### The 16<sup>th</sup> International Conference on Advances in Quantitative Laryngology, Voice and Speech Research

June 24 – 27, 2025 Groningen, the Netherlands





## Contents

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History of AQL	3
Welcome to AQL 2025	4
Organizing committee	5
AQL keynote speakers	7
About the city of Groningen	9
Food and drink recommendations	10
Sightseeing recommendations	11
Conference venues	13
Map of the conference venues	15
Workshop day	17
Conference program	18
Podium sessions 1 – 4	19
Poster session 1	21
Podium sessions 5 – 7	22
Poster session 2	23
Podium sessions 8 – 9	24
Communications	25

# **History of AQL**

The first AQL meeting took place in Erlangen, Germany in 1996. The collaborative workshop forum was first intended to be a venue where voice laboratories in Europe (mainly from Germany), could meet annually to provide updates on their progress on different aspects of quantitative assessment of laryngeal functions, voice and speech, and to set new goals. This collaborative effort was funded by member laboratories, and the German Research Foundation (DFG), in conjunction with other European funding agencies, the laboratories' institutional funding mechanisms, and/or through grants from private industry. The first four AQL meetings were thus collaborative workshops between European member-laboratories, producing progress reports. Non-member participants from other laboratories and nationalities were also involved.

Over the next four years (1996-2000), the AQL initiative grew very quickly and gained the respect and recognition of the international voice community. The meeting quickly expanded from 15 to 50 participants.

The 2001 AQL conference in Groningen, the Netherlands, marked the first international AQL with participants from across the world. The following AQL International Conferences were held in Hamburg, Germany (2003); in Groningen, the Netherlands (2006); in Stockholm, Sweden (2008); and in Erlangen, Germany (2010). These international scientific meetings had a strong impact on voice research, through the publication of proceeding materials. Since the 9th AQL 2010, in Erlangen, Germany, student workshops aimed at disseminating voice science have been added to the scope. Funding for the student summer school was initially obtained from the COST Action 2103 "Advanced voice function assessment," for dissemination of scientific knowledge among scientists and students from the participating European nations. In July 2012, another voice conference, the 8th International Conference on Voice Physiology and Biomechanics, was similarly organized in cooperation with the COST Action 2103.

The AQL was first held outside Europe in 2013. The 10th AQL Conference, in Cincinnati, Ohio, further broadened the scope and outreach of the previous AQL conferences. The AQL returned to Europe in London, the United Kingdom, in 2015 where it was held in conjunction with the 4th International Occupational Voice Symposium. The 12th AQL was held in Hong Kong, the first AQL conference to be held around the Asia-Pacific Rim. <u>The 13th AQL</u> was held in Montreal, Canada, <u>the 14th AQL</u> was held in Bogotá, Colombia (virtual). In 2023, the 15th edition of AQL was held in Phoenix, Arizona, USA at the Mayo Clinic.

In 2025, the 16th AQL will return to Groningen, the Netherlands.

AQL 2025

### Welcome to AQL 2025 in Groningen!

It is with great pleasure that we welcome you in Groningen for the 16<sup>th</sup> International AQL Conference!

Over the coming days, we will explore the latest developments in voice and speech research with a diverse programme full of excellent submissions. The first day will be devoted to workshops and discussions. This year, the conference has a particular emphasis on quantitative approaches to understanding voice and speech disorders.

Groningen, known for its vibrant academic community and rich cultural scene, provides an inspiring backdrop for AQL, with previous editions hosted here in 2001 and 2006. We encourage everyone to engage fully in the conference activities, but also to take the opportunity to experience our city's unique atmosphere. We hope you'll get to know Groningen and discover the beauty and spirit that make us proud to call it our home.

To facilitate your discovery of Groningen, we have organized a welcome reception at Brouwerij Martinus, a family-owned brewery nestled in a historic building in the city center. Here, you'll have the opportunity to sample locally brewed beers and enjoy the cozy atmosphere.

Our conference dinner will be held at Restaurant Graansilo, situated in a recently renovated grain warehouse overlooking the Winschoterdiep canal. This unique venue offers a surprise four-course menu crafted from seasonal, local ingredients, providing a memorable culinary experience.

We look forward to everyone's contributions and to the fruitful discussions that will shape the future of quantitative laryngology, voice, and speech research.

