ICVPB 2016

10th International Conference on Voice Physiology and Biomechanics

UNIVERSIDAD TECNICA
FEDERICO SANTA MARIA

Organizers

Advanced Center
for Electrical and
Electronic Engineering

Index

Foreword

Welcome to Chile! We are excited that you are able to join us for the 10th International Conference on Voice Physiology and Biomechanics (ICVPB), one of the premier forums for updates in scientific research on voice production.

This conference has a rich history that dates back to 1980. For more than 15 years, it kept its original name "Voice Physiology Conference", before updating it to ICVPB in 1997. Throughout its 36 years, this meeting has been held in Japan, the United States, Sweden, Australia, Germany, France, Finland, and now, Chile. We welcome all of you who are part of this wonderful history, as well as those who are new to it.

This conference is one of my favorite scientific meetings. It is very focused, wonderfully interdisciplinary, and always attracts an impressive lineup of world-class presentations from renowned researchers exploring the mathematical, physical, and physiological bases of voice production. I am glad to let you know that ICVPB 2016 will continue this tradition. We are welcoming more than 120 participants from all over the world; we are particularly proud of the strong South American assemblage that is joining ICVPB for the first time, which accounts for 40% of the presentations. Hosting ICVPB has been an honor, and driving its expansion to South America has made this experience truly unique.

This year, we are introducing an interesting new component to ICVPB. We are reaching the point where basic research in voice production is being translated into the clinical practice. Numerical models are starting to be used to assess surgical procedures and to provide additional information for diagnostic purposes. Experimental laryngeal fluid mechanics and nonlinear dynamics are providing new signal processing tools that are strengthening the objective assessment of vocal function. Vocal fold tissue engineering and bioimplants are reaching unprecedented success. With that in mind, we conceived special sessions that connect the traditional basic science nature of ICVPB with the applied clinical world.

ICVPB 2016 is going to be a wonderful conference on all fronts. Viña del Mar and Valparaíso offer a unique combination of stunning architecture, breathtaking coastline, vibrant culture, delicious cuisine, and entertaining nightlife. We invite you to enjoy Chile and to embrace our culture!

Matías Zañartu
General Chair
ICVPB 2016

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General Information about Chile

About the area: Viña del Mar, Spanish for "vineyard by the sea," is simply called "Viña" by Chileans, or sometimes "Garden City." Viña is one of the largest resorts on the South American Pacific coast, with a population of about 300,000 – more than 2 million people if the Valparaiso area is included. Viña was founded in the 1870s as a resort suburb of Valparaíso, connected to that city and to Santiago by train. After the 1906 earthquake damaged Valparaíso, Viña expanded with new architecture that transformed its seaside cliffs. One such structure is Castillo Wulff, a Germanic turreted granite castle set on a rocky point. Over the years, it has become a symbol of the city (much like the nearby giant floral clock that spells out the city's name and faces the ocean, offering a brilliant greeting to passing cruise ships). Called Cerro Castillo, or Castle Hill, this part of town is one of the oldest, full of other centuries-old whimsical homes jutting from the cliffs. The city is divided by the Estero Marga Marga, lined with colorful midcentury high-rise towers, their facades faceted by balconies tilting to the sea.

Time Zone: UTC/GMT - 3 hours. This means that the majority of the countries in central Europe including Spain have a time difference of +4 hours with Chile between the end of March and the end of October and of +5 hours during European summer time. From the eastern time zone of the United States, Chile is +1 hour from March to October (during daylight savings) and +2 hours otherwise. Daylight savings time in Chile is suspended as of 2015.

Climate & Clothing: Considering Chile's position on the globe, the seasons are opposite those of North America or Europe. The climate in Viña del Mar is similar to the Mediterranean. During summer - November to March - it is dry and warm. At night, it cools down. There is practically no rain.

Electrical Appliances: The voltage is 220 V / 50 Hz, and appliances need an adapter to plug into the Chilean sockets, which can be found in supermarkets or electronics stores.

Money: The official currency is the Chilean Peso (CLP). Exchange rates have recently hovered around $1 USD ≈ $650 CLP. Over the last few years, the rate of inflation has been around 5%. Spending Money: The best way to withdraw cash (pesos) is using a debit or credit cards from automated tellers marked with the Redcompra, Cirrus, Plus or Maestro symbol in all major cities - know your PIN! You will likely be charged a fee at the local automated teller and possibly by your banking institution (find out from your bank before you leave). Otherwise, travellers' cheques and cash in US dollars or euros (carry in a money belt) can be exchanged for Chilean Pesos at official exchange locations, such as in the airport (never in the street), or at local banks (usually worse rates, and only open from 9am-2pm). Cards: You can use your regular credit cards to pay almost anywhere. Only major hotels and tourist agencies accept US dollars directly.

Tipping: In restaurants, a tip of about 10% is expected; it is not included in the bill. It is customary to take all the change first and then leave a tip. Splitting the bill of a whole table in many individual ones is not a common practice in Chile, and it is generally not accepted. Gas station and parking attendants also expect a tip of 100 to 200 pesos, but cab drivers are not tipped.

Health: In Chile, there is no need to fear any specific health hazards. No special shots are necessary; there is no malaria or cholera. The World Health Organization excluded Canada and Chile from the areas affected by the Zika virus in the Americas. Tap water in Chile is safe to drink. However, for those who are especially sensitive to changes in diet, it is recommended to buy bottled water during the first days. As a precaution, avoid food offered in the streets.

