) Jean Schoentgen (Belgium)
10:15-11:00		<b>RESEARCH FORUM: VOCAL FOLD PARALYSIS, WHAT IS NEW?</b> Chair: Jean-Paul Marie (France) Moderator: J�rg E. Bohlender (Switzerland)
10:15-10:25	<b>R135</b>	Combined medialization thyroplasty and reinnervation in unilateral vocal fold paralysis: our experience <b>Ahmed Ibrahim Nasr, Andreas Mueller (Germany)</b>
10:25-10:40	<b>R189</b>	Keynote speaker Vocal Assessment in unilateral vocal cord paralysis: a qualitative systemic review. <b>Lise Crevier-Buchman, Zainab Bakhsh (France)</b>
10:40-10:50	<b>R215</b>	Selective laryngeal reinnervation for bilateral recurrent laryngeal nerve injuries <b>Zheng Hongliang (China)</b>
10:50-11:00	<b>R044</b>	Botulinum Toxin injection in Bilateral Vocal Fold Immobility <b>Reham Abdelwakil Ibrahim Mohamed (Egypt)</b>
11:00-11:30		<b>Coffee, Posters and Exhibition</b>
11:30-12:15	<b>S198</b>	<b>WORKSHOP: OSTEOPATHIC APPROACH TO EXAMINATION AND TREATMENT OF MUSCLE TENSION DYSPHONIA</b> Jacob Lieberman (UK) Markus Hess (Germany)
12:15-13:00	<b>S214</b>	<b>ROUNDTABLE: MANAGEMENT OF THE PROFESSIONAL VOICE BACK STAGE, IN THE OFFICE, AND IN THE OPERATING ROOM</b> Moderator: Reinaldo Yazaki (Brazil)  Speakers: Tadeus Nawka (Germany) Reinaldo Yazaki (Brazil) Matthias Weikert (Austria)
13:00-14:00		<b>Lunch</b>
15:00- 15:45		<b>RESEARCH FORUM: NEUROBIOLOGICAL AND NEUROPSYCHIATRIC LANGUAGE DISORDERS</b> Chair: Silvia Martinez (USA) Moderator: Anneli Yliherva (Finland)
15:00-15:10	<b>R006</b>	Language Disorders in children with ADHD <b>Wael Al-Dakroury (Egypt and UK)</b>

15:10-15:20	<b>R168</b>	Autism in Finland – families' and professionals' experiences on identification and diagnostic work <b>Anneli Yliherva</b> , L. Rantala, I. Moilanen, H. Ebeling, M. Gissler, T. Parviainen, P. Tani, A. Bejarano-Martín, R. Canal-Bedia (Finland and Spain)
15:20-15:30	<b>R146</b>	Fetal growth restriction is associated with poor communication skills at early school-age <b>Lea Partanen</b> , Noora Korkalainen, Kaarin Mäkikallio, Päivi Olsén, Anneli Yliherva (Finland)
15:30-15:40		Discussion
15:45-16:30		<b>RESEARCH FORUM: SENSORY AND PERCEPTUAL IMPAIRMENTS AND LANGUAGE</b> Chair: Rana Alkhamra (Jordan) Moderator: Sari Levänen (Finland)
15:45-15:55	<b>R025</b>	Touch It! Tactile symbols for students with developmental disabilities and visual impairments Laura Stone, Gerald Abner, <b>Judith Page</b> , Lou-Ann Land, Jane Kleinert, Jacqui Kearns (USA)
15:55-16:05	<b>R152</b>	Auditory and visual speech-perception deficits in language-impaired children <b>Sari Levänen</b> , Kaisa Tiippana, Erkki Vilkmán (Finland)
16:05-16:15	<b>R136</b>	Exploring family early interactive literacy practices <b>Rana Alkhamra</b> , Hana Mahmoud, Jehad Al-Araifi (Jordan)
16:15-16:25	<b>R020</b>	Linguo-studio as a form of teaching children-bilinguals and their parents <b>Olga Tverskaya</b> (Russia)
16:25-16:30		Discussion
16:30-17:00		<b>Coffee break</b>
17:00-18:00		<b>Closing ceremony</b>

**BALTICA**

TIME	ABSTRACT REFERENCE	HALL BALTICA
9:30-11:00	<b>S156</b>	<b>UEP 2020 SESSION: CASE DISCUSSIONS IN PHONIAITRCS &amp; LARYNGOLOGY</b> Moderator: Haldun Oguz (Turkey)  Speakers: Sevtap Akbulut (Turkey) Hakan Birkent (Turkey) Ilter Denizoglu (Turkey) Emel Cadalli Tatar (Turkey) Kursat Yelken (Turkey)
11:00-11:30		<b>Coffee, Posters and Exhibition</b>
11:30-12:00	<b>S145</b>	<b>INSTRUCTIONAL COURSE: REVISITING SOME BASIC MECHANISMS OF VOCAL FOLD VIBRATION</b> Philippe DeJonckere (Belgium)
12:00-12:30	<b>S102</b>	<b>TeleFON, AN INTERACTIVE SOFTWARE SERVICE FOR COMMUNICATION AND SWALLOWING THERAPY</b> Mieke Moerman and Mathias Colpaert (Belgium)
12:30-13:00	<b>S164</b>	<b>INSTRUCTIONAL COURSE: FEES SCORING PROTOCOL, THE "WHATS", THE "WHENS" AND THE "WHERE'S"</b> Mariam Shadi (Egypt)
13:00-14:00		<b>Lunch</b>
15:00- 16:30	<b>S007</b>	<b>WORKSHOP: ULTRASOUND IN PHONIAITRCS</b> Wolfgang Angerstein (Germany)
16:30-17:00		<b>Coffee break</b>
17:00-18:00		<b>Closing ceremony</b>

# Guidelines for speakers

## **GUIDELINES FOR ORAL PRESENTATIONS**

All presentation must be in English language.

Please meet the chairperson of your session before the start of the session to introduce yourself and ensure that the chairperson knows how to pronounce your name in the right way.

### **HOW TO PUT YOUR PRESENTATION ON:**

Speaker's ready rooms are so last season. We all make changes to our presentations to the last moment and we understand this. You just put your presentation on a USB memory stick and be ready in the hall of the session during the preceding coffee break, lunch or other break. In the hall of your session our staff will assist you in transferring it to the laptop.

### **SPEAKERS LOUNGE: ROOM 3**

There you can spend time working on your presentation, making changes, etc. The room is available during all congress hours.

### **POWER POINT PRESENTATIONS:**

Kindly use Microsoft PowerPoint 2010 or a newer version. Make sure your presentation is saved in the extend of PPTX or PPT. Make sure your whole presentation works as standalone presentation when saved on USB memory stick. This can be easily done before coming to the congress by checking that it works on other laptops or computers than your own.

### **MAC USERS**

We love you but please make sure your presentation saved on a USB works also on PC.

### **Prezi USERS**

Saving your presentation by downloading it is highly recommended. Wi-Fi is available, but we cannot guarantee its speed!

### **BACKUP USB**

In addition to the USB with your presentation please take another USB as a backup with another copy of your presentation. USBs are vulnerable to be broken or corrupted and a backup copy is always good.

### **TIME OF ORAL PRESENTATION**

10 minutes including one minute for questions unless otherwise stated in the program. Some sessions include time allocated for discussion at the end of the session.

### **STANDARD EQUIPMENT OF EACH HALL**

- Projector and screen
- Laptop
- Sound system and laser pointer

## **GUIDELINES OF POSTER PRESENTATIONS**

• Posters will be on display from Thursday till Saturday. You should hang up your poster on Thursday 14.6.2018 morning, by 08:30 at the latest. To hang up your poster, use the pins that are available at the Congress venue. Please use poster material that is light enough and can be fastened with pins.

• Poster tours are arranged in the program. Presenting author of the poster is expected to be available during the tour and to be prepared for questions.

• Presenters are responsible for dismantling their posters at the end of the last session on Saturday 16.6.2018 afternoon, and by 18:00 at the latest. The Congress organizers will dispose all posters that are not removed by the scheduled poster dismantling time.

• Posters should be displayed in portrait, not landscape. It is the presenter's responsibility to prepare a completely correct poster material ready for presentation, within the maximum frame of a poster board: width 95 cm, height 160 cm. Kindly prepare the content of your poster so that it is readable from a 1.5 meter distance. The content should be in English. Make sure you use the same title that you have used in your abstract.

## **WHY POSTER TOURS?**

### **THE POSTER TOUR IS MEANT FOR:**

• Giving attention to the posters and not to leave them behind. This is done by having a known expert working as the "guide" of the tour.

• The presenting author should be available during the poster tour that includes her/his poster for any questions.

• Assess the posters using certain criteria of content and outfit to select the recipient of the Vilkmán's Best Poster Award.

• Kindly notice that the tour time is short (20 minutes for all posters in each tour) as the tours are just meant to allow a quick look and ask possible questions.



# Social program and ceremonies

## WEDNESDAY 13.6.

### OPENING CEREMONY

Place: Helsinki University Great Hall, Aleksanterinkatu 5, Helsinki.

Time: 17:00-18:30

Hosts: Annika Laaksonen and Maaria Ansaranta

Chorus phoniatrix, Juha Vintturi, conductor

Welcome address by President of UEP, Antoinette am Zehnhoff-Dinessen

Duo Katrin Neumann, violoncello and Dirk Deuster, piano

Welcome address by President of the Association of Finnish Phoniatrixians, Mari Qvarnström

Duo Hurme; Hanna Rajakangas ja Petra Poutanen, folk singers

Welcome address by President of the 29th Congress Ahmed Geneid and unveiling of the relief dedicated to Prof. Erkki Vilkmän

Mari Markkanen-Leppänen, mezzo-soprano, Tuuli Takkala, piano



### GET TOGETHER

Time: 19:00-20:30

Place: Helsinki City Hall, Pohjoisesplanadi 11-13, Helsinki

Price: Free of charge. You will be welcomed by Alina & Ilkka playing Baroque inspired folk music from Finland. Alina Järvelä (fiddle), Ilkka Heinonen (violone).

## THURSDAY 14.6.

### Option 1:

#### EVENING CONCERT ON AN ISLAND: 'MUSIC FOR A WHILE', LONNA ISLAND, HELSINKI

Including the concert, waffle and cava, and waterbus transportation (10 min). Price 60 euros.

Gathering at 18:45. **Be on time, the waterbus will not wait, and it is a long distance to swim!** Gathering in JT-line pier on the Market square. See the map.

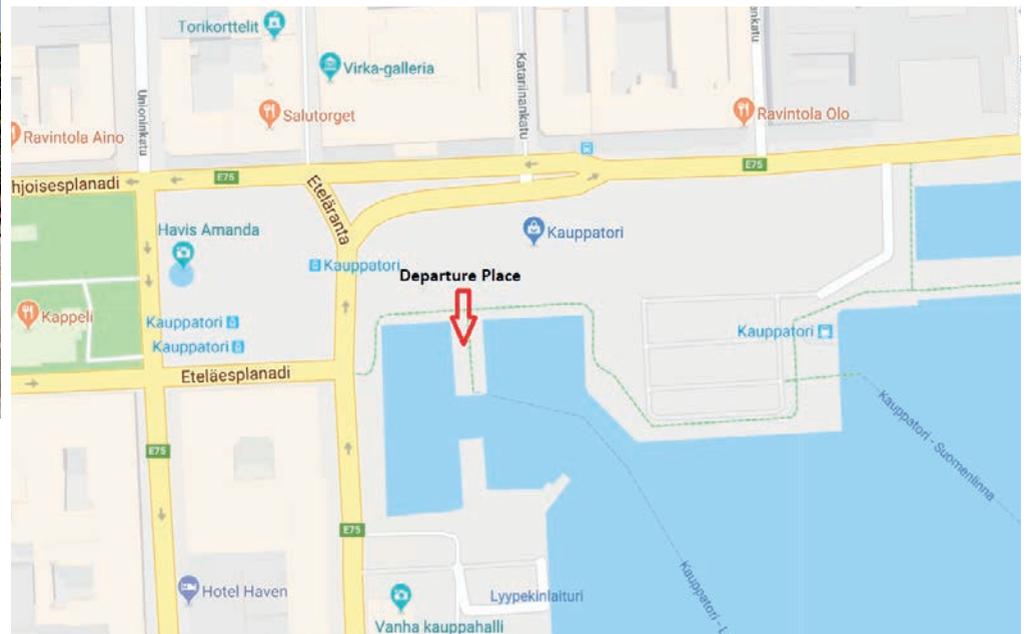
Returning to the same place at 21:45.

Please, make sure to take warm enough clothes with you. The weather by the sea during the transportation may be cold and windy.

**The Concert includes:** Lute songs and ensemble music from the Baroque era and beyond.

Meri Metsomäki, soprano  
Milla Mäkinen, soprano  
David Hackston, countertenor  
Kaisa-Majja Uljas, theorbo and lute

We welcome to our evening program four up-and-coming musicians from the Baroque-opera collective Orpheus' Muses. The concert presents some of the most famous arias and duets from the 17th century with which to while away a summer's evening, and explores the possibilities that living composers can bring to period instruments.

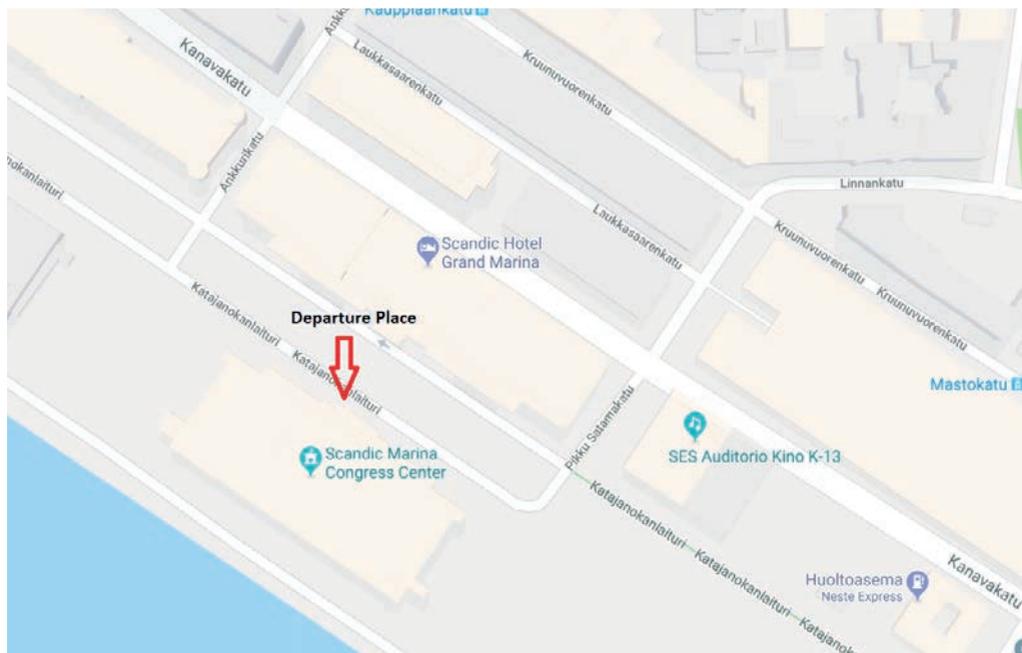


**THURSDAY 14.6.****Option 2: SIGHTSEEING BUS TOUR IN HELSINKI**

Time: 19:00-20:00.

Departure from front of Marina Congress Center. See the map.

Price: 10 euros



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**FRIDAY 15.6.****GALA DINNER**

A dinner in the Finnish House of Nobility (Ritarihuone).

Time: 19:30-23:30

Place: Ritarikatu 1, 00170 Helsinki. No transfer is arranged.

Price: 100 euros, requires registration. Limited number of tickets is available from registration desk.

Dress code: Semi-formal but you won't be turned back if dressed otherwise!

In the town plan of the early 19th century a place had been reserved for a palace of the nobility. Many plans of various styles were presented. The neo-gothic plan drawn by the architect G. T. Chiewitz won the competition and the palace was completed in 1862, in time to house all four estates during the Diet of 1863. The inside decoration of the palace is largely contemporary with the palace itself.

**SATURDAY 16.6.****CLOSING CEREMONY**

Time: 17:00-18:00

Place: Marina Congress Center, Fennia 2.

Kalevala interactive folk song with kantele

Congress wrap up

Announcement of UEP Congresses 2020 and 2022, Turkey and Czech Republic

UEP Awards

Thanks and good-bye

# UEP Art Gallery

On the occasion of 29th UEP Congress, an art gallery will take place during the congress. The gallery will include the installation "Vocological studies" by Voice researcher Jaana Tyrmi.

## OPENING OF THE GALLERY

The Gallery will open on 14.6 at 11:00 by Prof. Markus Gugatschka, art enthusiast and interim director of the Department of Phoniatics at the Medical University Graz, Austria.

**Installation:** Vocological studies  
Jaana Tyrmi, 2018

"I am interested in the analogies that one can find in the nature, how energy travels in wave form, how we interpret color or sound by the wave length or it's amplitude and how new things are born out of interventions. Cyanotype as one of the oldest forms of photography (by Sir John Herschel, 1842) and magnetic resonance imaging (MRI) as one of the newest imaging technologies (by Raymond Vahan Damadian, 1977) use both iron and potassium as reagents. In human body iron carries oxygen to cells and makes the action possible, where potassium makes it possible for cells to recover, as blue color can soothe and recover our minds.

The project Vocological studies combines new and old imagining technologies and is interested in the border between art and science. MRI and botanical images are the base of these cyanotypes that form a chorus. Under each portrait is demonstrated vowel or consonant that is seen in MRI images above. Listening or analyzing the pictures, phones a word is formed. In MRI pictures all individual information is stripped away, but cyanotypes dress them up again and a new identity is given.

These MRI images are from my first article of my thesis on vocology. Cyanotype intervention will place them under a different kind of audience to study."

Jaana Tyrmi is a doctoral student at the University of Tampere, in Speech and Voice Research Laboratory, School of Education. She has taken part in group exhibitions in Finland and abroad since 2009 and her first solo exhibition took place in 2017.



UEP 2018



# 3<sup>rd</sup> course of European Academy of Phoniatics

## VOICE THERAPY: THE PHONIATRICIAN'S APPROACH

The course is meant for fulfillment of the requirements for the Phoniatics Board Examination for medical doctors working in Phoniatics

Date: 13<sup>th</sup> June 2018

Place: Surgical Hospital, Kasarmikatu 11-13, Helsinki, Richard Faltin Hall

### PROGRAM

- 08:00-08:20 Opening Remarks (Tadeus Nawka)
- 08:20-09:00 The Multidimensional Approach to Human Voice: Phoniatics and Voice Therapy (Mieke Moerman)
- 09:00- 10:30 Philosophy and Possible Physiological Mechanisms of Voice Therapy (Reinaldo Yazaki, Ilter Denizoglu)
- 11:00-12:30 Methodology of Voice Therapy (Ekaterina Osipenko, Ilter Denizoglu)
- 13:30-15:00 Voice therapy techniques (Nasser Kotby, Bozena Wiskirska-Woznica, Ilter Denizoglu)
- 15:00-16:00 Patient samples, discussion, and comments (Tadeus Nawka, Haldun Oguz, Bozena Woznica, Ekaterina Osipenko, Mieke Moerman, Ilter Denizoglu)



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# UEP Awards

Announcing of the recipients of the UEP awards takes place during the closing ceremony of the 29<sup>th</sup> UEP Congress.

## 2018 EUROPEAN PHONiatrICS VOICE AWARD, SPONSORED BY XION



XION is one of the few companies offering complete endoscopy systems for the application fields of arthroscopy, ENT, laparoscopy and gynecology. Innovative instruments and devices with perfect functionality are requisite for modern and patient-caring diagnostics and therapy procedures. XION consistently meets these high demands and has guaranteed highest quality for more than 20 years. In 2014 the European Phoniatics Voice Award was inaugurated as a UEP award sponsored by XION. This award will be granted on occasion of the 29th UEP Congress in Helsinki.