The AQL 2025 Organizing Committee,

Defne Abur, Frank Tsiwah, Michelle Bretl, Thomas Tienkamp, Valentine Lucquiault



# **Organizing committee**





### **Defne Abur**

<sup>1</sup>Center for Language and Cognition Groningen, University of Groningen <sup>2</sup>Research School of Behavioural and Cognitive Neurosciences Groningen <u>d.abur@rug.nl</u>

Defne Abur is an Assistant Professor of Speech & Speech Technology at the University of Groningen. She directs the <u>Speech Biosignal</u> <u>Processing Lab</u> which examines a variety of biosignals to characterize typical and disrupted auditory function and speech production. Her research takes an interdisciplinary approach combining engineering, hearing science, and speech science.

### **Frank Tsiwah**

<sup>1</sup>Center for Language and Cognition Groningen, University of Groningen <u>f.tsiwah@rug.nl</u>

Frank Tsiwah is an Assistant Professor of (Neuro-) Computational Linguistics at the University of Groningen. His current research focuses on the use of Large Language Models and other machine learning approaches towards investigating speech, language, and human cognition, with particular emphasis on disordered speech and language.



# **Organizing committee**



#### **Michelle Bretl**

<sup>3</sup>Department of Communication Sciences and Disorders, University of Wisconsin-Madison bretlm@surgery.wisc.edu

Michelle Bretl is a PhD candidate in the Department of Communication Sciences and Disorders at the University of Wisconsin - Madison under the mentorship of Dr. Susan Thibeault. Michelle's research interests broadly include the development of more consistent and reliable treatments for voice and upper airway disorders, particularly hard-to-treat disorders such as vocal fold scar. Her current research investigates the effect of gene editing on vocal fold fibroblast function, particularly related to wound healing.

### **Thomas Tienkamp**

<sup>1</sup>Center for Language and Cognition Groningen, University of Groningen t.b.tienkamp@rug.nl

Thomas Tienkamp is a PhD candidate at the University of Groningen and he is affiliated with the Faculty of Arts as well as the Department of Oral and Maxillofacial Surgery at the University Medical Centre Groningen. Thomas' research aims to characterize speech outcomes following oral cancer treatment. To this end, he employs acoustic, kinematic, perceptual, and patient-reported outcomes. Through this holistic approach, Thomas hopes to inform and improve speech rehabilitation strategies for this population in the future.





### Valentine Lucquiault

<sup>1</sup>Center for Language and Cognition Groningen, University of Groningen v.lucquiault@student.rug.nl

Valentine Lucquiault holds a Master's degree in cognitive engineering. She is currently extending her training in the Language and Cognition Research Master at the University of Groningen. She is preparing to pursue a PhD combining her engineering background with clinical questions in voice and speech.

AQL 2025

# AQL 2025 Keynotes



Sonja Kotz is a translational cognitive neuroscientist, investigating temporal, rhythmic, and formal predictions in audition, music, and speech across the lifespan, pathologies (PD, stroke, tinnitus, psychosis, dyslexia), and animal models. In her research she utilizes a wide range of behavioral and neuroimaging methods s/f/rsMRI, TMS). (M/EEG. She heads the Neuropsychology section at Maastricht University (NL) and holds honorary professorships at the University of Leipzig (DE), and University of Lisbon (PT). She is a senior/associate editor for Imaging Neuroscience, Cortex, Neurobiology of Language, and PlosOne. Find out more about her Basic and Applied NeuroDynamics lab.

Srikantan Nagarajan is a tenured Professor in the Department of Radiology and Biomedical Imaging at the University of California, San Francisco. His research interests include determining neural mechanisms of speech motor control and understanding human brain plasticity associated with learning and disease. He has been involved in the development and refinement of machine learning algorithms and computational models for multimodal structural and functional brain imaging, to help with diagnosis, monitoring and prognosis in various brain disorders. Dr. Nagarajan's translational current research includes brain studies in program imaging Hearing Dementias, Voice Disorders. and Neurodevelopmental Disorders, Brain Tumors, Epilepsy and Schizophrenia. He is a fellow of the IEEE and the AIMBE.





