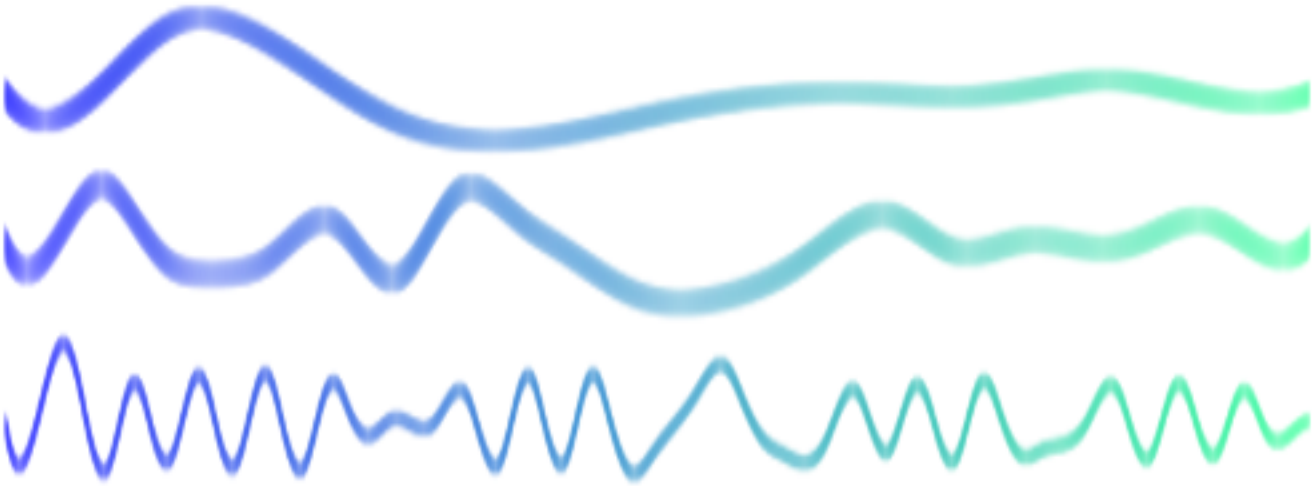
The 15th Conference on Laboratory Phonology

LabPhon15



Speech Dynamics and Phonological Representation

Cornell University
July 13-17, 2016

Wednesday, July 13		Thursday, July 14		Friday, July 15		Saturday, July 16		Sunday, July 17	
9:00 AM	Satellite meetings	7:30 AM	Breakfast	7:30 AM	Breakfast	7:30 AM	Breakfast	9:00 AM	Satellite meetings
		8:15 AM	Opening remarks						
		8:30 AM	**Session: Production dynamics** • Khalil Iskarous	8:30 AM	**Session: Prosodic organization** • Yiya Chen	8:30 AM	**Session: Acqusition and lifespan** • Sharon Goldwater		
		9:15 AM	•	9:15 AM	•	9:15 AM	•		
		9:45 AM	BREAK	9:45 AM	BREAK	9:45 AM	BREAK		
		10:00 AM	•	10:00 AM	•	10:00 AM	•		
		10:30 AM	•	10:30 AM	•	10:30 AM	•		
		11:00 AM	Discussant: Elizabeth Zsiga	11:00 AM	Discussant: Martine Grice	11:00 AM	Discussant: Stefan Frisch		
		11:30 AM	Poster session P1 Lunch	11:30 AM	Poster session P3 Lunch	11:30 AM	Poster session P5 Lunch		
		1:15 PM	**Session: Perception dynamics** • Meghan Sumner	1:15 PM	**Session: Lexical dynamics & memory** • Matt Goldrick	1:15 PM	**Session: Social network dynamics** • Jane Stuart-Smith		
		2:00 PM	•	2:00 PM	•	2:00 PM	•		
		2:30 PM	BREAK	2:30 PM	BREAK	2:30 PM	BREAK		
		2:45 PM	•	2:45 PM	•	2:45 PM	•		
		3:15 PM	•	3:15 PM	•	3:15 PM	•		
		3:45 PM	Discussant: Jennifer Hay	3:45 PM	Discussant: Keith Johnson	3:45 PM	Discussant: Erik Thomas		
		4:15 PM	General discussion	4:15 PM	General discussion	4:15 PM	Poster session P6		
		4:45 PM	Poster session P2	4:45 PM	Poster session P4			5:00 PM	
5:45 PM						5:45 PM	Closing discussion		
6:00 PM	Opening reception	6:15 PM	ALP board meeting	6:15 PM	ALP open meeting	6:15 PM			
		7:15 PM	Graduate student & invited speakers dinner	7:15 PM	Conference barbecue				
8:00 PM									