### AWARD

Awards must be accepted in person. Prize monies will be transferred to the prize winners' bank accounts as a lumpsum payment. The decision on the award and whether a scientific work submitted within the period stipulated meets the requirements of this award competition is taken by a jury. The jury is convened by 5 UEP experts who are free in their decision making. UEP board members are excluded from the jury. XION will not provide any jury members and renounces on their right to vote. Up to three scientific works may be awarded a prize with prize monies worth 1500 euros for the first prize, 1000 euros for the second prize, and 500 euros for the third prize.

### WHO IS ELIGIBLE?

The 2018 award competition is intended for UEP members and all physicians who are active in phoniatics as well as colleagues in training in phoniatics. All UEP members are entitled to nominate candidates. Only one publication or one thesis may be included in the application for the award. The publishing date of the publication or thesis must not be older than three years.

### WHAT IS REQUIRED?

The scientific work should deal with a topic concerning voice and should exhibit potential for development. The application must be accompanied by the author's curriculum vitae.

### RIGHT OF USE

After submission for the award competition, the scientific work will remain the copyrighted property of the author or the respective publisher. The participants in the award competition declare their consent to XION publishing their names and the titles of their scientific work as part of the XION website and, if applicable, in a XION press release. The participants also agree to visual and sound recordings being made during the award ceremony and being used thereafter. The jury's decision is final. There is no legal recourse.

## 2018 EUROPEAN PHONiatrICS EUHA HEARING AWARD



The European Union of Hearing Aid Acousticians (EUHA) is an association for all persons working in the hearing aid sector for the benefit of people with impaired hearing. The association aims at bringing together hearing aid acousticians, scientists and laymen, who want to take part in specialized further education and vocational training.

In 2013, the award was inaugurated as a UEP award sponsored by the EUHA. The third European Phoniatics EUHA Hearing Award will be presented in the 29th UEP Congress in Helsinki.

Awards must be accepted in person. Prize monies will be transferred to the prize winners' respective bank accounts as a lumpsum payment. The decision on the award and whether a scientific work submitted within the period stipulated meets the requirements of this award competition is taken by a jury. The jury is convened by five UEP experts who are free in their decision making. UEP Board members are excluded from the jury. The EUHA will not provide any jury members and renounces their right to vote. Up to three scientific works may be awarded a prize with prize monies worth 2000 euros for the first prize, 1000 euros for the second prize, and 500 euros for the third prize.

### WHO IS ELIGIBLE?

The 2018 award competition is intended for UEP members and all physicians who are active in phoniatics as well as colleagues in training in phoniatics and members of other professions if the scientific work is initiated and supervised by a phoniatician. All UEP members are entitled to nominate candidates. Only one publication or one thesis may be included in the application for the award. The publishing date of the publication or thesis must not be older than three years.

### WHAT IS REQUIRED?

The scientific work should deal with a topic concerning the technical rehabilitation of deficiencies affecting the auditory communication system in children or adults and should exhibit potential for development.

### RIGHT OF USE

After submission for the award competition, the scientific work will remain the copyrighted property of the author or the respective publisher. With acceptance of the award, the EUHA will be granted the right of publication of the paper in whole or in parts. At the same time, awardees will undertake to present the award topic at one of the EUHA's conferences, seminars, or courses at the earliest date possible. The participants in the award competition declare their consent to the EUHA publishing their names and the titles of their scientific work as part of the EUHA website and, if applicable, in a EUHA press release. The participants also agree to visual and sound recordings being made during the award ceremony and being used thereafter. The jury's decision is final. There is no legal recourse.

**VILKMAN'S BEST POSTER AWARD**

This is a new prize of the Union of European Phoniaticians honoring Professor Erkki Vilkmán. Prof. Vilkmán is among the most renowned voice researchers of our time. By a generous contribution from Professor Vilkmán, the award "Vilkmán's Best Poster Award" is inaugurated during the 29th UEP Congress. The award is to be given to young active researcher who manage to present a promising new finding in her/his research addressing a Phoniatic topic in a poster.

The prize of the award is 500 euros

Eligibility: All posters accepted in the congress are eligible for the award. There is no need for separate registration for the best poster award.



**30<sup>th</sup> Congress of Union of the European Phoniaticians**  
 6-10 October 2020 | Antalya, Turkey



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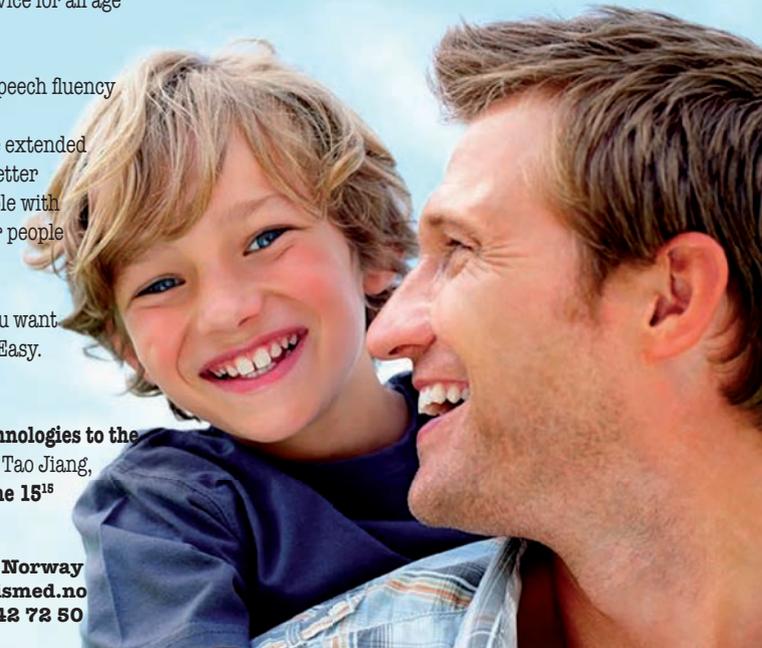
Please visit us on **booth 06** if you want more information about SpeechEasy.

Welcome to our presentation:

**The Application of Digital Technologies to the Treatment of Stuttering** by Dr. Tao Jiang, developer of SpeechEasy on **June 15<sup>th</sup>** at 10:35 a.m. at Hall **Fennia 2**.



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- Laryngeal botox-injections
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- Voice therapy

**Come and hear our presentation on HYKSin Voice Clinic on Friday 15.6 at 11.30-12.00 at Fennia1. Speakers: Teemu Kinnari and Ahmed Geneid (Finland).**

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**S129 Problems in language development - does the ICD-11 give us new aspects?**

Elina Mainela-Arnold<sup>1</sup>, Katrin Neumann<sup>2</sup>, Marja Asikainen<sup>3</sup>, Mari Qvarnström<sup>4</sup>

<sup>1</sup>Faculty of Speech Language Pathology, University of Turku, Finland, <sup>2</sup>Department of Phoniatrics and Pediatric Audiology, ENT-clinic, St. Elisabeth Hospital, Ruhr-University Bochum, Germany, <sup>3</sup>Department of Phoniatrics, Tampere University Hospital, Finland, <sup>4</sup>Department of Phoniatrics, Kuopio University Hospital, Finland

**UEP Speech and Language Committee Session**

The International Statistical Classification of Diseases and Related Health Problems (ICD) is the global standard for reporting and categorizing diseases and health-related conditions. WHO is currently developing new ICD-11 and the coding of developmental speech-language disorders will change. In this session we discuss the revision process, changes, diagnostic criteria and their effects on clinical work.

The first presentation describes the multinational and multidisciplinary CATALISE consensus statements on identifying childhood language disorders. Due to lack of agreement on diagnostic criteria and terminology for childhood language disorders, professionals representing several different disciplines from English speaking countries participated in consensus studies. Delphi technique was used to formulate consensus statements, which provide groundwork towards internationally accepted diagnostic criteria for developmental language disorders.

The second presentation deals with the upcoming ICD-11. During the commenting process of the ICD-11 Beta version the presenter proposed the classification of developmental speech-language disorders to be (1) specific developmental speech-language disorders (including phonological speech sound disorders), (2) developmental speech-language disorders associated with language-relevant comorbidities (e.g. hearing loss, auditory processing disorder, autism spectrum disorder, intellectual developmental disorder, language-relevant syndromes), also named unspecific developmental speech-language disorders, (3) phonetic speech sound disorders, and (4) speech-language disorders, not specified (assessment not performed). It seems advantageous that - compared with the ICD-10 - auditory processing disorders will be shifted from developmental speech-language disorders to disorders of the ear.

The last presentation provides a Finnish clinician's view on the forthcoming changes from the viewpoint of clinical practise in Finland.

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**S133 Office-based phonosurgery**

Prof. Dr. Markus Hess<sup>1</sup>

<sup>1</sup>Deutsche Stimmklinik, Hamburg, Germany

Office-based procedures with topical anesthesia avoid the risks that come with general anesthesia, and they also avoid the disadvantages that may occur with placement of the laryngoscope in suspension microlaryngoscopy. Furthermore, office-based intervention is mostly offered in an ambulatory setting and thus can help saving costs.

The method of office-based indirect surgery of the larynx is more than one hundred years old, but is rarely chosen as first option to treat patients with laryngeal disorders. However, there is a revival of its use within the last decade. All of the following procedures can be performed in an office-based indirect surgery setting: incision, excision, mobilization, coagulation, vaporization, suction, injection, implantation, and augmentation.

In general, office-based surgery has the advantage of having (i) realistic physiological muscular tension of the vocal folds, (ii) physiological endolaryngeal configuration and (iii) the possibility to immediately assess the voice as a result of intervention and using videostroboscopy.

Many instruments were designed to treat laryngeal problems: cupped forceps, alligators, scissors, needles etc., in various sizes and shapes, for transoral approaches. Tiny instruments are used for flexible transnasal endoscopes. Injection needles as well as laser fibers can be passed and precisely placed into the laryngeal cavity. Procedures can be done alone, however, some interventions requires a third hand (physician or nurse).

Several additional topics will be covered, e.g. topical anesthesia, sedation, medication, gag reflex control, precaution settings, airway etc. Information will be given on laser interventions. Finally, augmentation with injectables is addressed.

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**S156 UEP 2020 Session: Case Discussions in Phoniatics & Laryngology**

Professor Haldun Oguz<sup>1</sup>, Associate Professor Sevtap Akbulut<sup>2</sup>, Associate Professor Hakan Birkent<sup>3</sup>, Assistant Professor Ilter Denizoglu<sup>4</sup>, Associate Professor Emel Cadalli Tatar<sup>5</sup>, Professor Kursat Yelken<sup>6</sup>

<sup>1</sup>Fonomer, Ankara, Turkey, <sup>2</sup>Yeditepe University, Istanbul, Turkey, <sup>3</sup>Centrium Medical Centre, Istanbul, Turkey, <sup>4</sup>Medical Park Hospital, Izmir, Turkey, <sup>5</sup>Health Sciences University, Ankara, Turkey, <sup>6</sup>Uskudar University, Istanbul, Turkey

The 30th Congress of the Union of European Phoniaticians will be held in Antalya, Turkey in 2020. Professor Haldun Oguz, the congress president of UEP 2020, will be the moderator of this case discussion session.

The panelists are the core organizing committee members of the meeting. They are renowned, dedicated otolaryngologists all subspecialized in laryngology, phoniatics, and phonosurgery.

The panel will have a highly qualified discussion on a wide spectrum of cases ranging from benign vocal cord disorders, neurogenic laryngeal diseases, professional voice care, to voice surgery for pitch problems, functional voice problems, and airway disorders.

The discussion will focus not only on proper diagnosis of the specific problems, but also on differential diagnosis and different treatment approaches; medical, behavioural and surgical.

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**S157 Management of benign vocal fold lesions**

Teemu Kinnari<sup>1</sup>, Michael Benninger<sup>2</sup>, Markus Hess<sup>3</sup>, Heikki Rihkanen<sup>1</sup>, John Rubin<sup>4</sup>

<sup>1</sup>Helsinki University Hospital, Helsinki, Finland, <sup>2</sup>Cleveland Clinic, Cleveland, USA, <sup>3</sup>Deutsche Stimmklinik, Hamburg, Germany, <sup>4</sup>University College London Hospitals, London, UK

Management of benign vocal fold lesions such as vocal fold polyp or granuloma is taught to all otorhinolaryngologists and is daily routine for phonosurgeons. Nevertheless, there are no widely accepted guidelines for decision making between surgical and conservative treatment and we find a wide variety of treatments that are still in practice.

The round table “Management of benign vocal fold lesions” consists of four presentations and panel discussion by well-known laryngologists. We are going to hear the results of two questionnaires concerning the treatment protocols of common benign vocal fold lesions in Europe and there after introduction to decision making between surgical and conservative treatment and options of surgical techniques.

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## S182 Laryngeal laser surgery and its outcomes on voice

Doctor Lise Crevier Buchman<sup>1</sup>, Professor Sergei Karpischenko<sup>2</sup>, Doctor Yakubu Karagama<sup>3</sup>

<sup>1</sup>Hôpital Europeen Georges Pompidou, Paris, France, <sup>2</sup>ENT Department, First Pavlov State Medical University, Saint Petersburg, Russia, <sup>3</sup>University of Manchester Hospital NHS Trust, Manchester, UK

Since the sixties, laser use and applications have expanded rapidly in laryngeal surgery.

Lasers have offered a time- and cost-efficient alternative to cold surgical techniques, and have been employed in the treatment of numerous benign and malignant laryngeal pathologies. The physical principle of laser is characterized by the conversion of laser energy into heat, to allow cutting, vaporization, or coagulation of the affected tissue.

However, lasers can damage adjacent tissue and create vocal fold scarring.

In this round table, our panel will discuss different cases of laser surgery indications for benign vocal fold lesions and paralytic laryngeal stenosis.

In the case of bilateral vocal fold paralysis, the cause might be iatrogenic, trauma, infection, neurological, neoplastic or idiopathic. Therefore, various investigations might be required to identify the primary cause and orient the therapeutic management. Following emergency tracheostomy to save life, other surgeries might be performed at a later stage to expand the glottis. These techniques include CO2 laser partial arytenoidectomy, cordectomy, cordotomy and lateralization sutures. The author presents the techniques in his clinical armamentarium and the patient selection for each technique.

When managing laryngeal tumors particularly for patients with early glottic cancer, endoscopic laser cordectomy afford briefer hospital stays and shorter wound recovery periods. Evolution of voice outcomes was studied over one year by multidimensional analysis including Voice Handicap Index (VHI), perceptual evaluation with GRB scale, acoustics (FO, jitter, shimmer, Noise-to-Harmonic Ratio), and Maximal Phonation Time.

Minimal voice assessment for outcome measurements of voice quality and follow-up indicators will be discussed.

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## S187 Unilateral vocal cord paralysis: experience on augmentation

MD Rami Taulu<sup>1</sup>, Professor, MD, PhD Michael Benninger<sup>2</sup>, Professor, MD, PhD Markus Hess<sup>3</sup>, MD, PhD Petri Reijonen<sup>4</sup>

<sup>1</sup>Tampere University Hospital, Tampere, Finland, <sup>2</sup>Cleveland Clinic, Cleveland, USA, <sup>3</sup>German voice clinic, Hamburg, German, <sup>4</sup>Päijät-Häme Central Hospital, Lahti, Finland

This round table presents three prominent phonosurgeons, who will share their experience on vocal cord augmentation. The purpose of this round table is to present how these experts currently perform the augmentation and give the audience practical tips to take home.

Professor Hess will start with a presentation which covers many “how I do it” aspects. Ten most useful tips and tricks about how to achieve a good vocal cord augmentation result and which pitfalls should be avoided will be revealed for both beginners and advanced operators.

Professor Benninger will address in detail the office use of Restylane (hyaluronic acid) to treat paralysis, paresis and glottic incompetence. He will also present his study of patient hemodynamics in office versus OR interventions. The results suggest that office interventions are associated with more stable hemodynamic parameters.

Doctor Reijonen is an expert of autologous fascia injections. His presentation will educate the audience on how to harvest and inject the autologous fascia in unilateral vocal cord paresis under general anesthesia. He will also outline how he harvests autologous fat from abdominal subcutaneous tissue (a.m. Campos). He will discuss the choice of different filling materials, why he prefers to do the injections under general anesthesia and how to determine when is the right time to inject.

Questions from the audience are very welcome!

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## S223 Globus pharyngeus – are investigations needed?

Pia Järvenpää, MD, PhD,<sup>1</sup> Taru Ilmarinen, MD, PhD,<sup>1</sup> Ahmed Geneid, MD, PhD,<sup>1</sup> Petra Pietarinen, MD, PhD,<sup>1</sup> Teemu J. Kinnari, MD, PhD,<sup>1</sup> Heikki Rihkanen MD, PhD,<sup>1</sup> Johanna Ruohoaho, MD,<sup>1</sup> Mari Markkanen-Leppänen, MD, PhD,<sup>1</sup> Leif Bäck, MD, PhD,<sup>1</sup> Perttu Arkkila MD, PhD,<sup>2</sup> Leena-Maija Aaltonen MD, PhD,<sup>1</sup>

<sup>1</sup>Department of Otorhinolaryngology – Head and Neck Surgery, University of Helsinki and Helsinki University Hospital, Helsinki, Finland, <sup>2</sup>Department of Gastroenterology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland.

**Objective of the study** Globus patients with normal ear, nose, and throat (ENT) status are a diagnostic challenge. The symptom may cause concern about malignancy, leading to possibly unnecessary further investigation. The aim of the study was to assess whether radiological examinations are useful in globus diagnostics, and whether globus patients with normal ENT status develop a malignancy during a follow-up.

**Methods** We reviewed medical records of all 76 globus patients referred to Helsinki University Hospital, Department of Otorhinolaryngology-Head and Neck Surgery in 2009. Patient history and findings in physical and possible radiological examinations were registered. Patients with dysphagia or pain were excluded. Data from the Finnish Cancer Registry revealed whether globus patients developed malignancies within a 3-year follow-up.

**Results** Based on medical records, neck ultrasound was performed for 37 (49 %) and videofluorography for 22 patients (29 %). Four patients (13 %) underwent both examinations. One patient had a palpable goiter and neck ultrasound confirmed the diagnosis, other ultrasounds were normal. In videofluorography, all the results were within normal limits and investigations were not useful in diagnostics. The Finnish Cancer Registry data confirmed that globus patients developed no head and neck malignancies during a 3-year follow-up.

**Conclusions** Neck ultrasound and videofluorography showed no additional benefit to evaluate the globus etiology in patients whose ENT status was normal. Moreover, no globus patients developed malignancies during a 3-year follow-up. This study concludes that a clinical ENT examination is sufficient for patients with typical globus.

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**R025 Touch It! Tactile Symbols for Students with Developmental Disabilities and Visual Impairments**

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This session, developed by a team with extensive expertise in communication disorders, visual impairments, assistive technology, and special education, will describe strategies to integrate the concepts of core vocabulary with tangible symbol systems to facilitate oral and written communication development in students with developmental disabilities and visual impairments. The presenters will demonstrate strategies for designing a set of tangible symbols useful for representing core vocabulary in a school setting using the symbol format developed by the American Printing House for the Blind. The session will begin with a discussion of the types of visual impairments, their prevalence in students with complex communication needs, and their potential impacts on language, literacy, and cognitive development. Presenters will then review the concepts of core and fringe vocabulary, discuss the role of core and fringe vocabulary in language development for students with VI, provide an overview of available tactile symbol systems and strategies for developing novel symbols, and then review case studies where these symbols have been used to facilitate language development and use with AAC.

**Learning Objectives:**

1. discuss frequency and impacts of visual impairment on development of language and cognition in students with complex communication needs
2. differentiate between core and fringe vocabulary and discuss their use in AAC intervention for students with complex communication needs
3. describe strategies for using and creating tactile symbols

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**R027 Multilingual assessment of language impairment: searching for markers for specific language impairment**

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**Background**

Children with migration background often produce language forms resembling those of children with specific language impairment, SLI (Armon-Lotem & De Jong 2015). This results in a diagnostic dilemma, because children who due to different circumstances have problems learning their L2 have to be distinguished from children suffering from SLI.

**Objectives and method**

In our presentation, multilingual assessment of language impairment will be outlined. In the day unit of Pediatric Psychosomatics a specialized linguistic consultation service for multilingual populations with language impairment is offered. Medical students who are native speakers in the patient's mother tongue support the clinical linguist in assessing the competence on the linguistic levels phonetics and phonology, morphology and grammar, active and passive vocabulary and narrative ability. Here, a non word repetition task is considered to have an advantage over other assessment tasks, because the child is asked to repeat items that it has not heard or learned before.