# AQL 2025 Keynotes



Kaila Stipancic is an assistant professor and director of the Buffalo Oromotor, Speech, & Swallowing Lab in the Department of Communicative Disorders and Sciences at the University at Buffalo. She completed her PhD in Rehabilitation Sciences at the MGH Institute of Health Professions. Dr. Stipancic is also a licensed Speech-Language Pathologist who completed her clinical master's degree at the University at Buffalo and her clinical fellowship at the University of Wisconsin-Madison with a specialization in dysphagia prior to pursuing her PhD. This clinical training greatly influenced her research directions. Her research seeks to advance the assessment of oromotor impairments and dysarthria for individuals with a variety of neurological etiologies using perceptual, acoustic, kinematic, and neurophysiologic She is particularly interested in methodologies. improving relevant understanding and outcome measures that are used clinically and in research settings, with the ultimate goal being to optimize the care of patients with oromotor impairments.



# About the city of Groningen

#### Groningen: a city shaped by students and stadjers alike

Situated in the North of the Netherlands, Groningen (or Grunn as the locals call it) is built around learning and discovery. With the University of Groningen at its heart, the city has a long academic tradition and a large student population that brings a steady flow of new ideas and perspectives. This youthful energy shapes daily life, with cafés, bars, libraries, and cultural spaces all reflecting the pace and rhythm of a university town. Together, students and locals, the Stadjers, shape the atmosphere of Groningen: open, curious, and community-oriented. With its compact layout and extensive cycling infrastructure, the city is easy to navigate and invites both newcomers and lifelong residents to make it their own.

#### Cultural and music festivals all throughout the year

Throughout the year, Groningen hosts a wide range of festivals and cultural events. In January, the city is home to Eurosonic Noorderslag, one of Europe's leading showcase festivals for new musical talent, drawing artists, industry professionals, and music lovers from across the continent. In summer, the city hosts the Noorderzon Festival, where performance, art, and food are brought together all throughout the city's main park, the Noorderplantsoen. These events frequently feature research talks and/or educational outreach, connecting the city and the University of Groningen community. When the park is not hosting a festival, it functions as a shared living room for all students during the summer months. In short, there's something happening in Groningen all year round, contributing to the city's dynamic, yet relaxed and approachable atmosphere.



Academy building, University of Groningen Source: https://www.rug.nl/news/2024/10/hetacademiegebouw



Noorderzon 2023 SPAAKLAB speech research outreach



Noorderplantsoen Source: https://www.birdeyes.nl/2019/03/noorderplantsoen-Groningen/



# **Discover Groningen**

### COFFEE, TEA, BAKERIES

Koffiestation Black and Bloom Paais (Pie café) Broodje van Eigen Deeg **GRAB AND GO** 

Mr Dam FLFL II Gusto Ra bowls



LUNCH & DINNER

Het Concerthuis Thai Jasmine Konbu Streetfood Bar Barrie Anne & Max Eetcafé Lambik Gustatio Bistro Boys Tarantè 081 Cervantes



De Pintelier Vin Natuur Café Hooghoudt Het Pomphuis Boel (petanque bar!) The Stockroom Pacific Café Wolthoorn

# **Discover Groningen**

### SIGHTSEEING



© Groninger Museum, Groningen Photo: Erik en Petra Hesmerg 2014





Source: https://www.birdeyes.nl/2019/03/noorderplantsoen-Groningen/



# **Discover Groningen**

### SIGHTSEEING

### Martinitoren / Martini Tower

https://www.visitgroningen.nl/nl/plekken/stad/martinitoren

### Groningen Forum

https://forum.nl/en/info/what-we-do



Picture: https://www.visitgroningen.nl



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### AQL 2025 Conference, Workshop and Social Event Locations

### **Academy Building**

Broerstraat 5, 9712 CP Groningen

Location during:



Workshops

### House of Connections

Grote Markt 21, 9712 HR Groningen

Location during:

 Main program (Wedesday – Friday) with talks and keynote



### Harmony building

Oude Kijk in Het Jatstraat 26, 9712 GR Groningen

Location during:

 Poster sessions on Wednesday and Thursday





## **Reception and Conference Dinner**

### Reception: Brouwerij Martinus (10 min walk from House of Connections)

- June 25<sup>th</sup>, 17:30-19:30
- Kostersgang 32-34, 9711 CX Groningen



#### Conference Dinner: <u>Graansilo</u> (15 min walk from House of Connections) June 26th, 19:00-21:30

• Griffeweg 4, 9724 GG Groningen





## Map of the city centre



- 1. Harmony Building (Oude Kijk in Het Jatstraat 26, 9712 GR Groningen)
- 2. Academy Building (Broerstraat 5, 9712 CP Groningen)
- 3. House of Connections (Grote Markt 21, 9712 HR Groningen)
- 4. Hotel Halbert (Oude Boteringestraat 43, 9712 GD Groningen)
- 5. The Happy Traveller (Kleine Kromme Elleboog 5, 9712 BS Groningen)
- 6. The Social Hub (Boterdiep 9, 9712 LH Groningen)

### Location of the Reception and Conference Dinner



- 1. Academy Building (Broerstraat 5, 9712 CP Groningen)
- 2. House of Connections (Grote Markt 21, 9712 HR Groningen)
- 3. Brouwerij Martinus (Kostersgang 32-34, 9711 CX Groningen)
- 4. Graansilo (Griffeweg 4, 9724 GG Groningen)



## Workshops – June 24th, 2025

Location: Offerhauszaal (Academy building)

10:00 – 11:00 am



Vocal learning in songbirds

(Groningen Institute for Evolutionary Life Sciences)

Part I (11:00 - 12:00)

Lunch (provided)

Part II (1300 - 14:00)



Statistics Workshop (Generalized Additive Models)

Jacolien van Rij (Bernoulli Institute for Mathematics, Computer Science and Artificial Intelligence)



### **3D Lab for Speech Prostheses**

Max Witjes: introduction into the 3D lab UMCG Annelies Mulder : 3D personalized vocal cord medialization Reinier ten Brink : AI tools for 3D planning in health care (Oral & Maxillofacial Surgery and Head and Neck Cancer, University Medical Center Groningen)



SPRAAKLAB Mobile Speech Lab

Thomas Tienkamp Valentine Lucquiault (Center for Language and Cognition)

## AQL 2025 Main Program

Wednesday June 25th		Thursday June 26th		Friday June 27th	
Location	House of connections	Location House of connections		Location	House of connections
8:30 onward	Registration	8:30 onward	Registration		
9:00 - 9:15	Welcome to AQL				
9:15 - 10:10	Podium Talk Session 1	9:00 - 10:10	Podium Talk Session 5	9:10 - 10:20	Podium Talk Session 8
10:10 - 10:30	break	10:10 - 10:30	break	10:20 - 10:45	break
10:30 - 11:25	Podium Talk Session 2			10:45 - 11:40	Podium Talk Session 9
		10:30 - 11:30 KEYNOTE: Kayla Stipancic		1 <u>1</u> :40 - <u>12:</u> 00	Conference closing and poster awards
11:25 - 12:25	KEYNOTE: Sonja Kotz	11:30 - 12:25	Podium Talk Session 6		Bagged lunch (provided)
	Lunch (provided)		Lunch (provided)		
13:30 - 14:40	Podium Talk Session 3	13:30 - 14:25	Podium Talk Session 7		
14:40 - 14:50	break	14.05 45.05			
14:50 - 15:45	Podium Talk Session 4	14:25 - 15:25	4:25 - 15:25 KEYNOTE: Srikantan Nagarajan		
Location	Marielokezaal, Harmony building	Location	Marielokezaal, Harmony building		
	Poster session 1	15:25 - 17:00	Poster session 2		
15:45 - 17:15		Location	Graansilo Restaurant		
Location	Brouwerij Martinus	19:00 onward	Conference dinner		
17:30 - 19:30	Reception				