The 15th Conference on Laboratory Phonology

Speech Dynamics and Phonological Representation

July 13-17, Cornell University

labphon.org/labphon15

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Message from the Chairs of the Organizing Committee for LabPhon15

On behalf of the Cornell University Department of Linguistics and Cornell Phonetics Lab, it is our pleasure to welcome you to The 15th Conference on Laboratory Phonology in Ithaca! For the next several days we convene far above Cayuga's waters to promote the scientific study of the phonologies of diverse languages, through the use of quantitative and laboratory methods. We are very grateful to all who have helped in making this conference a success—presenters, scientific committee members, organizing committee members, Linguistics Department staff, and student volunteers.

If this is your first visit to Ithaca, it is our responsibility to tell you that "*Ithaca is gorges"*. This phrase is the cherished t-shirt slogan and cultural motto of Ithaca, a play on words indexing the natural beauty of Ithaca (Ithaca is gorgeous), and the abundance of gorges in the area (gorges are narrow valleys with streams). We encourage you, as linguists and phonologists, to reflect on why the slogan is not "*Ithaca is gorgeous*". More importantly, we encourage you to check out some of that natural beauty—Ithaca Falls is just a 15 minute walk from the conference venue, and the tallest waterfall east of the Rocky Mountains, Taughannock Falls, is a half-hour drive away. Be sure to check out some human-made beauty as well—the Ithaca Commons downtown is known worldwide for its eclectic mix of shopping, restaurants, and nightlife. We hope you will see that Ithaca truly is gorges.

Laboratory Phonology is gorges too. The conference theme of LabPhon15 is *Speech Dynamics and Phonological Representation*. We chose this theme in attempt to create a bridge from the past to the future of our field. On the one hand, our theme aims to get back to basics by encouraging submissions that address the nature of phonological representations; on the other hand, our theme looks forward by emphasizing how our understanding of those representations can be informed by studying dynamic processes in speech across a range of timescales. Although connecting representation and dynamics is no simple task, Laboratory Phonology, through its emphasis on quantitative and experimental methodologies, is well-suited to take on the challenge.

Another way we are attempting to create a bridge from the past to the future is by promoting graduate student participation in the conference. With generous support from our sponsors, we are able to provide substantially reduced student rates for conference registration. Over 100 students had registered for the conference when this booklet went to press. One of the best ways we can support the enterprise of Laboratory Phonology is to grow the Association, and in this regard have been successful.

Thank you for making the trip to Ithaca. We wish you an enriching conference experience and hope you enjoy some of the great things that Ithaca has to offer!

Abby Cohn
Sam Tilsen
Co-chairs of the LabPhon15 Organizing Committee

Organizing Committee

Lisa Davidson, New York University
Christian DiCanio, SUNY Buffalo
Marie Huffman, Stony Brook University
Robin Karlin, Cornell University
Peggy Renwick, University of Georgia
Michael Williamson, Cornell University
Hao Yi, Cornell University
Draga Zec, Cornell University
Web Developer: Sam Hyatt, Cornell University

Sponsors

The LabPhon15 Organizing committee gratefully acknowledges the support of the following:

The Association for Laboratory Phonology
labphon.org

National Science Foundation
www.nsf.gov

Cornell University
Department of Linguistics
ling.cornell.edu

Cornell Phonetics Lab
conf.ling.cornell.edu/plab

Cognitive Science at Cornell
www.cogstud.cornell.edu/

Cornell University Institute
for the Social Sciences
socialsciences.cornell.edu

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www.cis.cornell.edu

Mario Einaudi Center for International Studies
www.einaudi.cornell.edu

Cornell University Department of Psychology
www.psych.cornell.edu

Cornell University Department of Neurobiology and Behavior
www.nbb.cornell.edu

In addition, we would like to give thanks to participating publishers for their displays, materials, and discounted order forms. For more information see www.labphon15.org/labphon15/publishers.