Two studies on the assessment of language development and non word repetition in two groups of children with either a Russian or English speaking migration background are planned in Vienna and preliminary results will be presented.

**Conclusion**

It is important to assess language competence in mother tongue for all children facing severe problems in learning L2.

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## R030 SPI in assessment of stuttering severity and chronicity among Arabic speaking children

Reham Ahmed<sup>1</sup>

<sup>1</sup>Lecturer of Phoniatics in Ain Shams University, Egypt

### Objectives:

This study aimed to standardize an objective Arabic tool for measurement stuttering severity and prediction of its chronicity among Arabic speaking normal dysfluency children. SPI was changed into Arabic form & materials were prepared and changed to suit Arabic society.

### Subjects and Method:

This test was conducted on two groups: first group consists of (100) stuttering children (control group), Age ranged from 3 to 8years. Second group consists of (100) children who have normal non-fluency, age ranged from 3 to 8years, were randomly chosen for the standardization procedure. The SSI Arabic test, and SPI Arabic test were applied, during which the patients speech was audio-recorded, to facilitate judging the duration of the moments of stuttering. A follow up was done by SPI on normal dysfluency group every 6ms for 18ms to get a cutoff point between recovering and non-recovering children.

### Results:

Test reliability was measured by inter rater reliability, while validity was measured by correlation with previous standardized test and internal consistency validity.

### Conclusion:

The Arabic form of the S.P.I. (A.S.P.I.) presented in this article is an objective, valid and reliable test that can be used in evaluating the Arabic-speaking children who had dysfluency before and throughout the course of therapy. It was considered the first pioneer test to differentiate the diagnosis between the normal dysfluency children and children who stutter.

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## R031 Jaw-Tongue Neuromechanical Modelling from sEMG activity for Dysarthric Speech Evaluation

MSc Andrés Gómez-Rodellar<sup>1</sup>, Professor Agustín Álvarez-Marquina<sup>1</sup>, Professor Pedro Gómez-Vilda<sup>1</sup>

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Speech articulation is produced by the coordinate movements of muscles in the larynx, pharynx, mouth and face. Speech shows acoustic features as harmonics and formants which are directly related with neuromotor activity of these muscles. The first two formants are mainly related with jaw and tongue neuromotor actions. Speech is a ubiquitous signal, easy to record and process, either locally or on e-Health platforms, its use may open a wide set of applications in the functional grading and monitoring of neurodegenerative diseases.

A relevant question is how far speech correlates and neuromotor actions are related. In this preliminar study it is intended to find answers by using surface electromyographic recordings (sEMG) on the masseter and the acoustic kinematics related with the first formant. It is shown that relevant correlations can be found among the sEMG activity (dynamic muscle behavior) and the positions and first derivatives of the first formant (kinematic variables related to vertical velocity and acceleration of the joint jaw and tongue biomechanical system). It is shown that the probability density function associated to these kinematic variables is more sensitive to speech disorders than classical features as Vowel Space Area (VSA) or Formant Centralization Ratio (FCR) in characterizing neuromotor degeneration in Parkinson's Disease.

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### R032 Estimating Neuromotor Degeneration from Voice and Speech Correlates

Professor Pedro Gómez Vilda<sup>1</sup>, Dr. Jiri Mekyska<sup>2</sup>, MSc Andrés Gómez-Rodellar<sup>1</sup>, Dr. Daniel Palacios-Alonso<sup>3</sup>

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Neurodegenerative pathologies as Parkinson Disease (PD) show important distortions in speech, affecting fluency, prosody, articulation and phonation. Measurements based on articulation gestures altering formant positions, as the Vocal Space Area (VSA) or the Formant Centralization Ratio (FCR) have been proposed to measure speech distortion, but these markers are based mainly in static positions of sustained vowels.

The present study introduces a measurement based on the mutual information distance among probability density functions of kinematic correlates derived from formant dynamics. An absolute kinematic velocity associated to jaw and tongue articulation gestures is estimated and modeled statistically. The distribution of this feature may differentiate PD patients from normative speakers during sustained vowel emission. The study is based on a limited database of 53 male PD patients, contrasted to a very selected and stable set of eight normative speakers. In this sense distances based on Kullback-Leibler Divergence seem to be sensitive to PD articulation instability.

Correlation studies show statistically relevant relationship between information content distances to certain motor and non-motor clinical scores, based on the freezing of gait, or sleep disorders. Remarkably, one of the statistically relevant correlations point out to the time interval since the first diagnose was issued. These results stress the need of defining scoring scales specifically designed for speech-based diagnosis and monitoring methodologies in degenerative diseases of neuromotor origin.

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### R034 Warmed and humidified air and counter pressure in alleviating voice symptoms

Adjunct Professor Kerttu Huttunen<sup>1,2,3</sup>, Adjunct Professor Leena Rantala<sup>4</sup>

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In many occupations, professional voice users need to speak in challenging environments; outdoors in cold and dry air with often a long speaking distance, and in dry, draughty, dusty, or otherwise poor indoor air. Voice problems are common among, for example, teachers, but there is increasing evidence that respiratory exercises and pressure breathing may help in dysphonia.

This pilot study explored the efficacy of one-month intervention using breathing exercises in women with voice symptoms. Participants were six non-smoking working age women that suffered from poor indoor air at work and experienced voice symptoms, particularly hoarseness. They used 10 minutes a day WelIO<sub>2</sub> – a new commercially available device for respiratory exercises that provides counter pressure during both inhalation and exhalation, and warms and humidifies the breathing air. The data consisted of self-reports on voice symptoms and acoustically (F<sub>0</sub> and AVQI03.01 Index) and perceptually (GRBAS and VAS scales) analyzed speech samples. Measurements of breathing frequency and pattern, PEF (Peak Expiratory Flow), FVC (Forced Vital Capacity) and FEV1 (Forced Expiratory Volume in one minute) were also obtained.

AVQI03.01 Index and three of its subcomponents improved significantly, and, according to the perceptual assessment of the blinded speech samples, grade, roughness and strain in voice decreased. However, there was neither decrease in the frequency or grade of self-reported voice symptoms nor improvement in the respiratory measurements as the function of intervention.

Effects of these promising results using WelIO<sub>2</sub> need to be confirmed with a larger number of participants. Such project is currently in progress.

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**R054 Objective assessment of dysphonia in girls suffered from anorexia nervosa**

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**Background:** Chronic undernourishment in the course of anorexia nervosa leads to various metabolic and hormonal changes, which translates to the impaired functioning of the majority of systems and organs. The impact of eating disorders on the condition of the vocal apparatus and the voice has been described in the literature; nevertheless, it concerns mainly bulimia nervosa.

**Objectives:** a voice acoustic analysis in adolescent girls diagnosed with anorexia nervosa.

**Material and methods:** 42 girls with anorexia and 31 girls - control group, aged 12-19 years, were assessed for the condition of the voice, using the perceptual assessment of voice according to GRBAS scale, videolaryngostroboscopy, acoustic assessment of voice (MDVP - Multi Dimensional Voice Program).

**Results:** The perceptual assessment of voice using the GRBAS scale revealed changes in anorectic girls' voice - mainly breathy and asthenic in nature. The maximal phonation time was significantly shorter in anorectic group compared to control one (A vs K : 15.40s vs 23.19s).

The decrease of fundamenyal frequency FO and f the voice range were observed in anorectic girls (231.08 vs 247.30).

In the objective acoustic analysis of laryngeal tone MDVP among parameters with good-voice identification, parameters identifying shifting of frequency (Jitt, RAP, PPQ, sPPQ, vFo) have been differentiated according to the norm. There were no changes in amplitude signal.

**Conclusions:** These results might indicate that anorexia nervosa could have led to the functional changes of the larynx. Such disturbances may be explained by the hormonal dysfunctions as well as starvation.

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**R055 Can Cochlear Implantation Improve Voice Quality In Arabic Speaking Children?**

Assistant Professor Safinaz Azab<sup>1</sup>, Professor Rabee El Sabeela<sup>1</sup>

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**Objective:** After cochlear implantation, auditory control of voice production is possible and quality of voice is improved. Aim of study was to investigate changes in some of voice parameters in deaf children after cochlear implantation and the influence of implantation age factor. Methods: Thirty prelingually deafened children implanted unilaterally at the age of 2.5—6 years were included. For all of children an acoustic analysis of Arabic vowel/æ/was performed before cochlear implantation 6, and 12 months after the implantation. Fundamental frequency (FO), jitter, shimmer and noise-to-harmonic ratio (NHR) were compared before and after implantation.

**Results:** After cochlear implantation fundamental frequency did not change significantly. However, an improvement was noticed in measurements of jitter (p = 0.006), shimmer (p = 0.021) as early as 6 months and noise-to-harmonic ratio (p = 0.010) 12 months after the implantation. Children implanted before or at age of 4 years showed significant improvement in jitter and shimmer at 6 months and noise-to harmonic ratio 12 months after implantation. Children implanted after age of 4 years significant changes was detected in FO and Shimmer 12 months after implantation. Conclusion: Cochlear implantation enables auditory moment-to-moment control of pitch and loudness. Determination of jitter and shimmer in Arabic vowel/æ/ sample proved to be a good and early indicator of improved phonation control, even in young children. Deaf children who were implanted before age of 4 years improved their voice quality and control more quickly and to a greater extent than children implanted after the age of 4 years.

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## R063 Long-term follow-ups of Persian ADSD Patients - Studying QOL and Voice changes

Mrs **Maryam Faham**<sup>1</sup>, Dr. Farhad Torabinezhad<sup>1</sup>, Dr Payman Dabirmoghaddam<sup>2</sup>, Dr Jamileh Abolghasemi<sup>1</sup>

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**Introduction:** Adductor spasmodic dysphonia (ADSD) is one of the most disabling voice disorders with no permanent cure. Patients with ADSD suffer from poor voice quality with repeated stoppage of phonation so they experience many limitations in daily and work activities. Botox (BT) injection considered as a gold standard treatment for ADSD and reduced amount of voice stoppages and improve voice quality for a limited period of time. In this study patients with ADSD were followed after BT injection to track the changes in QOL and perceptual voice quality.

**Method:** this is a longitudinal study of 13 patients with ADSD. Patients were evaluated pre-injection, 1, 3, and 6-months post-injection. At each time they filled in Voice Activity and Participation Profile-Persian Version (VAPPP). They read a passage and their voices recorded. Perceptual assessment done by 3 expert voice pathologists using GRBAS. The data were analyzed by using Friedman, Wilcoxon, and McNemar test at significance level of  $p < 0.05$ .

**Results:** Total VAPPP and domains' best scores achieved at 3 months post-injection. At 6-months post-injection the VAPPP scores increased significantly in comparison with 3-months but stayed lower than pre-injection. GRBAS results also indicated that patients' voice at 1 and 3-months post-injection were significantly less severe in terms of strain and roughness ( $p = 0.01$ ;  $p < 0.001$ ).

**Conclusion:** BT injection caused patients' QOL improve and help them speak more comfortable with less negative emotions. The voice quality also improved but not considered normal. The effects of BT injection seemed to continue even after BT resolved.

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## R068 Reliability and validity of the new instrument for assessment of speech sound production in Persian speaking children

Mrs Akram Ahmadi<sup>1</sup>, Dr Reyhane Mohammadi<sup>2</sup>, Professor Mohammad Kamali<sup>3</sup>, Dr Abbas Ebadi<sup>4</sup>, Dr Talieh Zarifan<sup>5</sup>, Dr Mehdi Dastjerdi Kazemi<sup>6</sup>, Mrs **Maryam Faham**<sup>7</sup>

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Speech and language pathologists should include connected speech assessment as a part of their evaluation for children with speech sound disorders. The purpose of this study was to design and validation of a story for assessment of speech sound production for Persian children.

**Method:** 261 typically developing children aged 48-60 months recruited in this study. First, two stories that included all consonants and vowels in, more than one position for each of them, were designed and asked the expert panel to review them and select one of them for assessment. The ability of the test for discriminate between two age groups (48-54 months and 55-60 months) and discriminate between mean scores of boys and girls was investigated for construct validity. Test-retest was performed by two-week interval on 15 children which randomly selected from sample. inter-rater reliability was evaluated by the correlation between scores of two examiners that transcribed and scored speech sample of 15 children.

**Results:** There was 80% or more than 80% Agreement in experts' response regarding content validity. All the children could repeat all of the sentences easily after examiner. Both of the reliability values (test-retest and inter-rater reliability) were higher than 0.85 ( $p < 0.001$ ). There wasn't any significant difference between boys and girls ( $p = 0.77$ ), but significant difference between two age groups ( $p < 0.001$ ).

**Conclusion:** It seems The Persian story for assessment of speech sound production is a reliable and valid measure that can be used to assess the speech sound production abilities.

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### R079 Laryngeal Findings after Prolonged Endotracheal Intubation in adult patients

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**Background:** Prolonged endotracheal intubation (more than 24 hours) is needed in critically ill patients after respiratory failure. Prolonged intubation usually associated with different laryngeal injuries as vocal fold immobility, ulceration, granulomas and edema.

**Objectives:** To determine the effects of prolonged endotracheal intubation on the larynx & to identify the types of laryngeal involvement

**Patients & Methods** This study conducted on 52 patients with endotracheal intubation admitted to Adult Intensive care unit (AICU). When the Patients were eligible for endotracheal extubation (the decision was taken by the AICU consultants). The patients evaluated immediately after extubation or within 24 hours. The patients evaluated by flexible Fibroptic-naso-laryngoscope with endoscopic video-recording during examination. We examined the larynx during quite respiration for mobility of the vocal folds and the presence of vocal fold lesions. Also, some patients were assessed for swallowing ability.

**Results:** 11 patients presented by left Vocal Fold (VF ) immobility. 5 patients presented by right VF immobility. 3 patients with Bilateral VF immobility. 12 patients by posterior glottis laceration & ulceration. Subglottic rim and stenosis were found in 6 patients. Arytenoid & subglottic edema in 12 patients. Supraglottic edema in 7 patients. Laryngeal sensations decreased in 15 patients. No. of patients assessed for swallowing was 24 of which Aspiration was found in 12 patients.

**Conclusion:** Prolonged laryngeal intubation is associated with different laryngeal injuries. High Risk of aspiration was observed after prolonged laryngeal intubation.

**Key words:** Prolonged intubation, Vocal Fold lesions, Laryngeal aspiration

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### R080 A New Treatment Method for Puberphonia: DoctorVox Therapy with High Backpressure

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**Object:** Puberphonia (mutational falsetto) is a functional problem beyond pubertal period which is seen mostly in males. Treatment of puberphonia has been reported to be done by applying manual pressure externally; by exercises for lowering vertical laryngeal position or by surgery. A new method is presented by Denizoglu et al. using high backpressure in DoctorVox Therapy (DVT) which is developed by the author based on Sihvo's LaxVox Method.

**Methods:** 21 male with puberphonia and 25 age-matched healthy male were included in the study. ENT examination, videolaryngostroboscopy, acoustic and electroglottographic analysis, and perceptual voice evaluation were performed at pretreatment, first and sixth months of treatment. DVT was applied with high backpressure (over 20 cmH2O) and no other methods were used. After skill acquisition, therapy was completed by transferring the new skill into a behavior.

**Results and Conclusions:** All patients were able to find their chest register in the first two sessions and use their chest register in a normal habitual speaking tone and timbre after two weeks of therapy. All patients showed a statistically significant decrease in VHI-10, GRB, F0, F1, F2, F3, %Jitt, %Shimm, NHR and CI whereas an increase in CQ after treatment (first month). At the 6th month post-treatment, no patient got back to falsetto register; despite VHI-10, %jitt ve NHR values were higher than of control. DVT with high backpressure was shown to be an effective treatment for puberphonia.

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**R083 Semi Obstructive Vocal Tract Exercises: A Multidimensional Approach**

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Semi obstructive vocal tract exercises (SOVT) are well known in singing pedagogy for centuries. They have been used to improve ergonomic output by the singer and to produce safe and efficient voice, especially for artistic interpretation. Not only for developing sportive means, but also for care and cure of professional voice may be possible by applying SOVT exercises. SOVT exercises are also therapy of choice for voice disorders.

SOVT exercises may be applied with or without devices.

Types of backpressure during SOVT exercises may be classified according to temporal and spatial characteristics of physical effect, or they can be classified according to the duration and amplitude of impact of the backpressure. Regarding the electrical currents (Direct Current- DC, Alternant Current-AC) if there is a constant backpressure, we can call it DC-SOVT and it can be applied in two levels of backpressure. Narrow drinking straws, hand over mouth exercise and voiced fricative consonants provide a high constant (DC) backpressure whereas nasal consonants and semivowels provide a low backpressure on the system. If the backpressure impact is very fast and short, we can speak about transitory backpressure with voiced stop consonants such as [b], [g], [d]. In alternating backpressure current, the accessory system works in an oscillatory fashion as in so-called trills. The last SOVT type combines back pressure application with artificial elongation of vocal tract with free articulation: phonating into tubes one end in water.

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**R087 Modelling study of the physical background for voice therapy with tubes**

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Phonation into a tube with the distal end in air or submerged in water (water resistance therapy) is used for voice therapy. This study explores the effective mechanisms of tube therapy using a computer model and a physical model consisting of silicone vocal folds and a plexiglas vocal tract.

First formant frequency F1 decreased by 71% and F2 by 19% for phonation into a glass resonance tube (length 27 cm, inner diameter 7.8 mm) with the distal end in air, compared to the production of [u:]. F1 descended slightly above F0. For the tube in water, F1 decreased by 92%, reaching ca 28 Hz where the water bubbling frequency (19–24 Hz) was just below F1. The bubbling frequency occurs close to the acoustic–mechanical resonance of the vocal tract. This resonance helps F1 to descend lower –close to F0 in speech, which can further enhance the water voice therapy effect. Loops of subglottic pressure versus glottal area variation in time clearly differentiate vowel phonation from both therapy methods.

In both therapy methods, part of the airflow energy required for phonation is substituted by the acoustic energy utilizing the first acoustic resonance. Thus, less flow energy is needed for vibration of the vocal folds, which means improved vocal economy. The effect can be stronger in water resistance therapy if the water bubbling frequency nears the acoustic–mechanical resonance of the vocal tract and simultaneously the fundamental frequency approaches the first formant frequency.

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**R088 Dysphonia Severity Index and Acoustic Voice Quality Index measures differentiating normal/dysphonic voices**

Prof Virgilijus Ulozas<sup>1</sup>, Ph.D Ben Barsties v. Latoszek<sup>2</sup>, MD Nora Ulozaite-Staniene<sup>1</sup>, Student Tadas Petrauskas<sup>1</sup>, Ph.D. Youri Maryn<sup>3</sup>

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**Objective** of the study was to investigate and compare the feasibility and robustness of the Acoustic Voice Quality Index (AVQI) and the Dysphonia Severity Index (DSI) in diagnostic accuracy, differentiating normal and dysphonic voices.

**Methods.** Voice recordings of 264 subjects with normal voices (n = 105) and with various voice disorders (n = 159) including standard text and sustained vowel /a/ were perceptually rated for dysphonia severity using Grade (G) and the overall dysphonia severity with a visual analog scale (VAS) by five voice clinicians. All concatenated voice samples were acoustically analyzed to receive an AVQI score. For DSI analysis, the required voice parameters were obtained from the sustained vowel /a/.

**Results** achieved significant and marked concurrent validity between both auditory-perceptual judgment procedures and both acoustic voice measures. The DSI threshold of 3.30 pertaining to Gmean obtained reasonable sensitivity of 85.8% and specificity of 83.4%. For VASmean, the DSI threshold of 3.30 was determined also with sensitivity of 70.3% and specificity of 93.9%. The AVQI threshold of 3.31 pertaining to Gmean demonstrated sensitivity of 78.1% and specificity of 92.0%. For VASmean, an AVQI threshold of 3.33 was determined with sensitivity of 97.0% and specificity of 81.8%.