## Podium Sessions 1 – 4

Wednesday June 25 – Podium Sessions (12 min talk + 3 min Q&A, with combined panel at the end)					
	Time	Title	Authors		
	9:15 – 9:30	Vocal Fold Vibratory Kinematics in Pressed and Breathy Phonation	Laura E. Toles, Avery Moore, Ted Mau		
Podium Session 1	9:30 – 9:45	Test-Retest Reliability of The Daily Phonotrauma Index: Normal Variance Across Short- And Long-Term Time Scales	Jameson Cooper, Benjamin Kevelson, Hamzeh Ghasemzadeh, Daryush Mehta, Robert Hillman, Jarrad Van Stan		
	9:45 – 10:00	Towards Reproducible Acoustic Measurements Obtained During Rigid Laryngoscopy with an Endoscope- Mounted Microphone	Jan G. Švec, Dominika Valášková, Jitka Vydrová		
	10:00 - 10:10	Panel discussion w	vith all speakers		
	10:30 – 10:45	Tailored Stimuli to Investigate the Neural Coding of Speech	Etienne Gaudrain, Sarah Verhulst, Deniz Başkent		
Podium	10:45 – 11:00	Sensorimotor Control of Vocal Pitch Across Age in Adulthood	Valentine Lucquiault, Thomas Tienkamp, Hedwig Sekeres, Martijn Wieling, Defne Abur		
2	11:00 – 11:15	Voice Loudness, Self-Assessment and Auditory-Sensory Feedback in Voice Production in Parkinson's Disease	Francisco Contreras-Ruston, Antoni Callen, Matías Zañartu, Héctor Arriagada-Concha, Antonia Lagos- Villaseca, Sandra Rojas, Carla Napolitano, Jordi Navarra, Sonja Kotz		
	11:15 – 11:25	Panel discussion with all speakers			
	13:30 – 13:45	Deep Learning-Based Laryngo-Tracheal Landmark Tracking for Rapid and Safe Vocal Fold Injection	Amulya Vankayalapati, Nour Awad, Manikanta Varaganti, Laura J. Brattain, Gregory R. Dion		
Podium	13:45 – 14:00	Mechanisms of Vocal Fold Inferior Medial Bulging with Thyroarytenoid Muscle Activation	Tsukasa Yoshinaga, Zhaoyan Zhang		
3	14:00 – 14:15	Engineered Composite Hydrogels for In Situ Tissue Repair: Enhanced Adhesion, Porosity, And Immunomodulation	Sara Nejati, Luc Mongeau		
	14:15 – 14:30	Psychosocial Stress-Induced Changes in Vocal Fold Epithelial Barrier Integrity	Anumitha Venkatraman, Katelyn Jacobs, Susan Thibeault		
	14:30 - 14:40	Panel discussion w	vith all speakers		

	14:50 – 15:05	Injectable Click Decellularized Extracellular Matrix Hydrogels for Vocal Fold Tissue Engineering: An In Vivo Biocompatibility Study	Mika Brown, Hideaki Okuyama, Maryam Tabrizian, Nicole Y.K. Li- Jessen
Podium Session	15:05 – 15:20	A Multi-Material Hydrogel Model to Study Chronic Fibrosis in Vocal Folds	Mohaddeseh Mohammadi, Ayda Pourmostafa, Daniel Li, Hossein Goodarzi, Amir K. Miri
4	15:20 – 15:35	Innovating Treatments for Vocal Fold Scarring: Controlled Dexamethasone Delivery with a Novel Light-Activatable Implant	Denzel Ryan Cruz, Nour Awad, Avery Zheng, Alexander Karabachev, Charles Farbos de Luzan, Yoonjee C. Park, Gregory R. Dion
	15:35 – 15:45	Panel discussion with all speakers	



