CNS Satellite Symposium: Neural bases of speech production, 24th March 2017

Jan 23, 2017

Date: March 24, 2017

Location: Nursing School Auditorium N225, 513 Parnassus Ave., University of California San Francisco, San Francisco, CA 94122

Click to register [1]

Organisers: Professor John F. Houde [3], Dept. of Otolaryngology ? Head and Neck Surgery & Professor Srikantan Nagarajan [4], Dept. of Radiology, University of California, San Francisco
How does the neural circuitry of the brain create speech, and what are the constraints on this process? In the past several years, there has been exciting progress on many aspects of this topic, and at this symposium we will hear from many of the leaders in the field who are advancing it. In a full-day symposium, a series of sixteen speakers will present the latest findings on the neural control of speech output, how sensory feedback interacts with it, and how learning plays a role in the process.

Schedule:

8:45 am  Coffee  

**Session chair: John F. Houde**, Dept. of Otolaryngology ? Head and Neck Surgery, UCSF

9:00 am  Opening remarks  
John F. Houde, Dept. of Otolaryngology ? Head and Neck Surgery, UCSF, San Francisco, CA

9:05 am  Sensorimotor representations in verbal working memory [6]  
Bradley Buchsbaum, Rotman Research Institute, Toronto, Canada

9:27 am  Dissociating input- and output-related representations of speech in syllable repetition [7]  
Jason Bohland, Dept. of Speech, Language and Hearing Sciences, Boston University, Boston, MA

9:49 am  From sensorimotor to cognitive: The neural-computational bases of higher-level speech control [8]  
Nicholas Bourguignon, Dept. of Experimental Psychology, Ghent University, Ghent, Belgium

10:09 am  Coffee break (15 min)  

**Session chair: Carrie Niziolek**, Dept. of Speech, Language and Hearing Sciences, Boston University

10:27 am  Connectivity profiles of the insular network for speech control [10]  
Giovanni Battistella, Dept. of Neurology, Icahn School of Medicine at Mount Sinai, New York, NY

10:49 am  Clinical implications of efference Copy and laryngeal mechanoreceptors in speech sensorimotor control [11]  
Michael Hammer, Dept. of Surgery, Division of Otolaryngology, University of Wisconsin School of Medicine and Public Health, University of Wisconsin, Madison, WI

11:11 am  Auditory Feedback Processing in Alzheimer’s disease [12]  
Kamalini Ranasinghe, Dept. of Neurology, UCSF, San Francisco, CA
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
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<tbody>
<tr>
<td>11:31 am</td>
<td>Coffee break (15 min)</td>
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<tr>
<td>11:49 am</td>
<td>Human Laryngeal Cortex in Vocal Pitch Production [14]</td>
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<td>Benjamin Dichter, Program in Bioengineering, UCSF, San Francisco, CA</td>
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<tr>
<td>12:11 pm</td>
<td>Using direct brain recordings for insights in human speech motor control</td>
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<td>Jeremy Greenlee, Dept. of Neurosurgery, University of Iowa, Iowa City, IA</td>
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<tr>
<td>12:31 pm</td>
<td>Lunch (1 hour)</td>
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<td>1:34 pm</td>
<td>Speech production without the vocal tract [17]</td>
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<td>Megan Thompson, Program in Bioengineering, UCSF, San Francisco, CA</td>
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<td>1:56 pm</td>
<td>What sign production can tell us about speech production [18]</td>
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<td>Karen Emmorey, Dept. of Speech, Language, and Hearing Sciences, San Diego, CA</td>
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<td>2:16 pm</td>
<td>Coffee break (15 min)</td>
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<td>2:34 pm</td>
<td>Widespread changes to the cortical sensorimotor network due to somatosensory</td>
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<td>input [20]</td>
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<td>David Ostry, Dept. of Psychology, McGill University, Montreal, Canada, and</td>
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<td>Haskins Laboratories, New Haven, CT</td>
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<td>2:56 pm</td>
<td>Feedforward and feedback control in patients with cerebellar degeneration</td>
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<td>Benjamin Parrell, Dept. of Linguistics and Cognitive Science and Biomechanics</td>
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<td>3:18 pm</td>
<td>Simulating a hierarchical, task-based, state-feedback model of speech motor</td>
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<td>control [22]</td>
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<td>Vikram Ramanarayanan, Educational Testing Service Research &amp; Development</td>
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<td>3:38 pm</td>
<td>Coffee break (15 min)</td>
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3:56 pm  
**Modulation of auditory processing during speech movement planning**  
Ludo Max, Dept. of Speech and Hearing Sciences, Dept. of Linguistics, and Dept. of Bioengineering, University of Washington, Seattle, WA

4:18 pm  
**Modulation of covert speech on overt loudness perception implies the mechanism of speech monitoring**  
Xing Tian, Dept. of Neural and Cognitive Sciences and NYU-ECNU Institute, New York University Shanghai, Shanghai, China

4:40 pm  
**Observations of task-deactivation and negative BOLD response contributions to speech production**  
Vincent Gracco, School of Communication Sciences and Disorders and Centre for Research on Brain, Language & Music, McGill University, Montreal, Canada, and Haskins Laboratories, New Haven, CT

5:00 pm  
**Concluding remarks**  
Srikantan S. Nagarajan, Dept. of Radiology, Dept. of Otolaryngology - Head and Neck Surgery, UCSF, San Francisco, CA

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**Links**
- [2] https://www.youtube.com/watch?v=bjEQi7GXG_0
- [9] https://www.bu.edu/aphasiaresearch/people/carrie-niziolek/
[19] https://www.linkedin.com/in/inezrahajo/