**Conclusions.** The outcomes of the present study indicate comparable results between DSI and AVQI with a high level of validity to discriminate between normal and dysphonic voices. However, a higher level of accuracy was yielded for AVQI as a correlate of auditory perceptual judgment suggesting a reliable voice screening potential of AVQI.

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**R089 Spectral acoustic measures improve with increasing vocal intensity**

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**Objective:** Spectrum based acoustic measures such as smoothed cepstral peak prominence (CPPS) and spectral slope have been associated with laryngeal pathology and perceptual voice quality. Recent work has shown that harmonics-to-noise-ratio (HNR) increases with elevated voice sound pressure level (SPL) in healthy and pathologic voices. This study investigates SPL effects on CPPS and spectral slope in women with and without voice disorders.

**Methods:** In a retrospective matched case-control study, 59 female voice patients 18–61 years of age (mean 27, SD 12.4) were paired with 59 vocally healthy women according to approximate age and occupation. Diagnoses included nodules (66%, n=39), polyps (9%, n=5), and muscle tension dysphonia (MTD, 25%, n=15). Voice SPL, CPPS and spectral slope were computed from sustained vowel phonations with /a/ at “soft”, “comfortable”, and “loud” conditions using Praat. The effects of loudness condition (soft/comfortable/loud) and measured voice SPL (dB SPL) were examined with linear mixed models. Diagnosis (healthy/pathological), differential diagnosis (nodules/polyps/MTD) and treatment effects (before/after treatment) were determined with Wilcoxon signed-rank tests.

**Results:** Increased loudness was associated with higher values of CPPS ( $R_2=0.64$ ) and less negative (less steep) spectral slope ( $R_2=0.48$ ;  $p<0.001$ ) in both healthy and patient groups. Diagnosis, differential diagnosis and treatment had no significant effects on CPPS or spectral slope.

**Conclusions:** In women with and without voice disorders, higher loudness levels were associated with increased CPPS and less steep spectral slope. Future studies could investigate how vocal intensity effects should be controlled for to improve the clinical value of acoustic spectral and cepstral measures.

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### R093 Cognitive language learning mechanisms in bilingual and monolingual children with and without developmental language disorder

Dr. Elina Mainela-Arnold<sup>1,2</sup>, Dr. Ji Sook Park<sup>2</sup>, Dr. Carol Miller<sup>3</sup>, Dr. Janet van Hell<sup>3</sup>, Dr. Daniel Weiss<sup>3</sup>, Dr. David Rosenbaum<sup>4</sup>, Dr. Teenu Sanjeevan<sup>1</sup>

<sup>1</sup>University Of Turku, Turku, Finland, <sup>2</sup>University of Toronto, Toronto, Canada, <sup>3</sup>Pennsylvania State University, State College, USA, <sup>4</sup>University of California, Riverside, Riverside, USA

**Objectives:** Determining if children from diverse language backgrounds meet criteria for developmental language disorder (DLD, also known as specific language impairment) is a challenge. Bilingual children often have different levels of proficiency in their languages due to exposure factors, which can result in over-identification of DLD. We conducted three studies to address this obstacle by examining whether we could identify nonverbal cognitive variables that are closely related to DLD status, but that are unaffected by bilingual status. To this end, we compared monolingual and bilingual children with and without DLD on three cognitive tasks.

**Methods:** Four groups of English speaking children (ages 8-12), typically developing children (TD, 35 monolinguals, 24 bilinguals with varying home languages) and children with DLD (17 monolinguals, 10 bilinguals), participated. Children completed visual tasks measuring procedural memory, attention networks and choice reaction time.

**Results:** Interactions between bilingual status and language disorder emerged for choice reaction time. However, differences between the DLD and TD groups were observed for procedural learning and performance on aspects of attention, but performance on these tasks was equivalent in monolinguals and bilinguals.

**Conclusions:** Choice reaction time is defined by both bilingual experience as well as language disorder. Critically, procedural memory, and contrary to some prior research, aspects of attention appear to be child-intrinsic language learning mechanisms that are minimally shaped by bilingual environment. Future diagnostic accuracy studies should confirm if these mechanisms can be used to identify risk of DLD in children who come from diverse language backgrounds.

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### R096 Size does matter. First experiences in laryngological cases with a small 2.4 mm endotracheal tube

Prof Hans Mahieu<sup>1,2</sup>, PhD Derrek Heuveling<sup>2</sup>, PhD Jose van der Hoorn<sup>3</sup>

<sup>1</sup>Ruysdael Clinics, Amsterdam, Netherlands, <sup>2</sup>Meander Medical Center, Amersfoort, Netherlands, <sup>3</sup>Ventinova Company, Eindhoven, Netherlands

**Objective:** Testing feasibility of using a 2.4 mm ID Tritube® tube with cuff for fully controlled ventilation in laryngological and phonosurgical cases.

**Method:** 11 adult patient undergoing a laryngological procedure were intubated with the Tritube in the Netherlands. In the first 3 cases patients were also intubated with an MLT tube to note the difference in view and working space. Primary outcome measures were safety of ventilation, field of view of working space for phonosurgical intervention in the intubated airway.

**Results:** In one of the first cases, following a recent upper respiratory infection, the thin tube became blocked by thick secretions and instead of using the option of flushing the tube with saline, the anaesthesiologist decided to re-intubate with an MLT-tube. The ventilation was at no moment jeopardised. The other 10 cases were ventilated without any problem. In all cases the view of the larynx was remarkably good and in the three cases undergoing both types of intubation the view and working space with the Tribute was significantly better than with an MLT tube.

**Conclusion:** The 2.4 mm ID Tribute provides an unprecedented view of the intubated larynx without loss of ventilatory control.

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**R097 Adipose-derived stromal vascular fraction in scarred vocal folds: first results of a phase I/II trial**

Mrs Alexia Mattei<sup>1,2</sup>, Dr Jérémy Magalon<sup>3,4</sup>, Dr Baptiste Bertrand<sup>5</sup>, Dr Cécile Philandrianos<sup>5</sup>, Mrs Julie Veran<sup>4</sup>, Prof Patrick Dessi<sup>1</sup>, Prof Florence Sabatier<sup>3,4</sup>, Prof Antoine Giovanni<sup>2,6</sup>

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Scarred vocal folds (VF) can be congenital or acquired, with a considerable impact on the quality of life. Their treatment is still an unresolved chapter in laryngology. Adipose-derived stromal vascular fraction (ADSVF) is recognized as an easily accessible source of regenerative cells with therapeutic potential in various diseases.

**Objective:** To measure for the first time the safety, tolerability and potential efficacy of autologous ADSVF local injections in patients with scarred VF.

**Methods:** We did an open-label, single arm, at one study site with a 12-month follow-up among 8 patients with disabling scarred VF, refractory to conventional treatments. Lesions involved the middle third of the VF, for at least 12 months and with a Voice Handicap Index > 60/120. Autologous SVF was obtained from lipoaspirates, using an automated processing system. Primary outcome was the number and the severity of adverse events. Secondary endpoints were changes in videostroboscopy, voice recordings (perception, acoustic, aerodynamic data) and quality of life, 1, 6 and 12 months after treatment.

**Results:** Seven women and one man, aged from 25 to 59 years, have been included. No severe adverse events occurred. Some minor adverse events were reported and resolved spontaneously. An improvement in VF vibration, quality of life and perceptive evaluation was noticed in 6 patients. Changes in objective parameters were variable from one patient to another.

**Conclusion:** This study outlines the safety of the autologous ADSVF injection in scarred VF. Preliminary assessments suggest potential efficacy needing confirmation in a randomized placebo-controlled trial on a larger population.

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**R101 The band-aid-fixed bone conduction hearing aid ADHEAR – useful for children with conductive hearing loss**

Prof. Katrin Neumann<sup>1</sup>, Dr. Jan Peter Thomas<sup>2</sup>, Dr. Ph.D. Christiane Völter<sup>2</sup>, Prof. Stefan Dazert<sup>2</sup>

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Conventional bone conduction hearing aids for children bear several disadvantages: headband-integrated systems are frequently not well accepted due to pressure on the head, sweating, or cosmetic stigma. Also, the mechanical conduction loss is higher as for per- or transcutaneous systems. The bone conduction hearing aid ADHEAR seems to overcome a part of these disadvantages by clipping an audio processor on a band-aid fixed behind the ear.

A clinical study\* evaluates the audiometric benefit, the usage and the patients' and parents' satisfaction of 10 children aged 0.5-10 years with a permanent conductive hearing loss using a band-aid-fixed ADHEAR system compared with a headband-integrated bone conduction hearing aid. Aided and unaided pure tone/behavioral observational audiometry and speech audiometry both in quiet and noise are assessed initially of both hearing devices and after 8 weeks of ADHEAR use and questionnaires are administered to the parents and children.

So far, 7 children are included in the study. They show a comparable, tendentially better audiometric outcome using the ADHEAR systems compared with head-band-integrated hearing aids. All parents evaluated the ADHEAR as useful or very useful device for their child. For children <2 years of age, adherence problems of the band-aid may occur. Allergic skin reactions occurred in two cases. The other five children continue using the ADHEAR.

The ADHEAR system seems to be an excellent technical solution for children with conductive hearing loss or chronical draining ears, given shortcomings regarding the adherence of the band-aid and allergic skin reactions can be overcome.

\*Supported by MED-EL

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**R103 Oral placement therapy: The importance of the Jaw function in feeding and speech**

Doctor Rehab Zaytoun<sup>1</sup>

<sup>1</sup>Faculty of Medicine, Cairo University, Cairo, Egypt

Muscle-based feeding and speech disorders (Disorders that happen as part of cerebral palsy, Down Syndrome, apraxia of speech, post CVA patients...etc.) have been always a challenge for the professionals. These patients have seldom improved using the traditional visually and auditory-based speech and language therapy.

Oral placement therapy is a complementary approach -for the traditional approaches- addressing structural placement in clients with movement or placement disorders.

It is an approach that targets the following: Increasing the awareness of the oral mechanism on the somatosensory and metalinguistic levels, normalizing the tactile oral sensitivity, improving the differentiation of oral movements which will reflect on the feeding and the speech intelligibility. The function of the jaw musculature in feeding and speech has always been identified. However, we lack the information on how to assess or improve the jaw function. Oral placement therapy focuses on building the strength and the stability of the jaw in order to achieve the optimum dissociation, grading, and endurance.

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**R107 Eating disorders of early childhood (EDEC): oral motor versus sensory aversions**

Doctor Samia Bassiouny<sup>1</sup>

<sup>1</sup>Otorhinolaryngology Dept., Phoniatic Unit, Ain Shams University, Cairo, Egypt

There are several causes of feeding and swallowing disorders in early childhood. While In organic causes the management is directed to the cause, the real challenge is dealing with EDEC, were there is no apparent organic cause, but rather a wide variety of symptoms, leading to pickiness, growth faltering, nutritional deficiencies, & a disturbed pattern of family interaction.

Eating disorders of early childhood are synonymously used with: functional dysphagia, benign picky eating, tactile defensiveness, sensory food aversion, food avoidance emotional disorder, and toddler anorexia. Picky eating is an eating disorder that starts in early childhood, child demonstrates one or more of these pillars: Loss of interest in food, neophobia, & strong food preferences limiting quantity or variety of food intake. In this talk the pertinent signs or symptoms are going to be presented. Diagnostic evaluation and management alternatives will be discussed.

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**R120 Transdisciplinary Assessment of Dysphagia in Clinical Settings**

Tarja Kukkonen<sup>1</sup>

<sup>1</sup>University Of Tampere, Tampere, Finland

**Background:** Dysphagia is a very common consequence of stroke (Cabre et al 2009; Cichero et al 2012; Eslick et al 2008). However mild and moderate features of dysphagia are often neglected in the acute phase. When not diagnosed and treated properly dysphagia is the main risk factor of aspiration pneumonia and may often result in social isolation. Dysphagia is often examined by instrumental methods which does not edit transdisciplinary co-operation. In this study, swallowing and eating have been examined with clinical tools which can be used by professional from different backgrounds.

**Objective:** The study focused in speech therapist’s, nurses’ and patients’ evaluations of swallowing and its’ disorders.

**Methods:** The protocol consisted of screening the easiness of eating and swallowing in natural clinical and bed-side settings

**Results:** Speech therapists, patients and nurses made quite different judgments about swallowing and eating. The features observed were mainly the same but the interpretation about their meaning differed.

**Conclusion** (take-home message): Dysphagia can be diagnosed by clinical assessments in acute and subacute phase. We created a transdisciplinary protocol for clinical use. Even mild dysphagia has a large impact on persons’ participation and general conceptions of themselves. We need a lot of multi-disciplinary education to ensure that the transdisciplinary diagnostic paths of dysphagia are appropriate in clinical settings.

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**R122 Cases study (3 cases) in the Autistic Spectrum and the possibility of a syndrome’s existence**

Evangelos Bochatziar<sup>1</sup>

<sup>1</sup>Special Education Clinic Patras Greece, Patras, Greece

3 cases in the High Functioning Autistic Disorders’ Spectrum to be studied with a group of symptoms which consistently occur together. This 3-person group are kids – teenagers at the age of 9 to 15 years old and they are part of a 9-person group who had attended therapy in my national clinic for Autistics. All of these cases have been diagnosed with the Autistic Spectrum Disorders especially at the high functioning section and have received therapy at my clinic for a 9-month duration each.

At the presentation will be presented the difference before and after the therapy in social skills, expressions and tasks especially for this team of sufferers as well. Some of them will be presented via photos and video clips which show the extremely noticeable difference between the beginning of the therapy and at the end of it. It is important to mention that all of them had the same condition characterized by a set of associated symptoms which were the reason they referred to me, they had needed almost the same duration of intervention to gain results and the results were the same.

All of these cases appeared at the time period of the years 2012 till now, 2017. Finally, at the presentation will be presented a random sample of cases at the “normal high functional” autistics to be compared with the other group of cases where we examine a new syndrome’s existence at the Autistic Spectrum Disorders

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**R124 Vocal tract adjustment without Phonation – A prospective Study**

Dr. med. Simone Graf, Lena Richter, Patrick Hoyer

*<sup>1</sup>Department of Otorhinolaryngology/ Phoniatics, Klinikum rechts der Isar, Technische Universität München / Fraunhofer Headquarters, 81675 München, Germany*

Voice production, especially during singing, is a complex process where different aspects such as the breathing, glottal activity (phonation) and shaping of the vocal tract are simultaneously invoked. Standard warm up procedures without phonation are common concerning breathing and stance. For training of shaping the vocal tract, the proper position of the vocal tract is usually adjusted with glottal activity, using the resonance position of the different vowels as feedback signal. It would be advantageous to train the vocal tract without stressing the vocal folds.

Such training method is investigated in our study, wherein the vocal tract resonances is excited by external acoustic fields without using the vocal folds. A single frequency generated by a speaker interacts with the vocal tract resonances close to the open mouth of the participants. This static acoustic field is enhanced or muted depending on the position of the articulatory elements as tongue, jaw, lips, velum etc. An amplification of the external signal due to resonance – if the external acoustic field is carefully designed – may correspond to the resonances of the vocal tract also during phonation.

We included 30 vocally healthy lay-singers who were examined in April 2017. The results concerning the acoustical data along with the individual feedback of the participants concerning the influence of the novel technique on their own voice after training are discussed. The measured results correspond with the self-perception of the participants. Furthermore a perspective is given as how the technique may be helpful for voice therapy.

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**R125 Spasmodic Dysphonia: Botox injection vs Surgical options**

Mr Yakubu Karagama<sup>1</sup>

*<sup>1</sup>Manchester University Hospital NHS Trust, Manchester, United Kingdom*

**Objective**

Explore surgical options in the treatment of adductor spasmodic dysphonia

**Introduction**

This is a neuromuscular disorder of unknown cause. The abnormality is said to be in the basal ganglia of the brain leading to uncontrolled release of acetyl choline at the neuromuscular junction . This results into involuntary contraction of the laryngeal muscles during phonation causing intermittent voice breaks and strain.

**Types**

Adductor (ADSD) and abductor spasmodic dysphonia (ABSD) depending on the muscle affected.

**Diagnosis**

The diagnosis is made by exclusion of other physical lesions of the vocal cords. Usually this is done with fibreoptic and stroboscopic examination of the larynx.

**Methods**

ADSD: A review of practice and introduction of new surgical techniques. We have reviewed 100 cases receiving botox injection in our clinic using a percutaneous technique guided by laryngeal EMG. We compared this to a small number of patients who underwent CO2 thyroarytenoid myoneurectomy and thyroplasty type 2 surgery.

**Result**

Our results showed long term promising result with surgical approach.

**Conclusion**

Botulinum toxin is still the first line treatment for spasmodic dysphonia. However, there is increasing role for surgical treatment with long term excellent result.

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**R126 The causes for dysphagia in infants and toddlers**

Irena Hocevar Boltezar<sup>1</sup>

<sup>1</sup>University Medical Center Ljubljana, Department Of Otorhinolaryngology And Head & Neck Surgery, Ljubljana, Slovenia

**Objectives**

Dysphagia can threaten normal child's development and even his/her life. The fiberoptic endoscopic evaluation of swallowing (FEES) is useful in diagnostics and rehabilitation planning of dysphagia.

**Methods**

The data about gender, feeding mode, causes for dysphagia, results of FEES, and suggested rehabilitation procedures were taken from the documentation of small children with dysphagia examined in 2017 at our hospital. Causes for unsuccessful per oral feeding were identified.

**Results**

21 FEES procedures were performed in 19 children (11 boys, 8 girls, mean age 9.6 months, range 0.3-32 months). Eleven children were fed by nasogastric tube (NG), and 4 children had gastrostoma (PEG). The causes for dysphagia were lesions of the nervous system (NS) in 9, genetic causes in 10, and disordered oral sensibility in 2 children. FEES revealed disorders in oral phase in 14, pharyngeal phase in 7, laryngeal mobility and/or sensibility in 9, and evident aspiration in 2 children. The proposed rehabilitation included modifications of the diet/position in 15/5, oral stimulation in 2 children, and PEG in 1 child. Results of FEES suggested normal feeding in 3, modified diet in 4, starting per oral feeding besides the use of NG/PEG in 11 children, and use of NG/PEG in 3 children. Per oral feeding was impossible because of aspiration/disordered oral phase in 2 children with syndromes, and one child with NS lesion.

**Conclusions**

FEES is a safe procedure even in small children. It must be performed with care to give information about the disordered swallowing phase and possible rehabilitation procedures.

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**R135 Combined medialization thyroplasty and reinnervation in unilateral vocal fold paralysis: our experience**

Dr Ahmed Ibrahim Nasr<sup>1</sup>, Professor Dr. Andreas Mueller<sup>1</sup>

<sup>1</sup>SRH Wald-Klinikum, Gera, Germany

Medialization thyroplasty is commonly used for treating unilateral vocal fold paralysis. Combination between thyroplasty and arytenoid adduction offers better functional results especially in posterior glottal gaps. Yet the non-innervated vocal fold will show degeneration sooner or later which can be avoided using plain reinnervation.

Tucker described nerve-muscle pedicle reinnervation of the Larynx. In contrast to the non-reproducible results of Tucker, Jean Paul Marie has successfully established a selective laryngeal reinnervation with phrenic nerve transfer. According to the recent clinical studies we know that laryngeal pacing could be the future to restore vocal fold movement. This option needs preserved muscles. Therefore Larynx-Electromyography is mandatory. In case of ongoing muscle atrophy, surgical reinnervation should be indicated. Such plain reinnervation is a quick and easily step that can be done during medialization thyroplasty. It allows muscle-bulk-preservation and enhances later dynamic options.

We present in this case report a modified thyroplasty technique (Mueller's Technique) which is a combination between plain reinnervation of the thyroarytenoid muscle using ansa cervicalis and medialization thyroplasty. A 39-year old male Patient with progressive vocal muscle atrophy was evaluated. The inclusion of the reinnervation step in the medialization thyroplasty didn't remarkably prolong the surgery or the postoperative care. Three months later the voice improved dramatically (DSI: from - 0.55 to 4.74). We are expecting the effect of the reinnervation within the next months to keep the achieved result stable.

Simple reinnervation in combination with traditional medialization thyroplasty may offer a long-term patient satisfaction and avoid future muscle degeneration.

