



USC Speech MRI Summit

Cammilleri Hall
Brain and Creativity Institute
University of Southern California
University Park Campus
February 18-19, 2014

Hosted by the Ming Hsieh Institute
Department of Electrical Engineering

mhi.usc.edu

Endorsed by:



Event Agenda

Tuesday, February 18, 2014

7:45a-8:00a | Check-In

8:00a-8:30a | Welcome Address

8:30a-11:30a | Session 1: Scientific and Clinical Applications

Maureen Stone, PhD
*University of Maryland, Department of Oral and Craniofacial
Biological Sciences (OCBS) and Department of Orthodontics*

Louis Goldstein, PhD
University of Southern California, Department of Linguistics

Stimulus Talks + Panel Discussion

Ryan Shosted, PhD
University of Illinois at Urbana-Champaign, Department of Linguistics

Michael Proctor, PhD
Macquarie University, Department of Linguistics

Uttam Sinha, MD
Keck School of Medicine of USC, Department of Otolaryngology

Sam Tilsen, PhD
Cornell University, Department of Linguistics

Jamie Perry, PhD, CCC-SLP
*East Carolina University, Department of Communication Sciences and
Disorders*

11:30a-1:00p | Lunch - Ming Hsieh Seminar Room (EEB 132)

1:00p-3:30p | Session 2: Current and Emerging Technology

Brad Sutton, PhD
University of Illinois, Department of Bioengineering

Krishna Nayak, PhD
University of Southern California, Department of Electrical Engineering

Martin Uecker, PhD
*University of California Berkeley,
Department of Electrical Engineering and Computer Sciences*

Stimulus Talk + Panel Discussion

Silvia Blemker, PhD
University of Virginia, Department of Biomedical Engineering

3:30p-5:30p | Session 3: Proffered Abstracts - Ming Hsieh Seminar Room
(EEB 132)

Fast Pitch

Posters

6:00p-9:00p | Dinner — El Cholo Restaurant (see back for directions)

Wednesday, February 19, 2014

8:00a-11:30a | Breakout Sessions

Abstracts

- #1 - Joëlle K. Barral et al. - *RTHawk: A Development and Control System for Real-Time MRI*
- #2 - Colin Vaz et al. - *A Two-Step Technique for MRI Audio Enhancement Using Dictionary Learning and Wavelet Packet Analysis*
- #3 - Joshua Inouye et al. - *Towards Undistorted and Noise-Free Speech in an MRI Scanner: Correlation Subtraction Followed by Spectral Noise Gating*
- #4 - Maojing Fu et al. - *High-Resolution, Full-Vocal-Tract Dynamic Speech Imaging*
- #5 - Yinghua Zhu et al. - *Dynamic 3D Visualization of Vocal Tract Shaping During Speech*
- #6 - Jonghye Woo et al. - *Exploring the Functional Organization of the Human Tongue with Tagged-MRI*
- #7 - Jangwon Kim et al. - *Airway-Tissue Boundary Segmentation for Real-Time Magnetic Resonance Imaging Data*
- #8 - Yoon-Chul Kim et al. - *Toward Automatic Vocal Tract Area Function Estimation From Accelerated Three-Dimensional Magnetic Resonance Imaging*
- #9 - Adam Lammert et al. - *Vocal Tract Cross-Distance Estimation from Real-Time MRI Using Region-of-Interest Analysis*
- #10 - Christina Hagedorn et al. - *Characterizing Post-Glossectomy Speech Using Real-Time Magnetic Resonance Imaging*
- #11 - Michael Burdumy et al. - *Radial Acquisition and Regularized Reconstruction for Real Time Imaging of the Vocal Tract of Performing Singers*
- #12 - Li Hsuan Lu et al. - *A Comparative Study of Vocal Tract Shaping in Sibilant Fricatives in English, Serbian and Mandarin using Real-Time MRI.*
- #13 - Catherine Pelland et al. - *MRI-Based Velum Shape Clustering Indicates that Not All Closure is Equivalent*
- #14 - Caitlin Smith - *Identifying Consonantal Tasks Via Measures of Tongue Shaping: A Real-time MRI Investigation of the Production of Vocalized Syllabic /l/ in American English*
- #15 - Sam Tilsen et al. - *Effects of Response Preparation and Pre-Response Constraints on Articulatory Timing*

About the USC MRI Speech Summit

Real-time MRI is being increasingly used for studies of speech and vocal production. This application has seen major growth in the past five years. We aim to host the first ever gathering focused on this topic.

Our aims are to:

1. Bring together the leading groups worldwide
2. Review the enabling technology, basic science applications, and clinical applications
3. Share best practices
4. Produce 1–2 position papers in major journals

About the Ming Hsieh Institute

Key activities sponsored by the Ming Hsieh Institute include the support of ground-breaking proposals by electrical engineering faculty members. Research and other academic endeavors that enhance the electrical engineering department in significant ways is the goal of MHI.

Sponsorship is aimed to support programmatic activities that broadly benefit electrical engineering faculty and students, build an energetic academic environment, and increase the department's impact and visibility.

Directions to El Cholo Restaurant

- Head SW on Watt Way toward 37th Pl.
- Turn L onto Exposition Blvd.
- Turn L onto S. Figueroa St.
- Turn R onto W. Olympic Blvd
- Turn R onto S. Flower St.
Destination will be on the Right