### **Poster Session 1**

Wednesday June 25 – Poster Session 1				
#	Title	Authors		
1	Effects Of Surgery on The Relationship Between Subglottic Pressure and Fundamental Frequency in Vocal Fold Dynamics in Patients with Benign Laryngeal Diseases	Wen-Hsuan Tseng, Hsiang-Ling Chiu, Tzu-Yu Hsiao, Tsung-Lin Yang		
2	Improving Vocal Fold Paralysis Detection from Voice Recordings Using a Robust ML Mode	Juliette Dindart, Hélène Massis, Trung Kien Bui, Agnès Rouxel, Christophe Trésallet, Claire Pillot-Loiseau, Frédérique Frouin		
3	Use Cases for Optopalatographic Articulatory Measurements: A Portable and Easy to Use Solution	João Menezes, Arne-Lukas Fietkau, Jihyeon Yun, Peter Birkholz		
4	Clustering Study of Voice Characteristics of Mandarin Speakers in Lifespan	Dai Xiao, Liang Changwei, Lu Yao, Wu Xiyu, Kong Jiangping		
5	Enhancing Glottis Segmentation in Laryngeal High-Speed Videoendoscopy Using Yolo-Based Roi Detection	Alondra Araya, Emiro Ibarra, Matías Zañartu		
6	Visual Perceptual Analysis of Vibratory Patterns and Mucosal Wave Differences Between Vocally Healthy Children and Children with Vocal Fold Nodules	Bernhard Jakubaß, Hamide Ghaemi, Maggie Lynn Stall, Dimitar D. Deliyski, Rita R. Patel		
7	Feedback And Feedforward Auditory-Motor Processes for Voice and Articulation in Hearing Loss	Andrea Alves Maia, Luis M. T. Jesus		
8	A Dosimetry Comparative Study in Dear Evan Hansen	Ana Zuim, Celia Stewart, Ingo Titze, Aaron Johnson		
9	Voice Cepstral Peak Prominence Metrics in Italian by Age, Sex, And Pre-Processing Method	Irene de Nijs, Thomas Tienkamp, Martijn Wieling, Defne Abur		
10	New Perspectives Through Comprehensive and Multimodal Voice Diagnostics: Findings from a Current Intervention Study with German Teachers	Christian Gegner, Jonas Hauck, Marina Giglberger, Richard Göllner, Brigitte M. Kudielka, Anita Schilcher, Stefan Wüst, Sven Hilbert		
11	Exploring The Use of Amniotic Materials to Prevent Vocal Fold Scar After Injury	Jenny L Pierce, Brendan Olson, Ray M Merrill, Anika Isom, Kim Lanaghen, Omar Gharbia, Sidney Kaufmann, Marshall E Smith, Michael B Christensen		
12	Histological Evaluation of Human Laryngeal Embryogenesis	Vlasta Lungova, Jessica M. Fernandez, Susan L. Thibeault		
13	Laryngoresponders: Are They More Common in Individuals Diagnosed with Vocal Hyperfunction?	Daphne S. Toglia, Nicole Tomassi, Allison S. Aaron, Turley Duque, Kaitlyn A. Siedman, Jose M. Rojas, Lauren F. Tracy, J. Pieter Noordzij, Cara E. Stepp		
14	Post-Influenza Airway Injury: Immune Cell Recruitment and Oncogene Myc-Driven Basal Cell Regeneration	Alexander G. Foote, Xin Sun		
15	Comparability And Quantification of Vocal Tract-Related Efficiency Strategies of Different Voice Qualities in Four Professional Singers	Fiona Stritt, Stefanie Rummel, Johannes Fischer, Michael Bock, Bernhard Richter, Matthias Echternach, Louisa Traser		
16	Vowel Onset VRT: A Comparison of Signal Envelope Algorithms and Their Key Parameters	John Holik, Duy Duong Nguyen, Tünde Szalay, Tomás Arias-Vergara, Michael Döllinger, Catherine Madill		
17	Voice Acoustic Parameters and Working Conditions in Colombian Healthcare Workers	Lady Catherine Cantor-Cutiva, Andrés Carrillo- González		
18	Pitch Reflex Responses in Individuals with Hearing Impairment Via Acoustics and Electroencephalography	Tony Schelhorn, Benjamin Peschel, Michael Döllinger, Defne Abur, Ulrich Hoppe		
10	Pole Of Piezot in Human Vacal Fold Eibrahlaata	Se-in Kim, Vlasta Lungova,		
19	Kole Of Piezo1 in Human Vocal Fold Fibroblasts	Susan Thibeault		
20	Toward Automated Voice Quality Evaluation: Can an Acoustic Multiparametric Index Match Machine Learning Performance?	Ahmed M. Yousef, Emma C. Willis, Vahni Tagirisa, Robert E. Hillman, Daryush D. Mehta		