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**R136 Exploring Family Early Interactive Literacy Practices**

Rana Alkhamra<sup>1</sup>, Hana Mahmoud<sup>1</sup>, Jihad Al-Araifi<sup>1</sup>

<sup>1</sup>The University Of Jordan, Amman, Jordan

This study investigates early interactive literacy practices in Jordanian families with young children.

Survey data from 300 Jordanian families was analyzed. Parents were asked about home interactive reading practices, their frequency, and the importance of these practices to child language and literacy skills development. Family and child characteristics were examined as predictors of home reading practices. Descriptive statistics, and analysis of variance to identify predictors of early reading practices among families were used. Bivariate analyses was used to investigate families' perspective of the importance of early reading.

Around 91% of the families read children books, either daily (21%), weekly (48%) or rarely (21%). Analysis of variance was used to analyze family and child characteristics as predictors of early reading practices. Families of children with speech disorders read less than those of children with no speech disorders (P=.003). Parents' education significantly affected their early reading practices (p=.003). Increasingly, younger parents read less frequently than older parents (p=.004). Parents showed awareness of the relation between early reading practices and language (r=.529), and reading skills (r=.683) development. Approximately 35% of parents stated that receiving education from healthcare providers about the importance of early reading would support home early literacy practices.

Early literacy skills depend largely on the experiences provided to children at home. This study identifies how child and family characteristics can be associated with the family literacy orientation. Health care providers can work in collaboration with families to ensure that young children have sufficient opportunities to participate in home early literacy activities.

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**R137 Reliability and Clinical Validity of the Turkish Reflux Symptom Index**

Associate Professor, MD Sevtap Akbulut<sup>1</sup>, Assistant Professor, CCC-SLP Fatma Esen Aydinli<sup>2</sup>, Attending fellow, MD Oguz Kuşçu<sup>3</sup>, Associate Professor, CCC-SLP Esra Özcebe<sup>2</sup>, Professor, MD Taner Yilmaz<sup>3</sup>, Professor, MD Clark Rosen<sup>4</sup>, Professor, PhD, CCC-SLP Jackie Gardtner-Schmidt<sup>5</sup>

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**Objective**

To search the reliability and validity of the Turkish Reflux Symptom Index (RSI).

**Materials and Methods**

A Turkish version of the original English RSI was developed. One hundred twenty patients with a Reflux Finding Score (RFS) >7, and 182 asymptomatic subjects with RFS<7 were included in the study. For the RSI reliability analysis, the Turkish RSI was filled twice, with a week interval. The test-retest reliability was assessed through the Pearson correlation test, whereas the Cronbach's  $\alpha$  coefficient was used for internal consistency analysis. For the clinical validity assessment, the scores obtained in the patients group were compared with the data from the asymptomatic individuals through the Mann-Whitney U. Finally the correlation between RSI and RFS in the 120 participants was assessed.

**Results**

Internal consistency of the Turkish version of the RSI showed very high values ( $\alpha=0.95$ ). The test-retest reliability in the patients, as well as in the control group was very high, the values were respectively,  $r = 0.85$  and  $r=0.82$ . The mean RSI score in the patients was significantly higher than the one obtained in the control group ( $20.08 \pm 6.5$  and  $7.51 \pm 4.3$ ,  $p < 0.001$ , respectively). The mean RFS score in the patients group was  $12.57 \pm 4.4$  and the correlation between RFS score and RSI score was high ( $r = 0.70$ ).

**Conclusion**

The Turkish Reflux Symptom Index has been proven to be an easily administered, reliable and valid instrument for the self- evaluation of the laryngopharyngeal reflux.

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**R139 Impact of radiation technique and fraction dose on hearing impairment in platinum-treated pediatric medulloblastoma patients**

Dr. med. Amelie Tillmanns<sup>1</sup>, Dr. med. Sergiu Scobioala<sup>2</sup>, Ross Parfitt<sup>1</sup>, Peter Matulat<sup>1</sup>, Mohammed Channaoui<sup>2</sup>, Heidi Wolters<sup>2</sup>, Hans Theodor Eich<sup>2</sup>, Antoinette am Zehnhoff-Dinnesen<sup>1</sup>

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**Introduction**

This study compares sensorineural hearing loss (SNHL) in medulloblastoma patients receiving various radiotherapy treatment modalities and platinum-based chemotherapy.

**Methods**

24 children with medulloblastoma, mean 9.7 years age at diagnosis, with normal pre-treatment hearing were treated with radiotherapy and platinum-based chemotherapy (HIT 2000 protocol). Patients had one of two radiotherapy regimes: conventionally-fractionated (CRT) (N=14) and hyper-fractionated (HRT) (N=10) and one of two separate treatment techniques/positions ((tomotherapy in supine position (N=7) or combined dorso-ventral static field and IMRT radiation in abdominal position (N=17)). Results of all audiological tests were gathered and grouped into two timepoints: T1) prior to radiation up to the 3rd cisplatin cycle; T2) from 3rd cisplatin cycle up to latest follow-up. Best thresholds at T1 were compared with worst at T2. Audiological data included bone-conduction (mean 0.5-3 and 4 & 6 kHz) and air-conduction (4 & 8 kHz) and Münster Classification.

**Results**

Bilateral high-frequency SNHL was observed in 22/24 patients at T2 and significant differences between thresholds at T1 and T2 were evident across all groups. No difference in audiological outcome was found between radiotherapeutic method groups (CRT vs HRT). Cochlear doses did not differ significantly between any of the groups. Audiological outcome differed significantly (<0.05) between the two radiation technique/position groups in degree of hearing threshold change between timepoints in favour of tomotherapy in the following factors: audiological classification grade, 6 kHz bone-conduction and left-sided 8 kHz air-conduction thresholds.

**Conclusions**

These results demonstrate the impact of radiation position/technique on the severity of SNHL in medulloblastoma patients.

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**R140 Intrafamilial phenotypic variability of Specific Language Impairment**

Dr. Sabrina Regele<sup>1</sup>, Prof. Dr Lisa Bartha-Doering<sup>2</sup>, Prof. Dr Antoinette am Zehnhoff-Dinnesen<sup>1</sup>

<sup>1</sup>University Hospital Münster, Münster, Germany, <sup>2</sup>Medical University Vienna, Vienna, Austria

**Introduction**

Specific Language Impairment (SLI) is a common developmental disorder in childhood. The prevalence is 7% of children attending kindergarten (Thomblin et al.1997). Typical symptoms are deficits in morphology, syntax, vocabulary and written language acquisition. The symptoms are very heterogeneous. Therefore we examined a German family affected by a genetic language disorder to get individual language profiles.

**Methods**

We investigated language functions in 32 members of a family affected by Specific Language Impairment with a neuropsychological and neurolinguistic test battery. The test battery included verbal-auditory short-term and verbal working memory, reading aloud and writing, language comprehension, morphology and syntax, word fluency and the nonverbal IQ.

**Results**

Heterogeneity of linguistic deficits was shown in this family. Twelve family members displayed language deficits. One fourth of all family members fulfilled the criteria of the diagnosis SLI. The language deficits can be described as expressive SLI. Most often, verbal fluency, verbal short-term/working memory and writing were impaired. The nonverbal IQ was normal in all family members.

**Discussion and Conclusions**

Specific Language Impairment is a very complex and heterogeneous disorder. Even in the investigated family (one genetic population) the linguistic disorder manifests itself in different language abilities to a variant degree. The genetic origin of the linguistic disorder in this family is not found yet. Further genetic investigations and a MRT imaging are planned to understand more the etiology and far-reaching effects of Specific Language Impairments.

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## R146 Fetal growth restriction is associated with poor communication skills at early school-age

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### Objective

Fetal growth restriction (FGR=birth weight <10th percentile and/or abnormal umbilical blood flow) is a risk factor for poor language and communication skills. These skills are essential for a child's cognitive development and academic outcome. In this study communication skills of 8–10-year old FGR children born at 24–40 gestational weeks were compared those of their gestational age-matched, appropriately grown (AGA= birth weight >10th percentile) peers.

### Methods

A prospectively collected cohort of 42 FGR and 31 AGA children was recruited prenatally at a Finnish tertiary care centre during 1998–2001 and tested using various assessment methods at the age of 8–10 years. The communication skills were evaluated by the Children's Communication Checklist-2 (CCC-2) questionnaires composed by parents. CCC-2 is a screening tool for identifying children with possible impairment in language skills, pragmatic language skills and in general communication composite (GCC).

### Results

The FGR-children demonstrated poorer language and pragmatic language skills than the AGA children. Of the FGR children 19% scored below the 15th percentile threshold value for normality in GCC compared to 7% in AGA group. Furthermore, impaired communication skills became more prominent as the FGR children advanced to the third grade (≥9 years).

### Conclusions

FGR, especially in combination with prematurity, seem to be a risk for poor communication skills when compared with AGA children. With growing academic demands communication problems become more evident, indicating a need for early recognition, timely interventions and continuous linguistic evaluations of FGR children in order to optimize their long-term outcome in academic and communication skills.

## NOTES

## R152 Auditory and Visual Speech-Perception Deficits in Language-Impaired Children

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### Objectives

Auditory, visual and audiovisual speech perception in 5–6 year-old children with and without developmental language impairment (LI) was investigated.

### Methods

The participants were presented with auditory, visual and congruent audiovisual stimuli, and with incongruent McGurk stimuli, where the consonant uttered by the voice (auditory /aPa/) differed from that articulated by the face (visual /aKa/). All auditory and audiovisual speech stimuli were presented in noise and in noise-free conditions.

### Results

Both groups of children were inaccurate while perceiving consonants in noise and gained from the visual input in congruent audiovisual stimuli. However, LI children were significantly worse than the typically developing (TD) children in all auditory and congruent audiovisual conditions, and at visual speech-reading. In addition, while TD children were strongly influenced by the visual input in McGurk stimuli and gave mostly /aKa/ responses, LI children gave both /aTa/ and /aKa/ responses. Finally, auditory, visual and audiovisual speech perception did not differ between LI children who had problems predominantly either in receptive or expressive language skills.

### Conclusions

LI children had clear deficits in speech-in-noise perception and at visual speech-reading, reflected in poorer performance while perceiving congruent audiovisual speech. The poorer visual speech-reading ability was also reflected in their responses to McGurk stimuli, i.e. children with LI confused visual /aKa/ with /aTa/. In summary, these results show that speech perception problems in LI occur both in auditory and visual domain.

## NOTES



**R160 Impact of a customizable and flexible transportable seated positioning device on swallowing disorders ( DATP-DEG)**

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Positioning adaptations in terms of positioning of the head are recognized as fundamental in the management of swallowing disorders (SD). To reduce the cervical constraints and supply supports stabilizing the cervical position, a global positioning adapted of the body is a required meadow. A device customizable and flexible positioning seated transportable (DTAP) to place on a standard seat was finalized and its profit on SD is to be validated.

The aim of this work is to compare the the patients outcomes reported in a population of SD benefiting from a DTAP with regard to a SD population by not benefiting after 1 month of management.

It is a comparative clinical trial randomized by superiority in 2 parallel groups. The arm without DTAP will benefit as the arm DTAP of an educational session but will have no device to support the positioning correction to be applied during the period following the session.

Assessment criteria are the scores of the several domains of the Dysphagia handicap index, the measures of the seated adaptation positioning control, and of the hyoid bone motion during swallowing.

30 patients were included in each arm : 39 men and 21 women. The average age is of 62 years (min 30 max 82). The aetiologies of the SD are varied. 26 patient ended the protocole in the arm with DATP, 28 in the arm without DATP.

This presentation will present the final outcomes of this study supported by a grant from the University Hospital Toulouse “2012”

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**R161 Acute Unilateral Vestibular Failure - a pilot study of Rheohaemapheresis and Steroid therapy**

MD, Ph.D. Jakub Dršata<sup>1</sup>, prof., MD, Ph.D. Milan Bláha<sup>2</sup>, MD, Ph.D. Jan Mejzlík<sup>1</sup>, M.A., Ph.D. Michal Janouch<sup>1</sup>, MD, Ph.D. Milan Košťál<sup>2</sup>, prof., MD, Ph.d. Viktor Chrobok<sup>1</sup>

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Acute Unilateral Vestibular Failure (AUVF) is an acute clinically-defined disease of vestibular labyrinth with unknown etiology. Among supposed etiological factors, vascular theory seems to play a significant role.

The aim of the study is a pilot probe into the mechanism of vestibular organ function in standard steroid therapy (ST) and rheohaemapheresis (RF).

Patients and methods: in the course of the study years 2016 - 2017, 7 patients have been recruited in the RF arm and 9 patients in the ST therapeutic arm. Both the RF and ST groups underwent detailed vestibular examination prior to therapy and 1 month after therapy termination, of which the most stress was put on videooculography (VOG), video-head-impulse-test (VHIT) and vestibular evoked myogenic potentials (VEMP). Besides, haematological parameters were analyzed.

The results make evident, there is no conclusive vestibular examination for undubious AUVF identification. While the standard caloric test is difficult to be performed in patients with acute vestibular lesion, the VHIT and VEMP are feasible at AUVF patients and appear to provide good consistency with clinical diagnosis. Both treatment methods are safe for complications, none of them show a dedicive superiority in the therapeutic effect.

Supported by MH CZ - DRO (UHHK, 00179906).

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**R171 Study on the physiological difference between standing and sitting positions in the Duration for Normal Swallowing**

Ahlam El-adawy<sup>1</sup>, Eman Ahmed, Ahmed Emam, Rasha Hashem

<sup>1</sup>Sohag University, Sohag, Egypt

**Aims:** To assess the physiological difference between standing and sitting positions in oropharyngeal phase of swallowing in order to better understand of physiological processes.

**Introduction:** Although sitting upright is the typical position for eating and drinking, the rapid rhythm of daily life activity encourages many people to eat and drink in standing position. There is considerable amount of research assessing the effect of posture (supine and upright) on swallowing. To the best of authors' knowledge, there are no previous studies that approached the difference between sitting and standing positions and their effect on swallowing.

**Patients and methods:** Dynamic videofluoroscopic swallow studies were performed on 30 healthy adult volunteers (15 males and 15 females) ranging in age from 18 to 45 yrs. All volunteers were examined in both sitting and standing positions with a lateral view using barium sulfate. The protocol included intake of two liquid boluses and two solid boluses. Oral Transient Time and Pharyngeal Transient Time are measured.

**Results:** During studying fluid bolus, there was significant difference between sitting and standing positions in both Pharyngeal Transient Time (P value=0.005). On the other hand, there was no significant difference between sitting & standing positions in Oral Transient Time.

**Conclusion:** Variations of PTT during swallowing of fluid bolus in both sitting and standing did not deviate from that of a normal healthy swallow. Further studies combined with respiratory monitoring to assess the pattern of respiration during swallowing are needed

**Keywords:** Videofluoroscopy, normal swallowing, posture

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**R173 Effect of voice therapy with phonomicrosurgery on voice outcomes for vocal fold polyps**

D. Gokhan Toptaş<sup>1</sup>, M.D. Kemal Keseroglu<sup>1</sup>, M.D Emel Cadalli Tatar<sup>1</sup>, M.D. Mustafa Şahin<sup>3</sup>, Elife Barmak<sup>1</sup>, Sevilay Karahan<sup>4</sup>, M.D. Mehmet Hakan Korkmaz<sup>2</sup>

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**Objective:** The aim of the study was to investigate the effect of voice therapy with phonomicrosurgery on voice quality according to subjective and objective voice evaluation parameters in patients with vocal fold polyps.

**Methods:** The prospective study was performed with the patients who diagnosed as vocal fold polyp between May 2016 and January 2017. The patients divided into Group 1 (only surgery) and Group 2 (surgery+voice therapy). Two groups were compared preoperatively and postoperatively according to; vocal handicap index (VHI-10), GRBAS score, Maximum phonation time (MPT), S/Z ratio, fundamental frequency (FO), Jitter, Shimmer, Noise to harmonic ratio (NHR) .

**Results.** The study included fifteen female (%37,5) and twenty five (%62,5) male patients. There were a statistically significant decrease in VHI and GRBAS scores in boths groups (p<0.001). The posttreatment VHI exchange score in Groups 2 was statistically significant different when compared two groups. A statistically significant increase in MPT durations in both group was detected (p<0.001). The posttreatment MPT was statistically significant different in Group 2 when compared two groups. (p<0.001). Statistically significant increases in FO and decrease in Jitter and Shimmer were detected in both groups. The difference in NHR scores in both groups were not statistically significant (p > 0.05).

**Conclusion:** This study showed the beneficial effect of the voice therapy when combined with microphonosurgery for vocal fold polyps.

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**R180 Bilingual intervention using ABA methods in United Arab Emirates: Preliminary findings**

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There are few published studies that have evaluated the effects of bilingual communication interventions for children with autism spectrum disorder (ASD). One common practice among professionals is to ask parents to use one language only with children with ASD. In this study, we describe and report the findings of a project that investigates bilingual intervention using applied behavior analysis (ABA) in children with ASD in the United Arab Emirates (UAE).

We examine the effects of bilingual intervention on vocabulary skills for 30 bilingually exposed children with ASD who are enrolled in an intensive ABA program. The results of our preliminary findings show no detrimental effects to bilingual intervention, and therefore do not recommend advising parents to use one language only. These results seem consistent with the findings of the few published studies.

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**R183 The endoscopic evaluation of the oral phase of swallowing (Oral-FEES, O-FEES): a new procedure proposal**

Dr. Daniele Farneti<sup>1</sup>, Prof. Bruno Fattori<sup>2</sup>, Dr. Luca Bastiani<sup>3</sup>

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Oral FEES (O-FEES) is an endoscopic procedure conceived to directly visualise the oral phase of swallowing. In the perspective of clinical use, the feasibility, safety and acceptability of O-FEES has been evaluated. Subsequently, the procedure was compared with the radiological gold standard. The acceptability of O-FEES was compared to that of FEES using a 10 point questionnaire submitted to a sample of 52 outpatients complaining of swallowing disorders. Repeated measure analysis of variance (rm-ANOVA) models were used to test the mean difference of acceptability in the same subjects after FEES and O-FEES. Subsequently, another sample of 8 male outpatients underwent a simultaneous O-FEES and videofluoroscopic study (VFSS).

The inter-rater reliability using 10 radiological landmarks, compared to O-FEES, was blindly determined between two raters. Inter-rater agreement between the two judges for O-FEES and VFSS scores was assessed with the single score intra-class correlation coefficient (ICC). Differences between FEES and O-FEES answers for each question and among all the items considered overall were statistically significant (rm-ANOVA; F-statistic  $p < 0.001$ ). The inter-rater agreement concerning endoscopic and radiological evaluations between the two raters showed strong values of intra-class correlation coefficient (ICC) (95% confidence interval): 0.875 (0.373-0.979) and 0.921 (0.542-0.986), respectively.

The Bland-Altman test showed a bias of -0.24 (95% limits of agreement; -1.77 to +1.19), which suggests that both methods produced almost identical results. In clinical practice and compared with FEES, O-FEES is tolerated and safe. Compared with the radiological gold standard, O-FEES offers reliable information about oral preparation and oral propulsion.

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**R184 Aspiration: diagnostic contributions from bedside swallowing evaluation and endoscopy**

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The aim of this study was to identify which characteristics, collected from bedside swallowing evaluation (BSE) and fiberoptic endoscopic evaluation of swallowing (FEES), are a risk or a protective factor for aspiration.

This retrospective study included data on 1577 consecutive patients, collected from BSE and FEES. A bivariate analysis was performed to verify the association of each variable with aspiration (chi-square test). The variables associated with aspiration entered into a multivariate logistic model to verify and quantify this association.

Several variables were found to be significantly associated (P value of less than 0.05) with aspiration, some being a protective factor against aspiration: cooperation, sensation, laryngeal elevation, direct therapy. The regression model identified the most variables related with aspiration, among which tracheotomy, material pooling, spillage. Patients able to perform dry swallows are 77% less likely to aspirate (protective factor).

Several variables are involved in the protection of airways during swallowing. Their interaction, in patients with swallowing disorders, offers the clinician the best way to interpret BSE and FEES.