Earthquakes: Earthquakes are an ongoing part of Chile's history, and its buildings and infrastructure are well prepared for these rather common events. So, if you happen to experience a tremor, just remain calm and stay where you are. Do not attempt to run outside. If the magnitude of the quake is significant (>7.0), a tsunami advisory, watch, or warning may be issued through the coastal sirens to alert the public. In that case, move quickly to higher ground (4th floor or higher in any building, or to an area at least 30 meters above sea level if you are outside) or as far inland as possible away from the coast. Every hotel provides information about what to do during a earthquake..

Nearby touristic attractions

Viña del Mar: Viña del Mar has a little of everything—trendy boutiques, beautiful homes, interesting museums, a casino, exciting nightlife, and, of course, some of the best beaches in the country. Just north of the rock wall along Avenida Peru you can visit the main beach. Further north, you can explore Las Salinas beach, a crescent of sand that has the calmest waters in the area. In addition, Viña has plenty of parks and squares, including Quinta Vergara and Plaza Vergara, which is Viña del Mar's central square. Quinta Vergara park is a fairly large park in downtown, with peaceful grounds and unique attractions, such as an art museum, a palace (currently under renovation), and a modern open-air amphitheater seating 20,000 people, which is considered one of the main stages of Chile. Not far from Plaza Vergara, a 500-year-old stone moai (a carved stone head) brought from Easter Island guards the entrance to the Francisco Fonck archaeological museum. The most interesting exhibits are those from Easter Island (Rapa Nui), such as wood tablets displaying ancient hieroglyphics.

Valparaíso: Just a short drive or metro ride from Viña, Valparaíso is a city with a unique character and personality. Described as syncopated, dilapidated, colorful and poetic, Valparaíso is simply Chile's most charismatic and unusual city. An UNESCO World Heritage Site, Valparaíso has a natural amphitheatre-like setting with breathtaking views, charming colonial architecture, colorful houses, some of the best street art in Latin America, a maze of steep, sinuous streets, alleys and stairs, and well-preserved early industrial infrastructures, such as the numerous elevators (funiculars) on the steep hillsides. Home of Nobel prize winner Pablo Neruda, Valparaiso was named the cultural capital of Chile, with numerous museums, attractions, and top-tier restaurants and hotels. For those interested in exploring this wonderful city, we have prearranged a walking tour of Valparaíso after the technical sessions on Tuesday.

USM: Universidad Técnica Federico Santa Maria (USM) is a private research university founded in 1931 in Valparaíso, Chile. The University has a strong emphasis on scientific and technological education and is consistently ranked among the top engineering schools in Chile and South America (QS and times higher education rankings). Its majestic main campus located in between Valparaíso and Viña del Mar features a Victorian Gothic style overlooking the Pacific Ocean and is considered one of the foremost works of Chilean architecture. The USM campus has one of the best opera halls in the country known as "Aula Magna". In addition, it houses the Voice Production Laboratory (www.vplab.usm.cl) that is focused on developing numerical, ambulatory, and high-speed video imaging tools for the objective assessment of vocal function. A tour of the main campus and Voice Production Lab can be coordinated directly with Dr. Matías Zañartu.

Reñaca and Concón: Located just 7 km from Viña del Mar, Reñaca is one of the most fashionable summer destination, with crowds of people, countless outdoor activities, dozens of good restaurants, a vibrant nightlife and a blend of sun and surf that makes it the perfect place to practice water sports. Traveling north toward Concón on Av. Borgoño will bring you to a unique sand ecosystem that has been declared a Nature Sanctuary. Beyond it are Lilenes, Las Bahamas and Amarilla beaches, all of which offer good spots for swimming and swimming and surfing. Concón is renowned for its many seafood restaurants and wetlands, which have 70 resident and migratory bird species, which fly through here each spring and summer.

Casablanca: Owing its name to Santa Bárbara de Casablanca, wife of the Spanish monarch Fernando VII. It is one of Chile's major winegrowing valleys for white varieties and has a well-dveloped wine tourism industry. If you want to enjoy a glass of fine , just visit one of the dozens of wineries of the Casablanca valley.

Isla Negra: The break of the waves against the black rocks led Nobel Prize-winning poet Pablo Neruda to select this place to build his most famous home. Currently administered by the Neruda Foundation, its more than 500 square meters contain many of the fascinating items that the poet collected. Isla Negra also offers a small beach with a view of the open-air bell tower at Neruda's home. You can also visit other beach towns near Isla Negra, incluiding Algarrobo and El Tabo.

Santiago: Ancient traditions coexist with 21st century life on every street and in each neighborhood of Santiago. The Santiago's downtown area is home to La Moneda (the presidential palace) and Plaza de Armas. This area also boasts numerous museums and pedestrian malls. Santiago is home to several imposing green spaces. For example, Parque Metropolitano, also known as Cerro San Cristóbal, is visible from most of the city. You can get to the top by bike, by car or taking a refurbished cable car. Great daytrip options are Pirque, a neighboring village in the Andean foothills, and the Maipo Valley, where you can enjoy nature and find a place to spend a few nights near the banks of the Maipo River.