Scientific Committee

The LabPhon15 Organizers give many thanks to our scientific committee for over 1200 reviews!

Adam Albright, Arto Anttila, Molly Babel, Melissa Baese-Berk, Mary Beckman, Ryan Bennett, Tessa Bent, Stefan Benus, Catherine Best, Sonya Bird, Juliette Blevins, Bettina Braun, Mirjam Broersma, Marc Brunelle, Audrey Bürki, Matthew Carlson, Fery Caroline, Charles Chang, Yiya Chen, Ioana Chitoran, Taehong Cho, Meunier Christine, Cynthia G. Clopper, Andries Coetzee, Uriel Cohen Priva, Jennifer Cole, John Coleman, Alejandrina Cristia, Mariapaola D'Imperio, Robert Daland, Isabelle Darcy, Ken Dejong, Véronique Delvaux, Katherine Demuth, Christian Di Canio, Olga Dmitrieva, Gerry Docherty, Robin Dodsworth, Grzegorz Dogil, Karthik Durvasula, Mirjam Ernestus, John Esling, Zsuzsanna Fagyal-Le Mentec, Edward Flemming, Cecile Fougeron, Paul Foulkes, Stefan Frisch, Sónia Frota, Adamantios Gafos, Gillian Gallagher, Barbara Gili Fivela, Matt Goldrick, Louis Goldstein, Maria Gouskova, Carlos Gussenhoven, Kathleen Currie Hall, Silke Hamann, Mike Hammond, Sharon Hargus, Jonathan Harrington, Mark Hasegawa-Johnson, Sarah Hawkins, Jen Hay, Anne Hermes, Barry Heselwood, Julia Hirschberg, Barbara Hoehle, Jose Ignacio Hualde, Elizabeth Hume, William Idsardi, Khalil Iskarous, Ewa Jacewicz, Stefanie Jannedy, Sun-Ah Jun, Yoonjung Kang, Abby Kaplan, Shigeto Kawahara, Patricia Keating, Sameer Ud Dowla Khan, Ghada Khattab, John Kingston, James Kirby, Mafuyu Kitahara, Felicitas Kleber, Alexei Kochetov, Jelena Krivokapic, Jianjing Kuang, Barbara Kuhnert, Sang-Im Lee-Kim, Erika Levy, Susan Lin, Anastassia Loukina, Ian Maddieson, Kikuo Maekawa, Tara McAllister-Byun, Joyce McDonough, Lucie Menard, Alexis Michaud, Jeff Mielke, Amanda Miller, Holger Mitterer, Bernd Moebius, Rebecca Morley, Tuuli Morrill, Doris Muecke, Benjamin Munson, James Myers, Scott Myers, Noel Nguyen, Oliver Niebuhr, Kuniko Nielsen, Aude Noiray, Francis Nolan, Jennifer Nycz, Richard Ogden, Benjamin Parrell, Francois Pellegrino, Sharon Peperkamp, Pascal Perrier, Janet Pierrehumbert, Brechtje Post, Marianne Pouplier, Pilar Prieto, Michael Proctor, Tamara Rathcke, Melissa Redford, Rachid Ridouane, Joaquin Romero, Kevin Roon, Yvan Rose, Rebecca Scarborough, Jessamyn Schertz, Niels Schiller, James Scobbie, Stefanie Shattuck-Hufnagel, Jason Shaw, Chilin Shih, Linda Shockey, Ryan Shosted, Rajka Smiljanic, Caroline Smith, Maria-Josep Sole, Morgan Sonderegger, Jane Stuart-Smith, Mariko Sugahara, Keiichi Tajima, Anne-Michelle Tessier, Annie Tremblay, Benjamin V. Tucker, Alice Turk, Adam Ussishkin, Nathalie Vallee, Kristin Van Engen, Timothy Vance, Marilyn Vihman, Petra Wagner, Natasha Warner, Andrew Wedel, Pauline Welby, Doug Whalen, Colin Wilson, Alan Yu, Georgia Zellou, Chakir Zeroual, Jie Zhang, Elizabeth Zsiga, Kie Zuraw, Marzena Zygis.