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**R188 Adaptations of the respiratory system for phonation of pitch jumps – a real-time MRI study**

Louisa Traser<sup>1,2</sup>, Fabian Burk<sup>2,3</sup>, Ali Caglar Özen<sup>4</sup>, Michael Burdumy<sup>4</sup>, Michael Bock<sup>4</sup>, Daniela Blaser<sup>1</sup>, Bernhard Richter<sup>2,3</sup>, Matthias Echternach<sup>2,3</sup>

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The respiratory system is a central part of voice production but the underlying functional relations of diaphragm (DPH) and rib cage (RC) adaptations for the phonation of pitch jumps are not yet understood. This study therefore aims to analyse respiratory dynamics in pitch jumps in phonation via dynamic MRI of the lung. Images of the breathing apparatus of 7 professional singers were captured in a 1.5 T MRI system in supine position during phonation of octave jumps in high, medium and low range of the singer's tessitura in upwards and downwards direction.

In a dynamic series of cross-sectional images of the lung, distances between characteristic anatomical landmarks were measured. While for pitch jumps upwards the singers' DPH was raised quickly, for pitch jumps downwards, the raising DPH was suddenly moved in inspiratory direction. This movement was predominant in the posterior part of DPH and was associated with a shift of the DPH-cupola in anterior direction.

In accordance with previous work of our group, different functional units could be identified in DPH and RC movement during phonation, which could support phonation by facilitating the control of subglottic pressure for pitch adaption.

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## R189 Vocal Assessment in unilateral vocal cord paralysis: a qualitative systemic review

Dr, MD, PhD Lise Crevier-Buchman<sup>1</sup>, Dr Zainab Bakhsh<sup>1</sup>

<sup>1</sup>Hôpital Européen Georges pompidou, Paris, France

**Objective:** To review the relevant basic vocal evaluation in unilateral vocal cord paralysis (UVCP).

**Study design:** a qualitative systemic review.

**Methods:** Electronic searches were conducted on PUBMED for clinical studies reporting 'voice evaluation', 'stroboscopy', 'perceptual evaluation', 'acoustic and aerodynamic', and 'laryngeal electromyography (LEMG)' in combination with 'unilateral vocal cord paralysis'. The review was limited to studies published between 1989 and January 2018 in English language. Studies independently selected by two-review authors. Qualitative analysis was performed on three domains: quality of studies, strength of evidence and impact of intervention.

**Results:** Our search has identified 1740 abstracts, and 34 studies met our inclusion criteria. High Inter-rater agreement was reported in glottic insufficiency and vocal fold bowing among the stroboscopic assessment scales. The speaking intensity reflects more direct correlation with the patient's self-assessment of voice. High consensus of auditory perceptual evaluation was reported between GRBAS and CAPE-V scales with higher sensitivity for CAPE-V. LEMG is a good predictor of poor recovery in patients with UVCP and is clinically useful in identifying candidates for early definitive intervention. The acoustic analysis of jitter, shimmer and HNR correlated highly with the improvement after medialization surgery.

**Conclusion:** There is a lack of agreement in the scientific literature among the standardized basic assessment protocol in UVCP. We suggest the recording of voice intensity as a minimum parameter of aerodynamic analysis. The perceptual evaluation with CAPE-V seems more relevant in the objective assessment with the use of stroboscopic evaluation as a reference for vocal fold position and tension.

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## R193 Speech in Adults Treated for Unilateral Cleft Lip Palate

Dr Staffan Morén<sup>1</sup>, Dr Per-Åke Lindestad<sup>2</sup>, Ms Lilian Stålhammar<sup>3</sup>, Dr Mats Holmström<sup>2</sup>, Dr Maria Mani<sup>4</sup>

<sup>1</sup>Department of Surgical Sciences, Otorhinolaryngology and Head and Neck Surgery, Uppsala University Hospital, Uppsala, Sweden, <sup>2</sup>Division of Ear, Nose and Throat Diseases, Department of Clinical Science, Intervention and Technology, Karolinska Institute and Karolinska University Hospital, Stockholm, Sweden, <sup>3</sup>Department of Neural Sciences, Logopedics, Uppsala University, Uppsala, Sweden, <sup>4</sup>Department of Surgical Sciences, Plastic Surgery, Uppsala University Hospital, Uppsala, Sweden

**Objective:** The aim of the study was to evaluate speech among adults treated for unilateral CLP (UCLP) as rated by naïve listeners, speech language pathologists (SLPs) and patients, and compare ratings.

**Methods:** All patients with complete UCLP treated at Uppsala University Hospital, Uppsala, Sweden, between 1960 and 1987 were invited. A total of 73 of 109 patients (67%) participated at a mean follow up time of 35 years, with a non-cleft control group (n=55). All participants filled out a questionnaire for self-rating of speech and their speech was audio-recorded digitally. Fourteen naïve listeners and four SLPs rated the speech individually from blinded recordings.

**Results:** There were more speech abnormalities among patients compared to controls according to the ratings of naïve listeners and SLPs. The patients were less satisfied with their speech and rated themselves to have more speech abnormalities than controls ( $p < 0.001$ , Mann Whitney U test). There were positive correlations between the speech ratings by naïve listeners and SLPs ( $r = 0.44$  to  $0.69$ ,  $p < 0.001$ , Spearman). The correlations between ratings of any of these groups and the patients' self-ratings were weaker ( $r < 0.40$ ).

**Conclusion:** Adult patients treated for UCLP had fairly high speech-satisfaction but lower than controls. Agreement between ratings by naïve listeners and SLPs were fair while the agreement between these ratings and self-assessment of speech varied widely. When assessing treatment outcomes in adult patients treated for UCLP, differences in perception of speech abnormalities by professionals, laymen and patients should be taken into account.

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**R202 Tubes in voice therapy? What research tells us.**

Anne-Maria Laukkanen<sup>1</sup>

<sup>1</sup>University of Tampere, Speech and Voice Research Laboratory, Tampere, Finland

Phonation applying semi-occlusion of the vocal tract like voiced fricatives, lip and tongue trills, nasals, closed vowels [y:, o:, u:], hand over mouth technique, and phonation through some artificial device that narrows and/or lengthens the vocal tract are widely used in voice training and therapy. Phonation through a tube with the distal end either in air or submerged in water has been used for a longer time in voice exercise tradition to improve vocal function and voice quality.

The use of different types of tubes and straws in vocal exercising has become increasingly popular during the last two decades. The topic has also gained a growing international research interest. This lecture summarizes results of investigations on the effects of tube training methods and on principles behind the effects.

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**R204 Smoothed Cepstral Peak Prominence (CPPS), Voice Activity and Participation Profile (VAPP) and Vocal Health**

Caitriona Munier<sup>1</sup>, Meike Brockmann Bauser<sup>2</sup>, Irma Ilomäki<sup>3</sup>, Elina Kankare<sup>4</sup>, Anne-Maria Laukkanen<sup>3</sup>, Ahmed Geneid<sup>1</sup>

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CPPS is a spectrum based acoustic measure of dysphonia. We investigated the relations between CPPS and other vocal health measures.

Vowel and text reading samples from 183 healthy teachers; 99 Kindergarten teachers (KT), and 84 Primary School teachers (PST) were investigated for CPPS. Text reading was recorded in conversational loudness by PST, while KT read the text with chattering noise in the headphones to simulate the voice use in noisy classroom. CPPS values were studied in relation to the VAPP, laryngoscopic findings, and self-reported voice related health variables and voice symptoms. Comparison was also made for CPPS in vowel phonation and text, and between PST and KT.

CPPS from text was significantly higher in KT than PST due to higher sound pressure level in KT. CPPS from vowel had a low negative correlation with VAP-PCom11 (r -0.175, p 0.018). CPPS from text correlated positively with symptoms of vocal fatigue in PST. VAPP Com17 had a positive correlation with CPPS from text in PST (r 0,25, p 0,022), and VAPPCom 14 and VappEmotion22 in KT (r 0,214, p 0,034 and r 0,217, p 0.032, respectively). In KT, VAPP severity sum correlated negatively with CPPS txt (r -0,233, p 0,02).

People with louder or more pressed voice (leading to higher CPPS) seem to be more vulnerable to symptoms of vocal fatigue and communicative and emotional problems related to them. Deterioration in voice quality of loud classroom speech may indicate the total severity of voice related problems in functionally healthy subjects.

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**R211 Endoscopic management of Laryngotracheal Stenosis Using Diode Laser and Balloon Dilation**

Prof. Sergei Karpishchenko<sup>1</sup>, Prof. Marina Ryabova<sup>1</sup>, Mikhail Ulupov<sup>1</sup>

<sup>1</sup>Pavlov First Saint Petersburg State Medical University, Saint Petersburg, Russian Federation

**Study objective:** Evaluation of the effectiveness and safety of diode laser surgery and balloon dilation of benign laryngotracheal stenosis (LTS).

**Materials and methods:** A retrospective chart review was done for 29 patients with LTS who were treated with 980 nm diode laser surgery and balloon dilation between October 2013 and December 2016 in the ENT department of Pavlov First Saint Petersburg State Medical University (Russia).

**Results:** The study included 29 patients (9 men and 20 women). The stenosis was located within the larynx and / or in the upper third of the trachea (28 patients, 96.5%), had a length of 5 to 40 mm (median – 10 mm) and was 2-3 Cotton-Myer degree, 12 patients had tracheostomy. Under GA with high-frequency jet ventilation four radial incisions with diode laser in pulsed mode were followed by 2 balloon dilations. The number of surgeries varied from 1 to 4 (total of 48 operations), the interval between interventions was on average 23 months (from 6 to 42 months). In 17 cases a four-minute 0.4 mg / kg mitomycin C application was done. Operations and the postoperative period in all cases were uncomplicated. Statistically significant increase in PEF was achieved from  $1.9 \pm 1.11 / s$  to  $4.4 \pm 1.8 / s$  ( $p = 0.000$ ). The follow-up period averaged 36.2 week. Mitomycin C did not significantly affect the result ( $p = 0.174$ ).

**Conclusions:** Endoscopic diode laser surgery with balloon dilation is a safe and effective method for LTS treatment.

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**R212 Diode Laser in Recurrent Respiratory Papillomatosis Surgery**

Prof. Sergei Karpishchenko<sup>1</sup>, Prof. Marina Ryabova<sup>1</sup>, Mikhail Ulupov<sup>1</sup>, Gleb Portnov<sup>1</sup>

<sup>1</sup>Pavlov First Saint Petersburg State Medical University, Saint Petersburg, Russian Federation

Diode lasers are used for RRP surgery in Russia. Diode laser is small, portable, versatile, easy to use, has a stable power output, rapid setup time, an expected long life and low costs.

Diode laser energy is maximally absorbed by hemoglobin. The radiation is conducted via a quartz fiber and can be used in constant and pulsed modes for incision, vaporization and interstitial coagulation. Constant irradiation at 7W is better in cases of bulky exophytic papillomas. Pulsed irradiation is better used for flat lesions covering the vocal cords. The depth of coagulation zone in tissue depends on the incision velocity and power, so the surgeon can change the level of tissue coagulation to improve hemostasis if it is necessary.

One hundred and forty-four patients with RRP were treated during the last 10 years. Juvenile form of RRP was diagnosed in 49 cases, adult form – in 95 cases. Sixteen patients were tracheotomized in childhood, 21 patients - with advanced form of RRP in adulthood.

Laser interstitial coagulation provides clean, bloodless surgical field, ensures healing without excessive scarring. We use this method together with continuous suction of denatured tissue to save time.

Contact laser surgery in pulsed mode (980nm, 20-30W, 20-40ms) can provide predictable results of laser tissue interaction, can be safely used without basal membrane damage. To avoid complications and decrease surgery duration we use pulsed vaporization at 20-30W (20-40 ms, 2-3 Hz) for flat lesions.

**Conclusions:** Diode Lasers are effective and nontraumatic in RRP surgery.

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## R213 Surgery of Laryngeal Cancer Using Diode Laser

Prof. Sergei Karpishchenko<sup>1</sup>, Prof. Marina Ryabova<sup>1</sup>, Mikhail Ulupov<sup>1</sup>

<sup>1</sup>Pavlov First Saint Petersburg State Medical University, Russian Federation

In the ENT Department of Pavlov First Saint Petersburg State Medical University 980 nm diode laser is used for transoral resection of laryngeal cancer. T1 and T2 tumors can be radically removed by transoral approach. According to our experience, T3 neoplasms could be successfully excised in selected cases without invasion of thyroid perichondrium. The oncologic results of laser surgery are comparable with those of traditional surgery, but functional results are superior: laser surgery preserves natural airway, voice function and deglutition.

Between 2007 and 2017 116 patients (101 males and 15 females aged 23-84 years) with previously untreated laryngeal carcinomas underwent endoscopic diode laser surgery in our department. Supraglottic cancer was in 7 patients, glottic cancer – in 106 patients, subglottic – in 3 cases, T1- in 34 cases, T2 – in 69, T3 – in 13. Laser cordectomy type II was performed in 26 patients, type III – in 23, type IV – in 8, type VI – in 40 patients. None of the patients required tracheostomy or nasogastric tube after surgery.

The follow-up ranged from 6 months to 10 years. There were no significant perioperative complications after the surgery in our series. There were 9 local recurrences in 5 patients with T3, and in 4 patients with T2. Repeated laser surgery was performed in 5 cases, in 4 cases - laryngectomies. Four patients died in 2-3 years after treatment because of distant metastasis. 71 patients are alive with functioning larynx, 84,2% of patients are alive free of disease.

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POSTERS

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P008 Aspiration and treatment of dysphagia in adults with intellectual disability: Research plan

Minttu Sauna-aho<sup>1,2</sup>, Ahmed Geneid<sup>3,4</sup>, Leena Tuomiranta<sup>1</sup>, Kaisa Launonen<sup>1</sup>

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**Objective of the study:** Aspiration and dysphagia are common problems in adults with intellectual disability. This study aims to identify aspiration risk through clinical assessment in adults with intellectual disability and to investigate the reliability of the clinical assessment versus videofluorography. The study also aims to the development of an interventional protocol for adults with intellectual disability and dysphagia.

**Methods:** 50 study subjects with moderate to severe intellectual disability will be recruited to participate in the study. The aim is to assess if aspiration is possible to be identified without videofluorography using a clinical assessment protocol that includes Stewart’s Nutrition and Swallowing Checklist, Cervical Auscultation, the 3-oz water swallow test, mealtime observation with oxygen saturation assessment and assessment of oral-motor function. All subjects will also go through videofluorographic assessment in order to evaluate aspiration and the reliability of the clinical assessment protocol. The interventional protocol of rehabilitation will be offered to the study subjects and its effects will be assessed six months after the start of it.

**Results:** The hypothesis of this study is that clinical assessment will not alone be sufficient for verifying aspiration risk and instrumental assessment will be needed. However clinical assessment may show good results in identifying some features that are associated with aspiration. Rehabilitation will show positive results in managing dysphagia.

**Conclusions:** Findings will highlight the importance of usage of both clinical and instrumental tool when assessing aspiration with people who have intellectual disability. Rehabilitation tool will show good results when trying to manage dysphagia.

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## P013 Incidence of vocal cord paresis as a consequence of a surgical complication

MD Maria Heikkinen<sup>1</sup>, MD Svante Halttunen<sup>3</sup>, MD, PhD Markku Terävä<sup>4</sup>, MD, PhD Jussi Kärkkäinen<sup>5</sup>, professor Heikki Löppönen<sup>2</sup>, MD, PhD Elina Penttilä<sup>1</sup>

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**Study:** Although laryngoscopy is widely performed routinely after thyroid surgery to screen for vocal cord paresis (VCP), other surgical patients who might be at risk of iatrogenic recurrent laryngeal nerve (RLN) injury are not systematically investigated. The aim of this study was to evaluate the causes and incidence of VCP, and to identify patient groups who might benefit from VCP screening.

**Methods:** All patients with VCP diagnosed in Kuopio University Hospital, Finland between 2006 and 2015 were retrospectively reviewed (n=320). The incidence of iatrogenic VCP was calculated for each surgical procedure. The results were compared with a historical cohort (years 1979-1992) from the same institution.

**Results:** The most common etiologies of VCP were iatrogenic (50.6%), idiopathic (21.6%), and neoplasm (14.7%). In this study, 72/162 (44.4%) and 34/162 (21.0%) of all iatrogenic injuries were caused by thyroid surgery and anterior cervical spine procedures compared to 131/179 (73.2%) and 7/131 (3.9%) found in the historical cohort. The incidence of VCP during surgical procedures was 5.2% in thyroid surgery, 4.3% in parathyroid surgery, 16.6% in esophageal surgery, 5.6% in mediastinoscopy, 4% in non-cardiac surgery through sternotomy, 3.2% in surgery of the aortic arch, 1.4% in carotid endarterectomy, and 0.9% in anterior cervical spine procedures. The overall annual incidence rate of VCP was 11.4 per 100 000 inhabitants (95% confidence interval 10.1-12.8).

**Conclusion:** In addition to those patients undergoing surgery of thyroid and parathyroid gland, also the patients undergoing surgery of the esophagus or mediastinoscopy may benefit from systematic screening for VCP.

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## P018 Laryngeal granuloma under Phoniatician umbrella

Assistant Professor Sanja Krejovic Trivic<sup>1</sup>, Milan Vukasinovic, Professor Jovica Milovanovic, Professor Vojko Djukic, Aleksandar Ugrinovic, Assistant Professor Aleksandar Trivic

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Laryngeal granulomas include contact and postintubation ulcers and granulomas. Essentially, a contact granuloma is pseudotumor of the lateral wall of the posterior glottis. The most common etiological factor is voice abuse, with predisposing factors such as reflux disease. The therapy of choice is conservative treatment. Surgical laser excision is indicated for resistant cases and those whose size is causing respiratory distress.

The aim of our study is to show the results of standardized diagnostic-therapeutic procedure in the treatment of laryngeal granuloma and we wanted to propose a definition, classification and nomenclature which is not definitely established for this clinical entity in Serbian speaking countries.

A prospective clinical study included 83 patients treated at the Phoniatic department of ENT and MFS Clinic in Belgrade over a period of 2002. up to 2017. year, representing 0,33% all diagnosed phoniatic patients. Endovideolaryngostroboscopy and multidimensional computer analysis were performed to all our patients. The effects of conservative therapy (vocal therapy and aerosol and treatment of comorbidities) were evaluated at the control examinations after 3 months.

Our study included 58 men and 25 women from 25 to 81 years. Contact granuloma was diagnosed in 45 patients, contact ulcer in 23 patients and postintubation granuloma in 15 patients. The most common registered comorbidity was reflux laryngitis in 39 patients. Conservative treatment was achieved in 89% patients. Surgery was performed in 11% patients with relapse in 4 patients. The use of zinc supplementation could significantly contribute to the treatment of this clinical entity.

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**P073 Voice disorders in children**

Professor Elena Radtsig<sup>1</sup>, Professor Olga Orlova<sup>2</sup>, Dr Yana Bulynko<sup>1</sup>

<sup>1</sup>Russia National Reserach Medical University, Moscow, Russian Federation, <sup>2</sup>Federal Scientific and Clinical Center of Otorhinolaryngology, Moscow, Russian Federation

**Objective of the study.** Voice disorders diagnostic is actual in ENT practice especially with routine non-specific techniques usage (analyses of complaints and patients' voice quality). The aim of our research was the detection of frequency and reasons of voice disorders in children.

**Methods.** 386 children aged from 1 month till 17 years were under our observation. We used the routine ENT and endoscopic examination, voice quality and speech analysis in all cases.

**Results.** We have revealed different voice disorders in 84 cases (22%) in 44 (52%) boys and 40(48%) girls. The main complains were hoarseness (38%) and voice quality dissatisfaction (14,2%). The dysphonia (65,5%) have led between different voice disorders, the second place belonged hyponasality (22,6%), the third- "combined" disorders (combination of dysphonia and hyponasality (8,3%) and dysphonia and loudness (2,4%)).

The leading dysphonia reason were congenital abnormalities (glottis membrane, laryngomalacia) in pre-speaking and acquired pathology (vocal nodules, laryngitis, cicatricial stenosis) in speaking children.

In 26% patients didn't complain on voice quality but doctors have paid attention to it. We revealed 13 dysphonia (in 12 vocal nodules and "functional" in 1) and 9 hyponasality patients.

**Conclusions.** The frequency of voice disorders in children was 22% with dysphonia predominating. A doctor should pay more attention to patients' voice quality.