Zapallar-Maitencillo: Maitencillo has very quiet beaches with soft sands and big rocks, fishing holes and a good selection of restaurants and accommodations. In Maitencillo, surfers flock to El Abanico, Aguas Blancas and Playa Grande, enjoying the strong Pacific tides. The strong wind and hills also makes the area suitable for paragliders. Zapallar is famous for its tall trees, stunning summer residences, gorgeous gardens and the beautiful stone church. The small bay and hills that protect the town from the wind create an extraordinary microclimate.

Tour options in the program

Valparaiso walking tour: On Tuesday evening, we have coordinated a special tour in English for those interested in exploring Valparaíso. To better accommodate you, the tour guides will drive the group in and out from the conference venue. The meeting time is at 18:30 hrs on Tuesday, March 15. The tour is US$22 or $15,000 Chilean pesos and it needs to be paid in advance (please inquire at the registration desk). Valparaiso tour registration and questions: tours.icvpb@gmail.com

USM technical tour: On Thursday evening, we invite you to visit the majestic Universidad Técnica Federico Santa Maria (USM) campus located in between Valparaiso and Viña del Mar. The campus features a Victorian Gothic style overlooking the Pacific Ocean and is considered one of the foremost works of Chilean architecture. We will explore the campus, its opera hall and the Voice Production Laboratory (www.vplab.usm.cl). The meeting time is at 18hrs on Thursday March 17, and it is free of charge. The visit takes 2 hours including the bus ride from and to the conference venue. Please register for this tour in the conference main desk to plan accordingly.

Venue

Enjoy Viña del Mar Conference Center.

With more than 900 square meters of conference and event rooms with a capacity of up to 1200 people, the Conference Center is one of the best of the region. The Conference Center also has a 5-star hotel, with facilities such as a rooftop spa, onsite restaurants, luxurious accommodations, and a large casino.

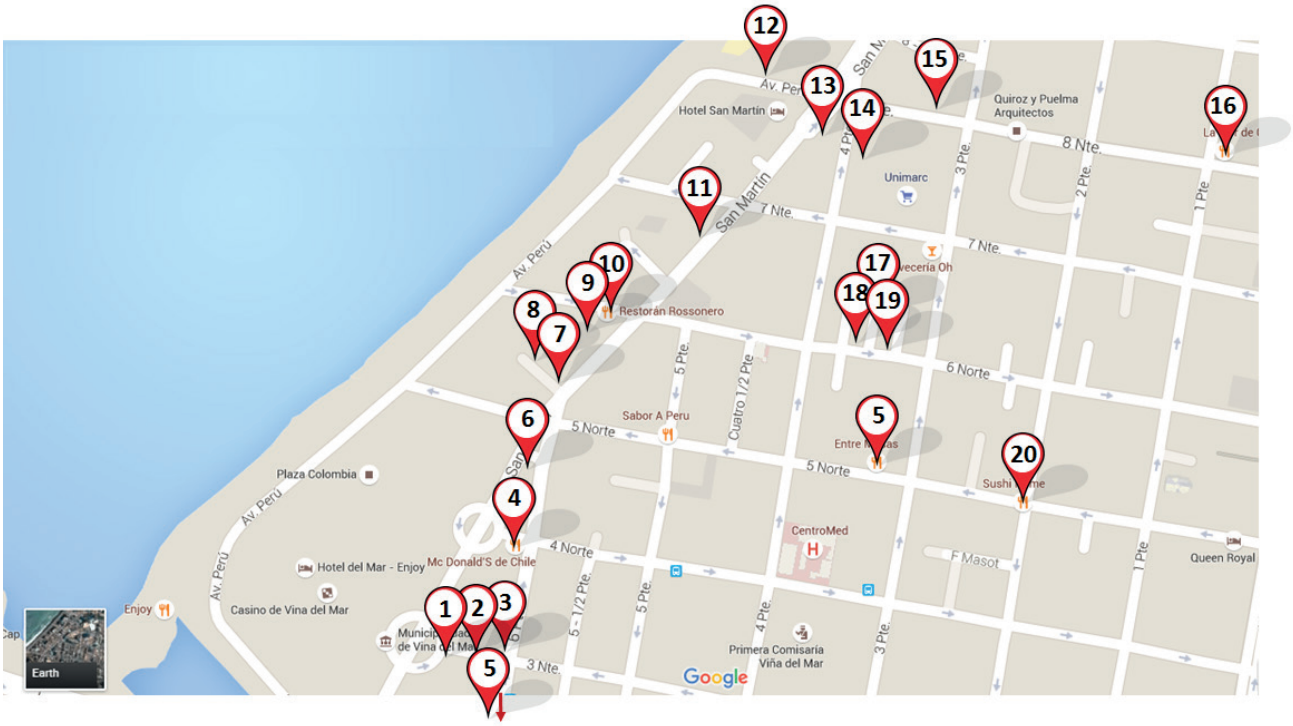
How to get there

If you stay at one of the hotels near the casino, you can walk to the venue. For people staying in Valparaíso, the easiest way to get to the Conference Center is by Metro. The train ticket is about the same price as the bus. Take the Miramar Station exit in Viña, walk (direction) to Ecuador Street and cross the bridge (10 min walk). If you are arriving by bus, get off at Calle Ecuador, which is very close to the Miramar Station Metro stop, and follow the directions above.