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## Podium Sessions 5 – 7

Thursday June 26th – Podium Sessions (12 min talk + 3 min Q&A, with combined panel at the end)					
Podium	Time	Title	Authors		
	9:00 – 9:15	An Update on Conversation Training Therapy (CTT)	Amanda I Gillespie, Jackie Gartner-Schmidt		
	9:15 – 9:30	The Effect of Listener Feedback on Sensorimotor Adaptation in Articulation and Prosody	Kimberly L. Dahl, Manuel Díaz Cádiz, Cara E. Stepp		
Session 5	9:30 – 9:45	Effects Of Delayed Auditory Feedback on Speech Kinematics	Christopher Dromey, Abbey Persons		
	9:45 – 10:00	Sibilant Differentiation Following Tongue Cancer Surgery: Evidence from Longitudinal Articulatory- Kinematics 6- And 12-Months Post-Surgery	Thomas B. Tienkamp, Teja Rebernik, Raoul Buurke, Nikki Hoekzema, Dan Mu, Katharina Polsterer, Hedwig Sekeres, Rob J.J.H. van Son, Martijn Wieling, Max J.H. Witjes, Sebastiaan A.H.J. de Visscher, Defne Abur		
	10:00 – 10:10	Panel disc	ussion with all speakers		
	11:30 – 11:45	Spatiotemporal Indices of Relative Fundamental Frequency for Quantifying Intraspeaker Variability in Vocal Hyperfunction	Jenny Vojtech, Laura E. Toles, Daniel P. Buckley, Cara E. Stepp		
Podium Session 6	11:45 – 12:00	Differences In Ambulatory Sympathetic Arousal Between Patients with Vocal Hyperfunction and Vocally Healthy Controls	Jeremy Wolfberg, Jameson C. Cooper, Daryush Mehta, Nelson Roy, Robert E. Hillman, Jarrad H. Van Stan		
	12:00 – 12:15	Effects Of Cognitive Load On Vocal Motor Control: Changes in Subglottal Pressure and Laryngeal Muscle Activation	Rocío B. Ortega, Jesús A. Parra, Nicolás F. Quinteros, Emiro Ibarra, Cara E. Stepp, Matías Zañartu		
	12:15 – 12:25	Panel discussion with all speakers			
	13:30 – 13:45	Transverse Ultrasound Imaging of the Phonating Larynx	Mark K. Tiede, D.H. Whalen, Laura L. Koenig		
Podium Session	13:45 – 14:00	Asynchronous Parallel Reinforcement Learning for Voice Control in a Human Larynx Model	Hem Pandeya, Xudong Zheng, Qian Xue		
7	14:00 – 14:15	Quantifying The Vocal Fold Oscillations Using Dynamic 3D Magnetic Resonance Imaging	Paula Jordan, Johannes Fischer, Fiona Stritt, Marie Köberlein, Louisa Traser, Bernhard Richter, Michael Bock		
	14:15 – 14:25	Panel discussion with all speakers			



### **Poster Session 2**

Thursday June 26 – Poster Session 2				
1	Quantifying Anatomic, Morphologic, Acoustic, And Perceptual Characteristics of Tracheoesophageal Voice Pre and Post Balloon Dilation Utilizing High Speed Digital Imaging	Angela Dionisio, Layne Singer, Charles Farbos De Luzan, Gregory R. Dion		
2	Measuring The Effects of Corticosteroid Use on Vocal Fold Inflammation and Biomechanics Using a Rabbit Model	Maya Stevens, Brendan Olson, Anika Isom, Douglas Roberts, Jenny Pierce, Julie M Barkmeier-Kraemer, Ray Merrill, Kristine Tanner, Ben Christensen		
3	Development And Validation of Personal Technology to Treat Hypophonia in Patients with Parkinsons Disease	Amanda I Gillespie, Adam Klein, Meredith Caveney, David Anderson		
4	Modeling Uncertainty in Speech Adaptation to Sensory Feedback Perturbations	Nicolás F. Quinteros, Juan P. Cortés, Jesús A. Parra, Hasini R. Weerathunge, Frank H. Guenther, Matías Zañartu		
5	Identifying The Speech Breathing Kinematics of Older Adults with Presbyphonia	Brian Saccente-Kennedy, Jessica Huber, Martin Wiegand, Matthew Maddocks, Roganie Govender		
6	Differences In Vocal Fold Vibratory Kinematics Between Women with Phonotrauma and Vocally Healthy Controls	Laura E. Toles, Ted Mau		
7	Comparison Of Salivary Cortisol Levels Across Laryngeal Pathologies	Anumitha Venkatraman, Ruth Davis, Seth Pollak Susan Thibeault		
8	Targeted Nebulized ECM Therapy for Vocal Fold Healing	Nour Awad, Alexander D. Karabachev, Ramair Colmon, Camilo A Mora-Navarro, Donald O. Freytes,		
	Discovering The Effects of Veccular Legisne of the Veccul Fold Vic	Gregory R. Dion		
9	Computational Modeling	Manoela Neves, Rana Zakerzadeh		
10	A Platform for Monitoring Ecological Vocal Efficiency	Ahmed M. Yousef, Adrián Castillo-Allendes, Mark L. Berardi, Juliana Codino, Adam D. Rubin, Eric J. Hunter		
11	Dynamic 3D Vocal Fold MRI For Quantification of Vocal Fold Oscillations in Different Voice Production Mechanisms	Louisa Traser, Johannes Fischer, Paula Jordan, Fiona Stritt, Marie Körberlein, Jonas Kirsch, Stefanie Rummel, Bernhard Richter, Michael Bock, Matthias Echternach		
12	Sound Pressure Level Differences Between Standard Laboratory Setup and Ambulatory Voice Monitoring Devices: A Pilot Study	Víctor M. Espinoza, Alberto Valdivia, Juan P. Cortés, Matías Zañartu		
13	Electroglottographic Analysis of the Voice in Mandarin-Speaking Children	Wang Binghao, Lu Yao, Liang Changwei, Wu Xiyu, Kong Jiangping		
	A Tool for Efficient HSV Rating Based on the Voice-Vibratory	Jonas Donhauser, Anne Schützenberger, Rita Patel,		
14	Assessment with Laryngeal Imaging (VALI) Form	Michael Döllinger		
15	Temporal Changes in Relative Fundamental Frequency in Continuous Speech: Contrasting Effects of State Vocal Fatigue And Vocal Fatigue Index Scores	Mark Berardi, Yixiang Gao, Gui DeSouza, Maria Dietrich		
16	Classification Of Adductor Spasmodic Dysphonia with Audio and Glottal Area Waveform Fusion	Hiroki Sato, David Crandall, Weslie Khoo, Rita Patel		
17	Speech Intelligibility in Speakers with Adductor Laryngeal Dystonia (ADLD)	Turley Duque, Jenny M. Vojtech, Katherine L. Marks, Laura E. Toles, Cara Sauder,		
	The Effect of Intentional Vision Overline Alteration on Mantel Effect	Tanya L. Eadie, & Cara E. Stepp		
18	Captured Via Pupillometry and Via The NASA-TLX And Borg CR-10 Scales	Eva van Leer, Lucas Ribas, Madison Won, Tianqi Luan		
19	A Total Variation Based Semi-Automatic High-Speed Video Denoising Pipeline	Benjamin Peschel, Tony Schelhorn, Ulrich Hoppe, Rosa Uhl, Moritz Bingold, Michael Döllinger		