The Association for Laboratory Phonology

www.labphon.org

The Association for Laboratory Phonology promotes the scientific study of the phonologies of diverse languages through the use of quantitative and laboratory methods. ALP promotes our field by:

- Facilitating free and fair open access to research and scientific papers related to laboratory phonology through its open access journal, Laboratory Phonology, as well as the open access book series Studies in Laboratory Phonology;
- Organizing the Biennial Conference on Laboratory Phonology and supporting other workshops and conferences;
- Recognizing achievement in the field through awards and honors.

Current Executive Council

Martine Grice, President

Kenneth de Jong, Vice-President

Matt Goldrick, Secretary

Jeff Mielke, Treasurer

Mirjam Ernestus, Editor-in-Chief of *Laboratory Phonology*

Abby Cohn, Organizing Committee LabPhon 15

Haruo Kubozono, Organizing Committee LabPhon 14

Mary E. Beckman, Councilor-at-Large

Cécile Fougeron, Councilor-at-Large

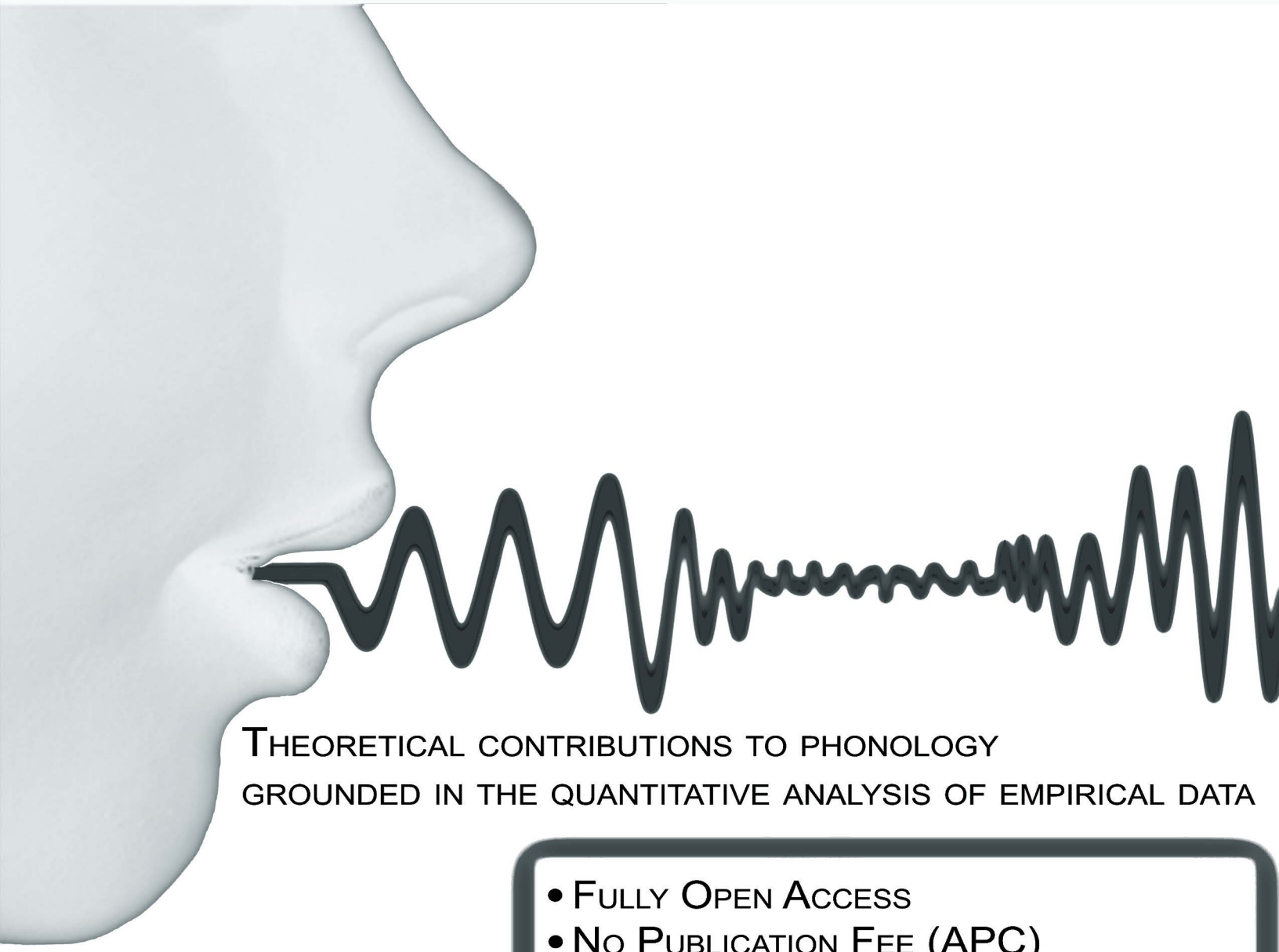
Ioana Chitoran, Councilor-at-Large

Taehong Cho, Councilor-at-Large

www.journal-labphon.org

Laboratory Phonology

Journal of the Association for Laboratory Phonology



THEORETICAL CONTRIBUTIONS TO PHONOLOGY
GROUNDED IN THE QUANTITATIVE ANALYSIS OF EMPIRICAL DATA

- FULLY OPEN ACCESS
- NO PUBLICATION FEE (APC)
- RIGOROUS PEER REVIEW
- ± 50% REJECTION RATE
- SUPPLEMENTARY MULTI-MEDIA MATERIALS

LingOA

Dear Colleague,

I would like to draw your attention to the Journal of Laboratory Phonology (www.journal-labphon.org). As you are attending this conference, your work is likely to be a very good match with the journal. I would ask you to seriously consider submitting your work to this journal.