Where to eat for lunch

The lunch break during the conference is on your own. Listed below are some nearby culinary options for you to explore. The Enjoy Conference Center includes three restaurants: Cenit, La Barquera, and Santa Brasa. The Cenit is a buffet restaurant, which costs CLP $13.500 per person. The other two restaurants offer an a la carte menu. Near the venue, you can walk along one of the biggest restaurant areas of Viña, where you can find Peruvian, Italian, Chinese, Mexican and other international foods. On the way back to the Enjoy, you can have a coffee or tea in one of the many "Cafés". Pubs and restobars located near Plaza Colombia and Calle San Martín provide informal environments to continue the discussions of the day, plan your next collaboration, or just have fun with friends and colleagues.

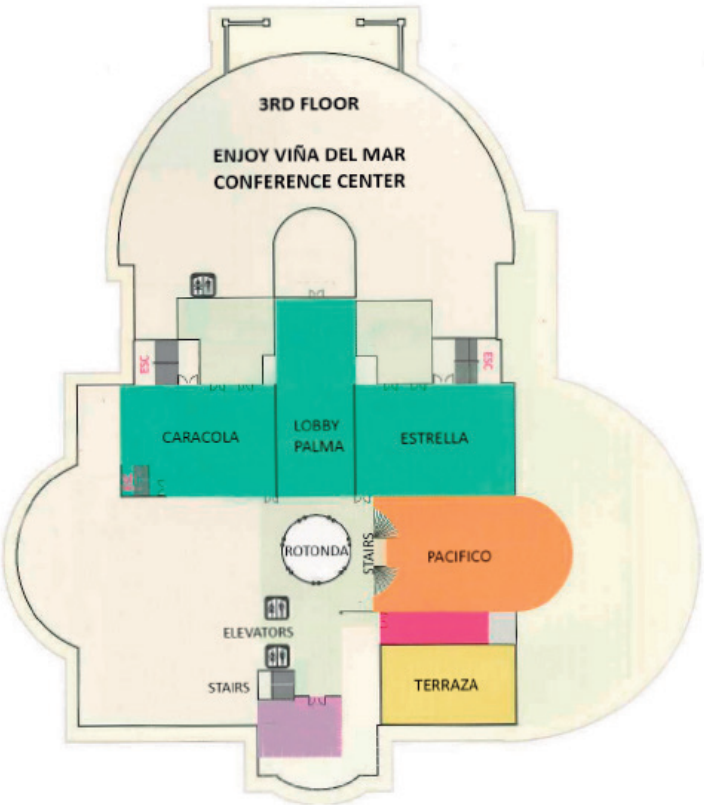
Nearby restaurants



	Type of Food	Trip Advisor Ranking	Mean Prices (CLP)
1-. Divino Pecado	*International*	2/296	$15.000-$20.000.
2-. Fellini	*Italian, Mediterranean*	13	$10.500-$17.500
3-. El Austriaco	*Austrian, European*	3	$15.000-$20.000
4-. McDonald	*Fast Food*	not rated	$3.000-$7.000
5-. Entre Masas	*Chilean (empanadas)*	34	$3.000-$7.000
6-. Telepizza	*Fast Food*	262	$5.000-$10.000
7-. ICA comida peruana	*Peruvian*	22	$15.000-$20.000
8-. El Gaucho	*Grill*	50	$12.000-$17.000
9-. Delicias del Mar	*Sea Food*	68	$12.000-$20.000
10-. Rossonero	*Italian*	10	$12.000-$17.000
11-. San Marco	*Italian, Mediterranean*	15	$14.000-$18.000
12-. Tierra de Fuego	*Mediterranean*	11	$25.000-$35.000
13-. La Dolce Vita	*Italian*	9	$20.000-$30.000
14-. Tomadochi House	*Japanese*	41	$10.000-$15.000
15-. Don Vito e Zanoni	*Italian, Mediterranean*	1	$15.000-$30.000
16-. La flor de Chile	*Chilean*	9	$10.000-$20.000
17-. Donde Willy	*Chilean*	36	$8.000-$16.000
18-. Los Roldan	*Chilean (empanadas)*	65	$2.000-$6.000
19-. La Cuisine	*French, International*	51	$10.000-$15.000
20-. Sushi Home	*Japanese*	23	$10.000-$15.000

Map of Venue

Activity	Room
Registration / Information	**Rotonda**
Short Course 1: Jack Jiang	**Caracola**
Short Course 2: Michael Döllinger	**Estrella**
Short Course 3: Ingo Titze	**Caracola**
Short Course 4: Luc Mongeau	**Estrella**
Coffee Break (Short Courses)	**Rotonda**
Welcome Reception	**Terraza**
Conference	**Pacifico**
Coffee Break (Conference)	**Lobby Palma**
Poster Sessions	**Lobby Palma**



Keynote Speakers

Jack Jiang, MD, PhD

Modeling of vocal fold vibration.

Dr. Jiang's research focuses on objective pathological laryngeal function assessments, laryngeal physiology, biomechanics of vocal fold vibration, medical instrumentation, and medical software development and application. He is also working on the development of accurate protocols for voice measurement in patients with laryngeal pathology. He has published more than 230 original research papers on these topics.

At the University of Wisconsin School of Medicine and Public Health, Dr. Jiang is the Director of International Collaborative Research and Translational Research for the Department of Surgery, Director of the Otolaryngic Biomedical Engineering Research Center, and runs the Laryngeal Physiology Lab. He serves on the editorial boards for the Laryngoscope, the Journal of Otolaryngology-Head and Neck Surgery, Annals of Otology, Rhinology, and Laryngology, and the Journal of Voice. In addition, he has served on Study Sections for the Center for Scientific Review of NIH since 1998, is a 2001 recipient of a Presidential Early Career Award for Scientists and Engineers from the White House, and is currently an American Speech and Hearing Association Fellow..