## Podium Sessions 8 - 9

Friday June 27th – Podium Sessions (12 min talk + 3 min Q&A, with combined panel at the end)					
	Time	Title	Authors		
	9:10 – 9:25	Arytenoid Adduction and Medialization: Resolving Height Asymmetry and Posterior Gap to Optimize Vocal Efficiency	Liran Oren, Charles Farbos De Luzan, Jacob Michaud-Dorko, Ephraim Gutmark, Greg Dion		
Podium Session	9:25 – 9:40	A Microengineered Vocal Fold Model for High-Through Screening Applications	Leila Donyaparastlivari, Scott Thomson, Chen Shen, Amir K. Miri		
8	9:40 – 9:55	Simulation Of Flow Induced Vibration of the Vocal Folds Using the Lattice Boltzmann Method	Stefan Kniesburges, Bogac, Tur, Adrian Kummerländer, Mathias J. Krause		
	9:55 – 10:10	A Feasibility Study of Subharmonic Voice Detection by Deep Learning	Takeshi Ikuma, Brad Story, Andrew McWhorter, Melda Kunduk		
	10:10 - 10:20	Panel discussion with all speakers			
Podium	10:45 – 11:00	Acoustic-Aerodynamic Vocal Efficiency Metrics Identify Changes in Vocal Function Following Voice Therapy for Phonotraumatic Vocal Hyperfunction Subgroups	Emma C. Willis, Annie B. Fox, Jarrad Van Stan, Jameson Cooper, Ben Kevelson, Robert E. Hillman, Daryush D. Mehta		
Session 9	11:00 – 11:15	Respiratory Kinematics in Aging Singers and Non-Singers: Relationship to Vocal Effort	Clotilde Marc, Jessica E. Huber, Maude Desjardins		
	11:15 – 11:30	Modeling Laryngeal Motor Control with Somatosensory Feedback for Prephonatory Vocal Posture	Nicolás F., Quinteros, Jesús A. Parra, Gabriel A. Alzamendi, Matías Zañartu		
	11:30 - 11:40	Panel discussion with all speakers			

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