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**P081 DoctorVox Voice Therapy Method**

MD MSc (Laryngologist & Speech Pathologist) Ilter Denizoglu<sup>1,2,3,4</sup>

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DoctorVox Voice Therapy Method (DVT) is a direct technique for general use which can be adapted easily both by the patient and the clinician. DVT is based on Sihvo's LaxVox Method; and developed by Denizoglu in which medical, physical and pedagogical approaches are combined. DVT method provides a well-defined therapy process with tools (exercises and devices). The clinician can make decisions for the 'next step' by monitorization of the patient's motor learning state. It also gives a multichannel biofeedback and establishes the therapeutic adherence by the patient.

The DVT devices mainly provide an artificial elongation of the vocal tract and adjustable backpressure. Acoustic-aerodynamic changes due to artificial elongation, enhanced inertance and massage effect of bubbling and backpressure are the main physical mechanisms. DVT has a multidimensional multilevel treatment strategy and has a dynamic algorithm; there are no exercise templates which is fit for all. The clinician has an action plan (preset- exploration- development- adaptation) and uses various predefined exercises in order to formulate the treatment program of an individual patient.

In Pedagogical Vocology, it may be useful for blending the registers, vocal warm-up and cool down and developing a resonant and an effective voice. In Clinical Vocology DVT is a therapy of choice for various functional and organic voice disorders such as muscle tension dysphonias, vocal fold nodules, habitual and psychogenic dysphonias-aphonias, unilateral vocal fold paralysis, puberphonia, presbiphonia, etc. For phonosurgical applications, it may also be an effective method for pre- and postoperative voice therapy.

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## P082 maskVOX: A New Device for Voice Therapy and Vocal Training

MD MSc (Laryngologist & Speech Pathologist) Ilter Denizoglu<sup>1,2,3,4</sup>

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**Objective:** DoctorVox Voice Therapy Method (DVT), based on Sihvo's LaxVox Method, is a multidimensional treatment strategy providing various exercises and devices to the clinician and the vocal pedagogue as well. Artificial elongation of the vocal tract and backpressure by resonance tubes and bubbling water are the main tools in DVT. One missing point is the limitation of articulatory movements during phonation into the tube. An oral mask has been designed by the author in order to serve for free articulatory movements of the lips, the jaw, and the tongue during therapy exercises.

**Methods:** After several steps of engineering/reverse engineering and design, an oral mask (maskVOX<sup>®</sup>) for phonatory use of purpose has been devised. The maskVOX<sup>®</sup> is made of medical grade elastic silicone in order to fit the face and not to irritate the skin. It can be mounted to the phonatory inlet of the doctor-VOX<sup>®</sup> and pocketVOX<sup>®</sup> devices which have been devised for DoctorVox Therapy applications. By using the maskVOX<sup>®</sup> device, it is possible to speak or sing into the mask and benefit the physical and physiological effects of artificial elongation and backpressure. It can also be used as a sound muffler which additionally provides the singer use the full voice without disturbing others in a calm environment.

**Results and Conclusions:** The maskVOX<sup>®</sup> is a unique device in the related literature. The maskVOX<sup>®</sup> may be a therapy tool of choice not only for voice problems but also for speech disorders. Future clinical research is warranted.

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## P085 The attitude of teachers on referring learning disabilities students to speech therapy

Neda Tahmasebi<sup>1</sup>, Peyman Zamani<sup>1</sup>, Ehsan Naderifar<sup>1</sup>, Ebtesam Hozeyli<sup>2</sup>, Negin Moradi<sup>1</sup>, Akram Ahmadi<sup>3</sup>

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**Background and objective:** Learning disabilities of academic skills causes serious communicational, emotional and social harm to students. Teachers, as people who deal directly with students on a daily basis, have an important role in identifying and referring students suspected of these disabilities. Therefore, the aim of this study was to investigate the role of primary school teachers' awareness and attitude about the signs and symptoms of learning disabilities on the referral of the students of Ahvaz to speech therapy centers.

**Materials and methods:** This case-control study was conducted on 165 elementary school teachers. The teacher's awareness questionnaire was used to determine the teachers' awareness level. A logistic regression test was used to determine the role of teachers' attributes on the referral of students to speech therapies.

**Findings:** The mean total score of teachers' awareness of students' learning disabilities was significantly different in the case and control groups ( $p = 0.001$ ). Teachers' awareness scores had a direct and meaningful relationship with working experience ( $p = 0.001$ ) and participation in educational workshops ( $p = 0.001$ ). However, there was no significant relationship between the teachers' awareness score with age and gender ( $p > 0.05$ ).

**Conclusion:** Teachers' experience of teaching, their level of education, history of participation in educational workshops, and teachers' awareness of learning disabilities are critical in referring students to speech therapy centers. It is recommended that teachers participate in workshops at regular intervals.

**Keywords:** Learning disabilities, teachers' awareness, speech therapy referrals

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### P094 Irritable larynx syndrome and problems with indoor air at work – preliminary results

Phoniatrician Sarkku Vilpas<sup>1</sup>, Ph.D. Eliina Kankare<sup>1</sup>, Docent Jussi Karjalainen<sup>2</sup>, Docent Lauri Lehtimäki<sup>2</sup>, Docent Jura Numminen<sup>3</sup>, Specialist in Occupational Health Pia Nynäs<sup>4</sup>, MD Antti Tikkakoski<sup>5</sup>, Prof Jukka Uitti<sup>4</sup>, Docent Leenamajja Kleemola<sup>6</sup>

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**Objectives:** To describe the laryngeal and voice findings in subjects reporting voice and/or respiratory symptoms at water damaged work places.

**Methods:** The participants in the present study were 78 voluntary patients referred to specialist care due to voice or respiratory symptoms associated with moisture damage at work (female n=66, male n=12, mean age 46 years, range 22-64 years). Voice samples were recorded and the Acoustic Voice Quality Index 02.02 (AVQI) and the inverse filtering analyses were executed. The AVQI 02.02 threshold level 3.09 on scale 0-10 in Finnish speaking population was used to separate abnormal voice quality from normal. Phoniatric videostroboscopy was done and videos were assessed.

**Results:** 41.0% (32) of the participants had deviant AVQI 02.02. In the videostroboscopy organic laryngeal findings were found in only 5.1% (4) of the participants. Different functional abnormalities were found more frequently: primary muscle tension dysphonia in 46.2% (36), supraglottic constriction in 11.5% (9), forward tending of arytenoid cartilages during forced breathing in 24.4% (19) and any combination of these in 57.7% (45) of the participants. All these findings refer to the irritable larynx syndrome.

**Conclusions:** The results of this preliminary study suggest that unfavourable laryngeal functional reactions are common in people who report voice problems and/or respiratory symptoms at work in buildings with water damage.

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### P095 Non-Verbal Communication in Speech-Impaired Persons: Two Case Studies

Seamus Hallahan<sup>1</sup>, Barbara Hallahan<sup>1</sup>

<sup>1</sup>MARVELLOUS MOUTH LTD., Bray, Ireland

This presentation will describe two case studies where speech-impaired persons attempted communication via non-speech methods, and the results thereof. The objective of these studies is twofold: to demonstrate the techniques developed by speech-impaired persons to communicate without relying on speech, and to shed light on ways for tutors or therapists to identify when speech-impaired persons are using these alternate communication methods and respond accordingly.

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## P098 Corpus of the oral language of Mandarin-speaking typically developing and language-delayed children

Shang-Yu Wu<sup>1</sup>, Re-Jane Huang<sup>2</sup>, I-Fang Tsai<sup>3</sup>

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Previous studies have established language corpora for exploring Mandarin linguistic features. Most of the corpora are gathered from adults or written materials. The oral language of young children was only collected in few corpora and most of the samples were acquired in a unitary context. Different contexts were used in different studies including free play, storytelling and daily routines. To compare language delayed with typically developing children, by exploring the association between language weakness and language disorders, an identical and systematic procedure should be conducted when collecting the samples.

This study followed the Chinese Language Sample Analysis Manual for Children in collecting, transcribing and analyzing language samples. Four different contexts: school-related conversation, story retelling, free play and family-related conversation, were used to ensure that the samples are representative. All the children who participated in this study spoke Mandarin as their first language. The researchers conducted standardized measurements of the children to differentiate typically developing children from those with a language delay. The collected language samples were then transcribed and analysed using CHAT and CLAN of the CHILDES.

A corpus was developed containing a total of 134 language samples including samples of 78 typical developing children and 56 children with language delay. Word lists were developed for both groups, containing all words produced with corresponding word frequency, accumulated frequency and phonetic labeling. The developed corpus will facilitate further research analyzing how typically developing children use their language and the weakness of children with a language delay.

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## P099 Text analyser for efficient generation of Mandarin oral reading test materials for hearing impaired children

Yu-Chen Hung<sup>2</sup>, Wen-Jet Wang<sup>3</sup>, Yi-Chih Chan<sup>2</sup>, Pei-Chun Li<sup>1</sup>

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Previous studies have shown that children's speech intelligibility is affected by their listening quality. The structured oral reading test may provide an objective way to assess the speech performance of children with hearing loss in different dimensions, such as reading fluency, word segmentation, reading intonation and prosodic expressions. However, it is far too laborious to manually generate this reading material because several criteria need to be considered, such as the level of difficulty of the words and the phonetic distribution of the test material. Any replacement of a word will be related to several criteria simultaneously, while the readability of the material has to be maintained. The present study aims to develop a text analyser to increase the efficiency in producing oral reading test materials.

The test designers firstly composed draft test materials and the text analyser performed the following processing steps: word segmentation, phonetic labeling, and criteria check. The mismatched items will be highlighted and supporting word lists were provided to help the test designer to replace the words that contribute the most to the discrepancies.

By utilising the text analyser, a total of 18 test materials for three different difficulty levels that matched all the criteria were developed. The average time for completing a test material was less than four hours.

This text analyser not only provides sufficient information to improve word replacement efficiency, but also supports effective strategies for choosing candidate words to achieve better matching. The generation efficiency of oral reading test materials was significantly improved.

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## P104 Apraxia of Speech in adolescents and adults with Down syndrome

PhD Sandra Cristina Fonseca Pires<sup>1</sup>, SLP Carolina Fonseca de Freitas<sup>1</sup>

<sup>1</sup>Santa Casa de Sao Paulo School of Medical Sciences, SAO PAULO, BRAZIL

**Objective:** There was two aim objectives, translate to portuguese the protocol "Down Syndrome Speech Intelligibility Survey" (Kumin,2006), and verify symptoms of Apraxia of Speech in adolescents and adults with Down Syndrome (DS), and described the speech intelligibility of people with DS.

**Method:** This study was approved by the Ethics and Research Committee. Participants were 22 adolescents and adults with DS, students from ADID institution, from 12 to 31 years old. The protocol of Speech Intelligibility Survey from Kumin (2006) was translated to portuguese, reviewed by two people with english language proficiency. The translated protocol was send to the parente to answer and return later. Phonological process was assessed from speech samples by imitation and nomeation - ABFW protocol (Andrade, 2004). It was analysed phonological processes occurrence, percentage of consonants correct (PCC) metric, and to speech intelligibility was used categories of Hodson and Paden; not intelligible, essentially intelligible, sometimes intelligible.

**Results:** There were verify symptoms of Apraxia of Speech in people with DS, and the phonological skills. Male gendre is suggested has poor intelligibility. Vowel difficulties was the only factor less idntified by the survey. The phonological processes more used was cluster reduction and devoicing of stop consoant  
**Conclusion:** Apraxia of Speech is a characteristics of DS speech and one fator of speech intelligibility impairment of these people. The prevalence and incidence of Apraxia of Speech is yet one thopic that need more researches.

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## P105 Assessment of Fluency in Down syndrome adolescents and adults

PhD Sandra Cristina Fonseca Pires<sup>1</sup>, SLP Flavia Perez De Freitas<sup>1</sup>

<sup>1</sup>Santa Casa de Sao Paulo School of Medical Sciences, SAO PAULO, Brazil

**Objectives:** The aim of this study was to analyze the fluency of speech of adolescents and adults with Down syndrome (DS), verify the patterns of speech disfluencies (cluttering/stuttering) and speed of speech in the DS. Method: 12 adolescents and adults with DS between 13 and 26 years world. Assessment of speech fluency by record of speech produced after show 3 kinds of pictures and also by a conversation with the participant, all recorded for later analyse. According Andrade (2004), this speech must has 200 fluents syllabies.

**Results:** It is very hard to get a extended speech of DS people, that makes difficult to determine a pattern of speech fluency of this population. This study showed more hesitation and syllabies repetition of distribution of dysfluency categories. There was more dysfluencies with men than women. There was also speaking rate lower than typical pattern, and higher dysfluencies of both categories, non-stuttered disfluencies (normal disfluencies) and stuttering-like disfluencies.

**Conclusion:** Speech of people with DS has a diferente distribution of types of disfluencies than the speech of normally developing people, with more dysfluencies of both categories and speaking rate impairment. This results on damage of intelligibility of speech. We need more researches about assessment of speech fluency of people with DS, and also about intervention.

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## P108 Significance of Pepsin from Saliva in Diagnosis and Treatment of Laryngopharyngeal Reflux

M.D. Zeljka Laksar Klaric<sup>1</sup>, Docent, M.D., Ph.D. Darija Birtic<sup>1</sup>

<sup>1</sup>Osijek University Hospital Centre, Department of Otorhinolaryngology, Head and Neck Surgery, Osijek, Croatia

**Objective of the study:** Laryngopharyngeal reflux (LPR) is a common illness of otolaryngology visits. Over the past few years, pepsin has become a promising marker of LPR, and in our study we have showed that the values of pepsin in saliva combined with clinical symptoms (» reflux symptom index«- the Belafsky RSI) and clinical findings videolaryngoscopy (»reflux finding score« the RFS by Belafsky) are significant diagnostic indicator of disease.

**Patients and Methods:** In a prospective clinical study we selected 45 patients with clinical symptoms and signs of LPR and 30 subjects in the control group without clinical symptoms. All subjects underwent, videolaryngoscopy, esophagogastroduodenoscopy, and all sampled saliva for analysis of the value of pepsin measured by using enzyme-linked immunosorbent assay. The Reflux Symptom Index survey was also administered before and after treatment with proton pump inhibitors.

**Results:** The average value of pepsin in patients with suspected LPR before treatment were higher than average value of pepsin after treatment, and comparing the level of pepsin before therapy in patients with suspected LPR and pepsin in the saliva of the control group confirmed a statistically significant difference in the amount of pepsin. The RSI scores were statistically different between these groups of subjects.

**Conclusions:** In our study we have proved that tracking the value of pepsin in the saliva is a valuable diagnostic indicator of LPR and a valuable indicator of the success of the treatment.

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## P109 A longitudinal research of 10 years of hearing screening in athletes with an intellectual disability

Dr. Rupal Mehta, Global Clinical Advisor Special Olympics Healthy Hearing Program, lecturer at University College of Arteveldehogeschool Melina Willems

<sup>1</sup>Hôpital Civil Marie Curie, Charleroi, Belgium

**Purpose:** Hearing screening of 3,778 athletes with an intellectual disability over a period of 10 years.

**Methods:** After registration, an otoscopy is performed and hearing is screened with Distortion Product Otoacoustic Emissions (DPOAE). Depending on screening results, tympanometry and pure tone audiometry are taken.

**Results:** In ten years 3,778 athletes between the age of 8 and 71 years are screened at the Belgian National Special Olympic Games. The average age is 31.6 years. The group consists of 2,291 (60.6%) men and 1,487 (39.4%) women. 28.3% is referred to an ENT-specialist for excessive ear wax, 26.9% for middle ear problems and 37.6% for possible hearing loss. A significant referral is seen with increasing age and in people with Down syndrome. Significant more refers due to aberrant tympanometry is seen in people with Down syndrome (38.6%) versus the other athletes (18.5%).

**Conclusion:** The percentage of athletes referred for excessive ear wax diminishes over the years due to increasing experience of the recurrent ENT-specialists. Hearing loss in this population (37.6%) is higher than in the healthy population (5.3%). People with Down syndrome score worse than other athletes with an intellectual disability. Hearing impairment can give more and/or delayed speech and language difficulties. Especially for this population, lesser communication will reflect on their whole live (social, sport, every day...).

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### P127 Scale of assessment of myofunctional disorders of the maxillofacial region in children

Dr Galina Tarasova<sup>1</sup>, Dr Olga Orlova

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Malfunction of muscles of the maxillofacial area (FACIAL), often manifested by dysphonia lips, open mouth "syndrome long faces", infantile swallowing, and others. Due to the high prevalence of such disorders in children there are different scales and protocols for their evaluation.

We have developed our own rating scale of these violations, which includes the following sections: complaints, anamnesis, physical development, condition and appearance of the chewing, the swallowing, as cheeks, forehead muscles, lingual frenulum, the appearance of the face in statics, the presence and localization of tics, the position of the lips and tongue in its natural state, structure and tone of language, form and structure of the hard and soft palate, the condition of the bite, the movement of the lips, tongue, jaw and cheeks, the type and nature of breathing, as the air stream, the condition of the lips and tongue when swallowing efficiency swallowing, the rate of speech, the height and power of voice with the time dimension maximum phonation, hoarseness, nasalization. intonation, the utterance sounds.

We have also developed a numerical score for each violation of these sections and identified options and recommended urgent remedial work with such children. As a rule, if such violations required an interdisciplinary approach which includes speech pathologist, otolaryngologist, orthodontist, and physiotherapist.

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### P130 Additional fibrolaryngoscopic tests: clinical significance

Sergey Karpishchenko<sup>1</sup>, Olga Vershchagina<sup>1</sup>

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Fibrolaryngoscopy is one of the main endoscopic methods which laryngologists apply. Transnasal fibrolaryngoscopy allows examination of the larynx in details in its physiological state during respiration, phonation and available in practically all patients. All the parts of the larynx, which are often not seen during indirect laryngoscopy, are visible.

The aim of our study is to analyze diagnostic possibilities of additional fibrolaryngoscopic tests, to describe indications for different diagnostic methods during endoscopy in patients with laryngeal pathology.

**Methods:** Besides routine examination for better view of some anatomical areas of the larynx we use a number of additional tests, such as, measurement of anterior commissure angle and other.

Since 2016 our department has examined 81 patients with normal vocal folds mobility, 32 males and 49 females. Maximal anterior commissure angle values were measured. They varied from 65 to 80 degrees among males and between 50 and 60 degree among females.

**Results:** Later this method was applied for treatment effectiveness estimation in patients with unilateral vocal fold paresis. The fold being in medial position in 9 patients: 3 males and 6 females. The results of angle measurement during unilateral vocal fold palsy were from 35 to 40 degrees among males and from 25 to 30 degrees among females.

**Conclusions:** Additional tests and methods are extending diagnostic possibilities of fibrolaryngoscopy. Fibrolaryngoscopy is an obligatory method of examination of patients with suspicion on laryngeal pathology.

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### P131 Association between aggressive recurrent respiratory papillomatosis and HLA-DQ alleles

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Recurrent respiratory papillomatosis (RRP) induced by human papilloma virus 6 and 11 type. However, the presence of a specific virus in RRP is not enough for disease development, activation mechanisms are required. We analyzed the association of alleles of HLA-DQB1 \* 0301 and HLA-DQ2 (alleles DQA1 \* 0501 / DQB1 \* 0201) with recurrent papillomatosis. Our study involved 26 people with juvenile (18) and adult-onset (8) RRP.

According to the genetic testing results, 9 people (57,7%) with RRP identified DQB1 allele \* 0301. In control group consisting of patients with chronic hyperplastic laryngitis DQB1 \* 0301 allele was found in 10,0%. Haplotype HLA-DQ2 (DQA1 \* 0501 / DQB1 \* 0201) was found in 11 patients (42,3%) with RRP. Patients with recurrent respiratory papillomatosis were divided into groups with aggressive and non-aggressive course of the disease. In patients with an aggressive course of juvenile-onset RRP HLA-DQ2 (DQA1 \* 0501 / DQB1 \* 0201) haplotype was met in 100% cases. Thus, all patients with severe respiratory papillomatosis were carriers of alleles DQV1 \* 0301 in conjunction with the heterodimer DQ2 (DQA1 \* 0501 / DQB1 \* 0201).