Luc Mongeau, PhD

Influence of phonation-related stresses on vocal fold reconstruction

Luc Mongeau is Professor and Chair of the Department of Mechanical Engineering at McGill University, located in Montreal, with affiliations with the Departments of Biomedical Engineering, Bioengineering and Otolaryngology, Head and Neck Surgery.

His research is on the biomechanics and mechanobiology of voice production. He has authored over 100 archival journal publications in over 35 different journals, and had has studied many aspects of voice over the past 20 years, including fluid mechanics, acoustics, visco-elasticity, computer modeling and simulations, mechanical stresses and strain, and imaging techniques. His recent research has turned to the relationship between mechanical factors and biological response, specifically cell migration and adhesion, and extracellular matrix production. He is a Tier 1 Canada Research Chair, a Fellow of the Acoustical Society of America, and a member of several professional societies, including the European Society of Biomechanics, the Canadian Biomaterials Society, the ASME, SAE, and AIAA. He is an active member of the Voice Foundation and serves on the editorial board of the Journal of Voice.

Ingo Titze, PhD

Using computer models to validate therapy and surgery approaches.

Ingo R. Titze is a University of Iowa Foundation Distinguished Professor in the Department of Communication Sciences and Disorders and the School of Music. He also directs the National Center for Voice and Speech, which is located at the University of Utah and the University of Iowa. Although formally educated as a physicist (Ph.D.) and engineer (M.S.E.E.), Dr. Titze has applied his scientific knowledge to a lifelong love of clinical voice and vocal music.

Specifically, his research interests include biomechanics of human tissues, acoustic phonetics, speech science, voice disorders, professional voice production, musical acoustics, and the computer simulation of voice. Dr. Titze has published over 350 articles in scientific and educational journals, authored books entitled Principles of Voice Production and The Myoelastic-Aerodynamic Theory of Phonation and Fascinations with the Human Voice. He has recently completed his third book, entitled Vocology. Dr. Titze is the father of vocology, a specialty within speech-language pathology. He has defined the word and the specialty as “the science and practice of voice habilitation.”

Dr.-Ing. Michael Döllinger

Interdisciplinary voice research:
"The whole is more than the sum of its parts"

University Hospital Erlangen, Medical School Department of Phoniatrics and Pediatric Audiology at the Department of Otorhinolaryngology Head & Neck Surgery Bohlenplatz 21, 91054 Erlangen, Germany.

Prof. Döllinger studied mathematics at the University Erlangen-Nürnberg (Germany) and received his diploma degree (M.Sc.) in 2000. In 2002 he received his PhD in Computer Science from the University Erlangen-Nürnberg (supervisor Prof. Eysholdt). From 2003 – 2005 he was postdoctoral fellow at the University of California Los Angeles (supervisor Dr. Berry). Then he returned to Germany and was Assistant and Associate Professor (2005 – 2008) at the Department for Phoniatrics and Pediatric Audiology (University Erlangen-Nürnberg). In 2008 he became Professor and Head of Research of the department. He was scientific head of the DFG funded research group FOR894 "Fundamentals on flow dynamics in voice production" between 2008 and 2013. Since 2008 he is Adjunct Professor at the Louisiana State University Baton Rouge.

In 2010 he chaired and hosted the 9th AQL and in 2012 the 8th ICVPB meeting in Erlangen. His scientific work is disseminated in 83 peer reviewed journal articles and 207 conference contributions. In his free time he is searching for some secluded waves to surf.

Short Courses

Monday, March 14 2016

Timetable	Activity	
08:00 - 18:00	Conference Registration	
08:00 - 09:00	Short Courses Registration	
09:00 - 10:20	**Jack Jiang**	Short Course 1, Part 1: Objective measurements of vocal fold vibration and phonatory function
09:00 - 10:20	**Michael Döllinger**	Short Course 2, Part 1: From basic science to clinical application
10:20 - 10:40	Coffee Break	
10:40 - 12:20	**Jack Jiang**	Short Course 1, Part 2: Objective measurements of vocal fold vibration and phonatory function
10:40 - 12:20	**Michael Döllinger**	Short Course 2, Part 2: From basic science to clinical application
12:20 - 14:00	Lunch Break	
14:00 - 15:40	**Ingo Titze**	Short Course 3, Part 1: Using computer models to validate therapy and surgery approaches
14:00 - 15:40	**Luc Mongeau**	Short Course 4, Part 1: Tissue engineering of the human vocal folds
15:40 - 16:00	Coffee Break	
16:00 - 17:20	**Ingo Titze**	Short Course 3, Part 2: Using computer models to validate therapy and surgery approaches
16:00 - 17:20	**Luc Mongeau**	Short Course 4, Part 2: Tissue engineering of the human vocal folds
19:00 - 21:00	Welcome Reception	

Oral Session

Tuesday, March 15 2016

Timetable	Activity	
08:00 - 08:20	**Matías Zañartu**	Welcome remarks
08:20 - 09:00	**Jack Jiang**	Keynote talk: Modeling of vocal fold vibration
Special Session 1: Virtual phonosurgery / Chair: Ingo Titze		
09:00 - 09:20	**Ted Mau**	1 From in silico to in vivo: Applying Simulation to Laryngeal Surgery Planning
09:20 - 09:40	**Alessandro De Alarcon**	2 Surgical Modeling Using Dynamic Voice CT to Improve Voice Post Airway Reconstruction
09:40 - 10:00	**Sid Khosla**	3 Comparing arytenoid adduction and infraglottal medialization to glottal medialization alone in an excised canine larynx model
10:00 - 10:20	**Dinesh Chetri**	4 Using the in vivo canine model to assess and treat laryngeal disorders
10:20 - 10:40	Coffee Break	
10:40 - 11:00	**Denisse Sciamarella**	5 Modeling voice production with time-delay systems: the larynx tube
11:00 - 11:20	**Matias Zañartu**	6 Modeling the pathophysiology of vocal hyperfunction
11:20 - 11:40	**Jorge Lucero**	7 Broadband synchronization of asymmetric vocal fold oscillators
11:40 - 12:00	**Ingo Titze**	8 Predicting Achievable Fundamental Frequency ranges in Vocalization Across Species
12:00 -12:20	**Marc Arnela**	9 Generation of diphthongs using finite elements in three-dimensional simplified vocal tracts
12:20 - 14:00	Lunch Break	

Tuesday, March 15 2016

Timetable	Activity	
14:00 - 14:20	**Luc Mongeau**	Keynote talk: Influence of phonation-related stresses on vocal fold reconstruction
Regular Session 1/ Chair: Cara Stepp		
14:40 - 15:00	**Nicole Li**	10 Sensitivity Analysis of Agent-Based Model of Vocal Fold Inflammation and Repair
15:00 - 15:20	**Vlasta Lunova**	11 Effect of Beta-Catenin signaling on cell proliferation in developing vocal folds and its potential for vocal fold regeneration and repair in adulthood
15:20 - 15:40	**Xia Chen**	12 Using RNA-Seq Characterization of Differently Expressed Genes from Larynx Responding to Smoking and Reflux
15:40 - 16:00	Coffee Break	
16:00 - 16:20	**Julie Barkmeier-Kraeme**	13 Aortic arch compliance and idiopathic left-sided vocal fold paralysis
16:20 - 16:40	**Hilton Ricz**	14 Electrophysiological activity of the pharyngoesophageal segment and tracheoesophageal voice and speech proficiency in total laryngectomees
16:40 - 17:00	**Rosario Signorello**	15 Toward a Psychoacoustic Model of Spectral Noise in the Voice Source
17:00 - 17:20	**Maryna Kryshtopava**	16 Brain Mapping of Laryngeal Sensorimotor Control in Normal Phonation
17:20 - 17:40	**Christian Herbst**	17 Universal mechanisms of sound production and control in birds and mammals
17:40 - 18:00	**Aaron Johnson**	18 The Effect of Social Isolation on Vocalizations and Neuromuscular Junctions of Aged Rats
19:00 - 21:00	Valparaiso Walking Tour	

Wednesday, March 16 2016

Timetable	Activity	
08:00 - 08:40	**Ingo Titze**	Keynote talk: Where has all the power gone? Accounting for energy creation and loss in vocalization
Session 3: Viscous flow phenomena in laryngeal aerodynamics / Chair: Byron Erath		
08:40 - 09:00	**Alexander Lodermeyer**	19 Highly resolved temporal analysis of the flow field in a synthetic human larynx model
09:00 - 09:20	**Stefan Kniesburges**	20 Subharmonic tone generation in an artificial vocal fold model
09:20 - 09:40	**Sid Khosla**	21 Intraglottal Vortices During Phonation
09:40 - 10:00	**Scott Thomson**	22 Simulations of Vocal Fold Replicas Containing Liquid-Filled Cavities
10:00 - 10:20	**Xudong Zheng**	23 Computational Modeling of Flow-Structure-Acoustic Interaction inside an Simplified Airway during Voice Production
10:20 - 10:40	Coffee Break	
10:40 - 11:00	**Lucy Zhang**	24 Dynamic and energetic relevance of glottal jet asymmetry
11:00 - 11:20	**Byron Erath**	25 Rethinking vocal fold contact: The role of viscous dissipation
11:20 - 11:40	**Sean Peterson**	26 Assessing the influence of intraglottal vortices on vocal fold dynamic
11:40 - 12:00	**Qian Xue**	27 The effect of vocal fold superior-inferior stiffness variation on sound production
12:00 -12:20	**Xavier Pelorson**	28 Experimental study of the influence of a growth on a replica of the vocal fold

Wednesday, March 16 2016

Timetable	Activity	
12:20 - 14:00	Lunch Break	
Regular Session 2/ Chair: Sean Peterson		
14:00 - 14:20	**Lewis Fulcher**	29 Hysteresis and Relaxation of Vocal Fold Tissue and the Difference between Phonation Onset and Offset
14:20 - 14:40	**Ronald Scherer**	30 An Empirical Equation for Posterior Glottal Flow
14:40 - 15:00	**Liran Oren**	31 Comparison of glottal flow rate predicted by
15:00 - 15:20	**Andre Armani**	32 The influence of sound emission on the lamina propria of the ventricular fold
15:20 - 15:40	**Veronika Birk**	33 Computer controlled set-up for automated phonation excitation in excised larynx experiments
15:40 - 16:00	Coffee Break	
16:00 - 17:00	Poster Session (even Poster IDs)	
17:00 – 18:00	Poster Session (odd Poster IDs)	
19:00 - 22:00	Gala Dinner	