Obtained result does not exclude the association of allele DQB1 \* 0301 with RRP. The presence of the DQ2 (DQA1 \* 0501 / DQB1 \* 0201) haplotype may have relation with the severity of recurrent respiratory papillomatosis.

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### P138 The first experience of use of voice analysis in voice laboratory in Kazakhstan

Dinara Toguzbayeva<sup>1</sup>

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For creation of professional environment of diagnostics in Kazakhstan, in accordance with international standards, we have formed the "voice laboratory" for research of professional diseases of people with voice professions. More accurate method of evaluation of severity of voice violations is a voice analysis, which allows to study simultaneously several physical parameters that characterize not only condition of voice function, but also vocal abilities.

The purpose of present research is to study clinical importance of methods of voice analysis applicable to diagnostics conditions and treatment of voice violation in Kazakhstan.

**Research objectives:** 1. To study specialties of acoustic parameters of voice of healthy singers and not singing people.

2. To define opportunities of acoustic voice analysis in evaluation of treatment effectiveness of people with voice function violation.

**Materials and methods:** Research was done on clinical base of KazUMO in ENT clinic "V-ent" equipped with endoscopic equipment of "Xion" company and "LingWaves" program of voice analysis. 120 adults and children with different complaints on voice violation were studied during September-December'17 period.

**Research results:** Standards of such acoustic voice parameters as Jitter, DSI, and indicators of speech and singing profile, have been defined. It was proven that during mutation of boys in comparison with girls, there are more pronounced changes of almost all acoustic voice parameters.

Considering acoustic analysis, the condition function and specialties of phonograms of patients with voice violations were studied. This made a base for formation of tactics of the therapeutic approach to treat patients with larynx diseases.

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### P162 Dual Coding Theory: The imagery-language connection

Rehab Zaytoun<sup>1</sup>

<sup>1</sup>Faculty of Medicine, Cairo University, Egypt

Dual coding theory is a theory of mind in which all cognition consists of the independent activity of, or interplay between, two great mental codes: a verbal coded specialized for language and a non-verbal code specialized for knowledge of the world in the form of mental images.

Without the sensory information of imagery, words have no meaning, neither individually nor connected together to form concepts.

This separate, subtle comprehension weakness often undermines the reading process and directly affect the comprehension even with the use of context, prior knowledge, and background experience. It is a weakness based on the sensory system in creating an imaged gestalt. When individuals do not easily create a gestalt, they often process only parts of what they read or hear.

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### P163 Boost irradiation as a treatment option of the recurrent carcinoma in situ of the larynx

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**Objective:** A carcinoma in situ needs treatment just like an invasive carcinoma. This report is about a 77 year old patient who received boost Irradiation as a treatment option after CIS field cancerization in the voice box.

**Methods and results:** Due to a pT1cNOcMx glottic carcinoma the patient underwent Co2-Laser treatment with total left sided subtotal chordectomy in 2012. Due to aphonia caused by glottic insufficiency after resecting an invasive carcinoma of the left vocal cord our patient received a left sided thyroplasty with Goretex®. Two years after regular aftercare, a tumorous swelling of the left vocal cord was seen. A biopsy of the tumor histopathological reappraisal revealed a cis. Goretex® was removed in general anesthesia and in a second step, the cis was resected by CO2 Laser in total three times. Due to proven CIS even in the anterior commissure, a frontolateral partial laryngectomy (Leroux Roberts) was performed which showed some field cancerization with CIS.

Due to the lack of invasiveness but no reasonable option of treatment, the results were discussed intensively in our interdisciplinary tumor board. After another proof of persisting CIS, the radiooncologists were willing to perform some boost irradiation which was performed in 2016. One year later the patient received another microlaryngoscopy with several biopsies. Until now, neither signs of cis nor invasive carcinoma could be found in several endoscopies.

**Conclusions:** Radiotherapy as a treatment for field cancerization in larynx carcinoma in situ should be considered as a treatment option.

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### P167 The significance of clinical voice examination to vocal music teaching

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1. Vocal music is created by the human voice organs, most of which are not visible and untouchable, especially vocal folds and air flow.
2. Due to different growth environments, personality traits, and speaking habits, a vocal student's voice structure, speaking situation, or singing voice type cannot be easily judged by the singing teacher only by ear.
3. The clinical voice examination given by a voice doctor could provide a vocal student's physical structure and vocal states, which is the basis of the individualized singing teaching.
4. An effective combination of the singing teacher's ear and a voice doctor's eyes would benefit the voice type classification accuracy, voice health maintenance, and best vocal quality presentation of the vocal student.

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### P170 World Voice Day in Russia

Ekaterina Osipenko<sup>1</sup>, Maria Isaeva<sup>1</sup>

<sup>1</sup>Federal Scientific and Clinical Center of Otorhinolaryngology of the FMBA of the Russian Federation, Russian Federation

World Voice Day is celebrated in Russia since 2007. A wide range of specialists such as phoniaticians, otorhinolaryngologists, vocal teachers, singers, actors, students of art and music colleges and universities make more than 100 events every year! Lectures, examinations, workshops, reports on the base of conferences, flashmobs, interviews on the radio and TV, trainings, hotlines, concerts, open days in hospitals are organized across the country. All events are dedicated to the World Voice Day and aimed at attracting attention to the one of the most important tools – our voice.

Every year more and more people becoming organizers and do their best in showing people how to use their voice, methods of treatment, improving of voice techniques. Traditional main organizer and coordinator of Word Voice Day in Russia is Federal Research Clinical Centre of otorhinolaryngology of Russian Federation Ministry of public health. Specialists of the centre every year make important screenings for detecting tumors of a larynx, give interviews on the main channels about voice disorders and what to do in order to prevent it. Events are held in all federal districts of a country, more than in 25 cities.

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## P172 Speech therapy in comprehensive rehabilitation and resocialization of patients with head and neck tumors

Doctor of Psychology, Professor Madrudin Magomed-Eminov<sup>2</sup>, **Doctor of Pedagogy, Professor Olga Orlova<sup>3,4</sup>**, Candidate of Medical Sciences Dmitriy Reshetov<sup>1</sup>, Candidate of Pedagogic Sciences, Docent Daria Uklonskaya<sup>1</sup>, Candidate of Medical Sciences Olga Sokolova<sup>5,1</sup>, Yulia Pokrovskaya<sup>5</sup>, Victoria Agaeva<sup>5</sup>, Yulia Khoroshkova<sup>2</sup>, Anastasia Guretc<sup>1</sup>

<sup>1</sup>The Semashko Central Clinical Hospital №2 «JSC «Russian Railways», Moscow, Russian Federation, <sup>2</sup>Lomonosov Moscow State University, Moscow, Russian Federation, <sup>3</sup>Federal Scientific and Clinical Center of Otorhinolaryngology, Moscow, Russian Federation, <sup>4</sup>Moscow State University of Education, Moscow, Russian Federation, <sup>5</sup>Moscow State University of Medicine and Dentistry, Moscow, Russian Federation, <sup>6</sup>Moscow City University, Moscow, Russian Federation

Modern medicine often allows saving lives for patients with cancer, and quality of life becomes significant success rate of treatment. Patients after surgical treatment of head and neck tumors need comprehensive rehabilitation, particularly, speech therapy. The purpose of our study was to optimize logopaedic impact within comprehensive rehabilitation.

We have conducted research during two years with 38 patients after surgical treatment of head and neck tumors. Their speech status was studied with auditive evaluation, questioning of patients and relatives. Their psychological state and focus of motivation were studied with qualitative interview and meaning-narrative analysis. At the beginning of rehabilitation work all patients noted disorders of verbal communication, because of anatomical-functional defects and neurologic impairment, and dysphagia of varying severity.

Comprehensive therapy was directed to normalization of swallowing, speech breathing, voice and pronunciation. 33 patients (87%) achieved normalization of meal process; 5 patients (13%) achieved its significant improvement. Elimination of dysphagia almost always facilitated speech rehabilitation. 36 patients (95%) achieved recovery or significant improvement of verbal communication by speech enhancement with normalization of voice function and pronunciation. Analysis of qualitative interviews showed: most successful recovery was in patients with high orientation to success and low orientation to failure.

We conclude that effectiveness of rehabilitation increases by persistent work of patients together with specialists and relatives. It depends on focus of motivation and adequate assessment of new life situation. This allows to reduce disability after surgical treatment of head and neck tumors and to return such patients to habitual way of life.

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## P176 Differences in vocal tract dimensions between female classical singing, kulning and edge

MA, PhD student Tero Ikävalko<sup>1</sup>, PhD Anita McAllister<sup>2</sup>, PhD Robert Eklund<sup>3</sup>, PhD Eveliina Lammontausta<sup>4</sup>, M.Ed., PhD student Mari Leppävuori<sup>5,6</sup>, **PhD Anne-Maria Laukkanen<sup>7</sup>**

<sup>1</sup>University of Tampere, Speech and Voice Research Laboratory, Faculty of Education, Tampere, Finland, <sup>2</sup>CLINTEC, Karolinska Institutet and Functional area Speech and Language Pathology, Karolinska University Hospital, Stockholm, Sweden, <sup>3</sup>Dept of Culture and Communication (IDA), Dept of Computer Science (IDA), Linköping University, Linköping, Sweden, <sup>4</sup>Oulu University Hospital, Department of diagnostic Radiology, Oulu, Finland, <sup>5</sup>Eudaimonia Research Center Oulu, Oulu, Finland, <sup>6</sup>Faculty of Education and Research Unit of Medical Imaging, Physics and Technology, Faculty of Medicine, University of Oulu, Oulu, Finland, <sup>7</sup>University of Tampere, Speech and Voice Research Laboratory, Faculty of Education, Tampere, Finland

This study compared vocal tract dimensions between three singing styles: classical, kulning and a subtype of belting called 'edge' according to Complete Vocal Technique terminology. These styles are known to have great audibility, yet they are quite different in timbre. This study aimed to better understand the differences between these singing styles at the level of the vocal tract.

Magnetic Resonance Imaging (MRI) was used to study vocal tract shapes of three female singers singing at pitch C5 (523 Hz) on vowel [i:] or [e:] in edge. Dynamic 2D MRI was recorded while the subjects sung transitions from classical to kulning. Additionally, the singers sustained 15 second long notes in each of the styles for static 3D MRI registrations. Several measurements were made from the MR images.

Results showed that all subjects had a lower laryngeal position, larger tongue-palate distance, and a more elevated soft palate in classical singing than in kulning. One subject phonated also in edge and showed a more elevated larynx and a wider jaw opening and protrusion in edge than in kulning and classical singing. Cross-sectional areas of the low pharynx (Aph) and epilarynx (Ae) and the ratio between them were greater in classical singing compared to kulning. Edge had the smallest Ae out of these singing styles, while Aph and the Aph/Ae ratio were intermediate compared to classical singing and kulning.

Classical singing, kulning and edge showed several differences in vocal tract dimensions, which likely contribute to the different timbre of these singing styles.

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**P179 Study on the Subjective and Objective Evaluation of the Vocal Tone of Beijing Opera**

Jiang Yongmei<sup>1</sup>

<sup>1</sup>National Academy Of Chinese Theatre Arts, Fengtai district wanquan temple 400, China

**Objective:** To study the subjective and objective evaluation methods of the vocal tone of Beijing Opera.

**Method:** The acoustic parameters, such as the main acoustic parameters and the singer resonance peak, were used to measure the acoustic parameters, such as the base frequency, pitch, length and spectrum energy distribution of the 9 trainees, and compared them with the subjective evaluation of the experts.

**Results:** Basic frequency, pitch, pitch, spectral energy distribution, and resonance peaks are all correlated with the sound level, and objective sorting is quite consistent with auditory subjective order. In particular, the first three, the last three and the middle one are almost exactly the same.

**Conclusion:** The acoustic analysis method can be used as an objective evaluation method for the evaluation of the vocal quality of Beijing Opera. It can be assisted in teaching or singing.

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**P185 Good rehabilitation practice - Group Counselling and Augmentative and Alternative Communication**

Rehabilitation advisor Jaana Reuter<sup>1</sup>

<sup>1</sup>Tampere University Hospital, Tampere, Finland

**Objectives:** Group counseling about Augmentative and Alternative Communication targeted for parents and educators started in the Pirkanmaa Hospital District in 2009 as a trial, and later extended to a developing project. The purpose of the study is to describe the clients' experiences of participating in the group counseling and to report the participants' utilization of AAC after group counseling in their daily lives.

**Methods:** This study was both qualitative and quantitative. The data were collected using a web-based questionnaire Webropol. A part of the open questions were analyzed by using data-based content analysis and partly by quantitative analysis. The multiple-choice questions were analyzed using quantitative methods. The questionnaire was sent to 270 participants, the response rate was 43%.

**Results:** The participants' experiences related to encouragement for using AAC in everyday life and reinforcement of their participation in the rehabilitation of their child. In addition participants expressed becoming more conscious of the importance of interaction. The advantages of the group counseling for all participants were receiving social and cognitive support, as well as support for coping.

**Conclusions:** Group counseling in AAC is an effective way giving parents and the careers practical experiences and theoretical background how to support children's communication. AAC-information should be provided for the parents and the careers as soon as the need for the support has been noticed.

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**P210 Methodological decisions in consistent selectivity in data collection about the impact of aphasia rehabilitation**

LPh, M.SocSc, M.EdSc, SLT, Lecturer in logopedics Tarja Kukkonen<sup>1</sup>

<sup>1</sup>University Of Tampere, Tampere, Finland

**Background:** Already in 1989 Brindley et al made a statement that it will be “only by radically reorganizing current provision SLT can be effective in the field of aphasia therapy.” The current clinical practice in speech therapy is to spread (usually quite a small overall amount of) treatment sessions over a long time period.

The main challenges to take advantage of and to draw conclusions on the effectiveness of rehabilitation existing research is the fact that research settings vary widely. The main challenges of the consistent selectivity in data collection are, for example, irregular accumulation of the data, clinical pressure to use the “common solutions of the intensity of therapy” inside the rehabilitation system and conceptual challenges when assessing the RCT study design.

**Contents:** This poster provides one example of decision making of basic assumptions concerning ontological, epistemological and methodological decisions behind a scientifically justified research. Also main clinical challenges for the consistent selectivity of clinical efficacy RCT data will be presented. It will be demonstrated that collecting a RCT data is a gauntlet, indeed.

**Take-home message:** In the scientifically justified rehabilitation impact studies, the basis for the methodical decisions and selections is constructed by the precise determination of methodological decisions.

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**P216 Congenitally Missing Teeth (Hypodontia) In Children with Can Cause Severe Speech Production-A Case Study**

Tahany Ahmad<sup>1</sup>, Ain Shams University Enas Salem

<sup>1</sup>Ain Shams University, Faculty of Art. Dept. of Psychology, Cairo, Egypt

**Introduction and objectives:** Some of children with ADHD likely to have “Congenitally Missing Teeth” which caused sever speech production. The effect of dentition on speech becomes more complicated when a child has both an articulation disorder, an incorrect bite (e.g., “open bite”). We tried to reduce the ADHD symptoms and sever speech deletion, which effect his self-esteem, communication, behaviour, academic performance and quality of life. We introduce alternative method in speech-language session using multi-therapeutic techniques in therapy setting with structural behavioural rules amid ADHD child, who is struggling to produce a clear word or sentence and minimise speech default.

**Methods:** The study investigated a child aged 6.3 Yrs. in first grade bilingual American School. The program settled for three times weakly in the clinic with collaborate with home and school setting to improve his speech construction and behaviour as well.

**Results:** The outcomes of the multi-therapeutic programs proved that ADHD child he involved in the program had made greater improvement in using significant speech production in bilingual.

**Discussion:** This study gives a great opportunity for more collaborative researches to assimilating the therapy goals and orthodontist to collaborate on a therapy plan or timeline. Furthermore, we open a wide discussion, if there is a gene defect-affect some children with ADHD, which led to congenital missing teeth and sever articulation in many cases?

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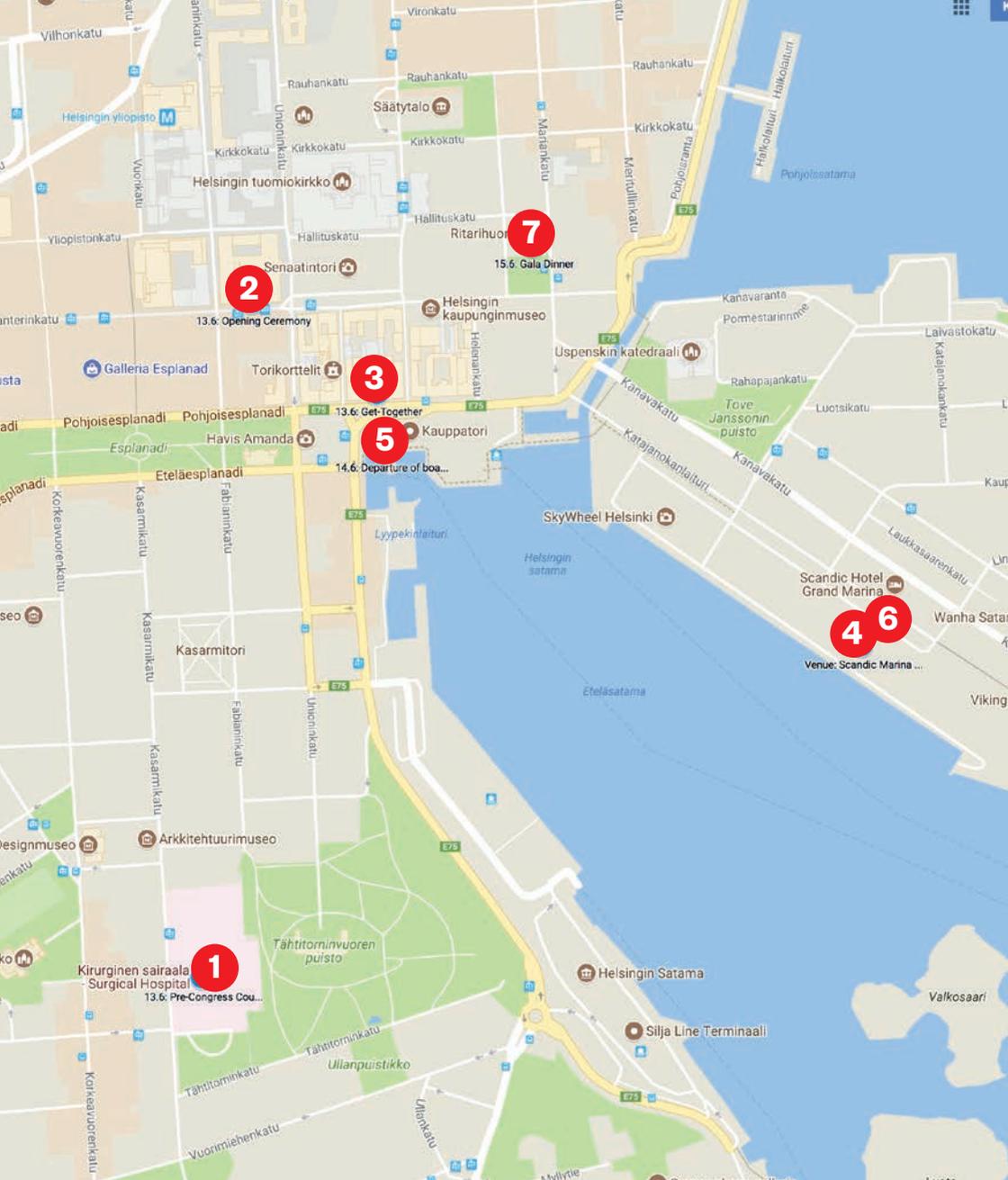
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## VENUE AND LOCATION OF EVENTS

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|--|---|
| <b>1</b> 13.6: Pre-Congress Course Venue | <b>4</b> Venue: Scandic Marina Congress Center                |
| <b>2</b> 13.6: Opening Ceremony          | <b>5</b> 14.6: Departure of boat to Evening Concert, Option 1 |
| <b>3</b> 13.6: Get-Together              | <b>6</b> 14.6: Departure of buss tour, option 2               |
|  | <b>7</b> 15.6: Gala Dinner                                    |