Thursday, March 17 2016

Timetable	Activity	
Session 5: Challenges and advances in high-resolution endoscopic imaging ***Chair: Daryush Mehta***		
08:00 - 08:20	**Nicusor Iftimia**	34 Dynamic vocal fold imaging with combined optical coherence tomography/laryngeal high-speed video endoscopy
08:20 - 08:40	**Michael Döllinger**	35 Potential of endoscopic high speed imaging – current projects
08:40 - 09:00	**Ken - Ichi Sakakibara**	36 Analysis of spatial characteristics of the larynx using high-speed digital imaging
09:00 - 09:20	**Brian J. F. Wong**	37 Cross Sectional Imaging of Phonating Human Vocal Fold in Vivo Using VCSEL Optical Coherence Tomography
09:20 - 09:40	**Dimitar Deliyski**	38 Analysis of connected speech using high-speed videoendoscopy
09:40 - 10:00	**Matthias Echternach**	39 Vocal fold oscillation patterns in soprano singers' high fundamental frequency phonation
10:00 - 10:20	**Gustavo Andrade**	40 A new method to present high-speed data for laryngeal assessment based on Optical Flow computation
10:20 - 10:40	Coffee Break	
Regular Session 3: / Chair: Matías Zañartu		
10:40 - 11:00	**Elizabeth Heller Murray**	41 The Impact of Glottal Closure on Speech Breathing
11:00 - 11:20	**Stephanie Zacharias**	42 Vocal fold opening and closing phase differences in children with and without bilateral lesions

Thursday, March 17 2016

Timetable	Activity	
11:20 - 11:40	**Melda Kunduk**	43 Center of Vocal Fold Vibration during Initiation and Termination Phases
11:40 - 12:00	**Marco Guzman**	44 Computerized tomography measures during and after artificial lengthening of the vocal tract in subjects with voice disorders
12:00 -12:20	**Felipe Quintana Barahona**	45 Comparison of supraglottic activity and spectral slope between theater actors and vocally untrained subjects
12:20 - 14:00	Lunch Break	
14:00 - 14:40	**Michael Döllinger**	Keynote talk: Interdisciplinary voice research: The whole is more than the sum of its parts
Special Session 4: Applying engineering methods for the clinical assessment of vocal function / Chair: Mara Behlau		
14:40 - 15:00	**Brad Story**	46 Simulations of child-like speech as test material for speech analysis algorithms
15:00 - 15:20	**Leonardo Lopes**	47 Effectiveness of recurrence quantification measures in discriminating patients with and without voice disorders
15:20 - 15:40	**Juan Pablo Cortés**	48 Discriminating patients with vocal fold nodules from matched controls using acoustic and aerodynamic features from ambulatory voice monitoring data
15:40 - 16:00	Coffee Break	

Thursday, March 17 2016

Timetable	Activity	
16:00 - 16:20	**Gabriel Galindo**	49 Constructing a subject-specific lumped-mass model from clinical data using Bayesian estimation
16:20 - 16:40	**David Berry**	50 Phonation Type as a Function of the Activation of the Intrinsic Laryngeal Muscles
16:40 - 17:00	**Cara Stepp**	51 Relative Fundamental Frequency Distinguishes Between Phonotraumatic and Non-Phonotraumatic Vocal Hyperfunction
17:00 - 17:20	**Elizabeth Godoy**	52 The Role of the Epilarynx in Clear Speech Production: An Acoustic Analysis
17:20 - 17:40	**Manuel Diaz Cadiz**	53 Vocal fold contact pressure estimation using laryngeal high speed videoendoscopy
17:40 - 18:00	**Michael McPhail**	54 Phonation energy utilization and efficiency
19:00 - 21:00	Social Activities	

Poster Session

Title	Presenting Author
1. Electroglottographic assessment of in vivo Japanese Macaque sound production	***Christian Herbst***
2. Cross-cultural adaptation of the Chilean version of the Voice Symptom Scale - VoiSS	***Francisco Contreras***
3. Phonatory characteristics and Voice quality evaluation of Laryngeal dystonia before and after Botulinum toxin treatment. A case study	***Manfred Pützer***
4. Terminology of voice phenomena related to diplophonia	***Philipp Aichinger***
5. Influence on Spectral Energy Distribution of Emotional Expression	***Soledad Correa***
6. Relationship between sociodemographic variables and parameters teachers Members in Chillan	***Jazmín Perez***
7. Overtone measures in the clinic	***Mette Pedersen***
8. Voice type discrimination by analyzing neck surface skin acceleration signals: preliminary results on single vowels.	***Zhengdong Lei***
9. Synthetic Multi-Line Kymographic Analysis of High-Speed Videoendoscopy Feature Data	***Melda Kunduk***
10. Effects of Volume, Pitch and Phonation Type on Oscillation Initiation and Termination Phases	***Melda Kunduk***

Title	Presenting Author
11. Use of the PROMPT System® in voice training	***Ma. Eugenia Ferrando***
12. Vocal Tremor in Parkinson and Control Speakers	***Jean Schoentgen***
13. A setup to study physical principles underlying speech production for articulation-like movement	***Annemie Van Hirtum***
14.Perceptual Error Identification of Human and Synthesized Voice	***Mara Behlau***
15. Divergent or Convergent Glottal Angles: Which Gives Greater Flow?	***Ronald Scherer***
16. Control of glottal channel geometry by intrinsic laryngeal muscle activation	***Dinesh Chhetri***
17. Acoustic detection of diplophonia among other types of dysphonia	***Philipp Aichinger***
18. Chromoendoscopy Associated with Endoscopic Laryngeal Surgery for Treatment of Recurrent Respiratory Papillomatosis (Phase II)	***Daniel Gonzalo Rey Caro,***
19. The tongue- hyoid- larynx complex and its influence on phonation	***Ana gloria Ortega***
20. Intrinsic frequency of vowels with respect to phonatory behavior	***Ana gloria Ortega***
21. Vocal Tract Geometry from a Biomechanical Model	***Saeed Dabbaghchian***

Title	Presenting Author
22. Transcriptome Profiling and Molecular Pathway Analysis Using RNA-Seq to Understand Vocal Fold Development at E15.5 in a Mice Model	***Vidisha Mohad***
23. Psychoacoustic parameters present in the vocal prosody as predictors of emotional identification	***Carla Badani***
24. Perturbation Measures on the Degree of Naturalness of Synthesized Vowels	***Mara Behla***
25. Effects of vocal tract inertance on the glottal flow	***Charles Farbos de Luzan***
26. The Influence of Men and Women Sexual Orientation on the Acoustic Features of Spanish Vowels.	***Jaime Crisosto***
27. A low-order vocal-fold model with an aerodynamic degree of freedom: theory and experiments	***Denisse Sciamarella***
28. Implementation of the vocal function exercises program in teachers: acoustic-perceptives effects	***Paulina Zavala***
29. Implementation of the vocal function exercises program in teachers: acoustic-perceptives effects	***Michael Mcphail***
30. Fluid-dynamical double-cavity properties of the laryngeal ventricle	***Denisse Sciamarella***
31. Acoustic voice measurements after voice warm-up and cool-down in choir singers	***Lílian Aguiar-Ricz***
32. Speech Therapy Treatment of Benign Organic Lesions of the Vocal Fold Mucosa: Case Studies.	***Alicia Celia Hernández***

Title	Presenting Author
33. Preliminary normative data of the Phonatory Aerodynamic System model 6600 for the adult Brazilian population	***Lílian Aguiar-Ricz***
34. Preliminary normative data of the Phonatory Aerodynamic System model 6600 for the elderly Brazilian population	***Lílian Aguiar-Ricz***
35. Vocal fold activity detection in a neck surface acceleration signal	***Felipe Acevedo***
36. Voice therapy program for presbyphonia: preliminary results	***Gleidy Vannesa Espitia Rojas***
37. Relationship between laryngeal morpho-functional diagnosis and acoustic parameters of voice	***María Esperanza Sastoque***
38. The utilization of the vocal biography for the comprehensive approach to the vocal symptomatology	***Paola Silberman***
39. Effect of the electromyographic biofeedback combined with vocal exercises in vocal quality of dysphonic women: a randomized controlled pilot trial	***Vanessa Ribeiro***
40. Acoustic and muscular changes in the voice of a singer after respiratory support exercises with TVSO.	***Alondra Castillo***
41. Voice related quality of life and musculoskeletal pain after use of TENS associated with vocal exercises: a pilot study	***Larissa Thais Donalonso***
42. Effects of the Transcutaneous Electrical Nervous Stimulation associated with vocal therapy in the vocal and laryngeal symptoms in dysphonic women: pilot study	***Kelly Cristina Alves Silverio***

Title	Presenting Author
43. Adipose Tissue as a Lateral Vocal Fold Boundary Condition	***Byron Erath***
44. Laryngoscopic and Spectral Analysis of Laryngeal and Pharyngeal Configuration in Non-Classical Singing Styles	***Sofia Madrid***
45. Air pressure and contact quotient measures during different semi-occluded postures in subjects with different voice conditions	***Marco Guzman***
46. Acoustic effects of implementing a Minimum Vocal Warming Plan (PCVM) in Radio Newscasters	***Maria Celina Malebran***
47. Effects of resonance tube phonation in water in the asymmetric oscillatory entrainment of unilateral vocal fold paralysis	***Christian Castro***
48.Differentiating between females with vocal hyperfunction and matched-controls using inverse filtered aerodynamic measures	***Víctor Espinoza***
49. Hard Vocal attack from a physiological and behavioural review	***Felipe Cerda***
50. Case presentation: Riedel`s Thyroiditis and Cordal Paralysis	***Gonzalo Inostroza***

Title	Presenting Author
51. Morpho- functional, perceptual and acoustic parameters of the voice of people with functional dysphonia	***Alejandro Rodriguez Campo***
52.Vocal profile using a phonetic acoustic analysis voice of patients with Parkinson disease by stages of evolution.	***Mauricio Alfaro***
53. Effect of the technique of semi-occluded v ocal tract in the acoustic parameters and phonatory ability in the students of choral group.	***Angela Contreras***

Authors of posters with even poster IDs will be presenting their work from 16hrs to 17hrs, and authors of posters with odd poster IDs will be presenting their work from 17hrs to 18hrs, on Wednesday, March 16.

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