As you probably know, Laboratory Phonology is the official journal of The Association for Laboratory Phonology. It represents the scientific study of the elements of spoken and signed language, their organization, their grammatical functions, and their roles in speech communication. The journal publishes research on phonology from perspectives of all the domains of linguistics, as well as from related disciplines. Research published in Laboratory Phonology is grounded in quantitative analyses of empirical data by researchers of diverse languages, obtained either in (laboratory) experiments or from speech or signed corpora. Please note that articles in Laboratory Phonology can be reports on quantitative studies, or be more theoretical contributions based on the quantitative analysis of empirical data. As Laboratory Phonology is the only journal with this specific scope, it is the ideal outlet for those contributing to the Conference on Laboratory Phonology.

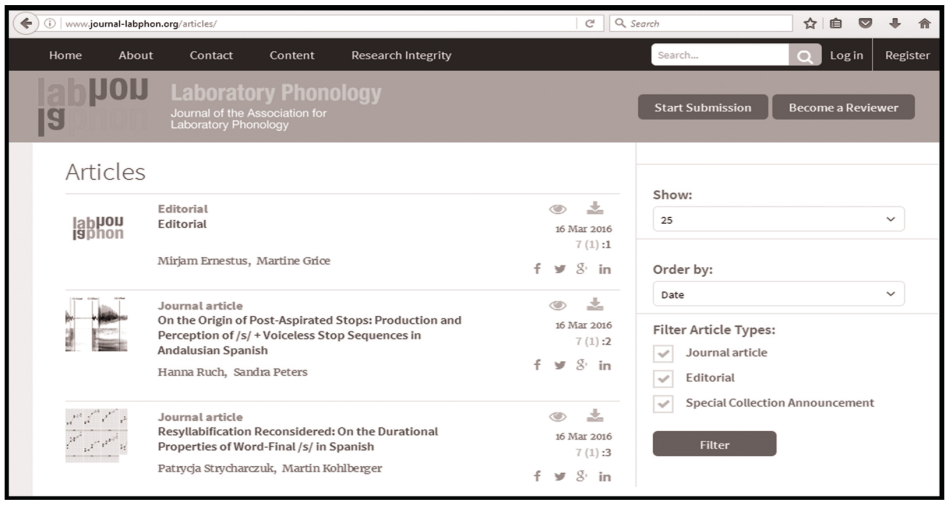
The recent move to fair open access is another good reason for submitting your article to Laboratory Phonology. This means, above all, that all papers appearing in Laboratory Phonology are directly available online to all, free of charge, and that copyright remains with the author. Moreover, published articles can contain additional material like sound files. As in the past, a rigorous review process ensures the high quality of the journal.

If you are interested in submitting your article, please visit the journal's website: www.journal-labphon.og. You can also upload your article there.

Should you have any questions about the journal, please contact us at admin@labphon.org, or meet me at the conference. I will be happy to answer your questions there.

Sincerely,

Mirjam Ernestus (General Editor of Laboratory Phonology)



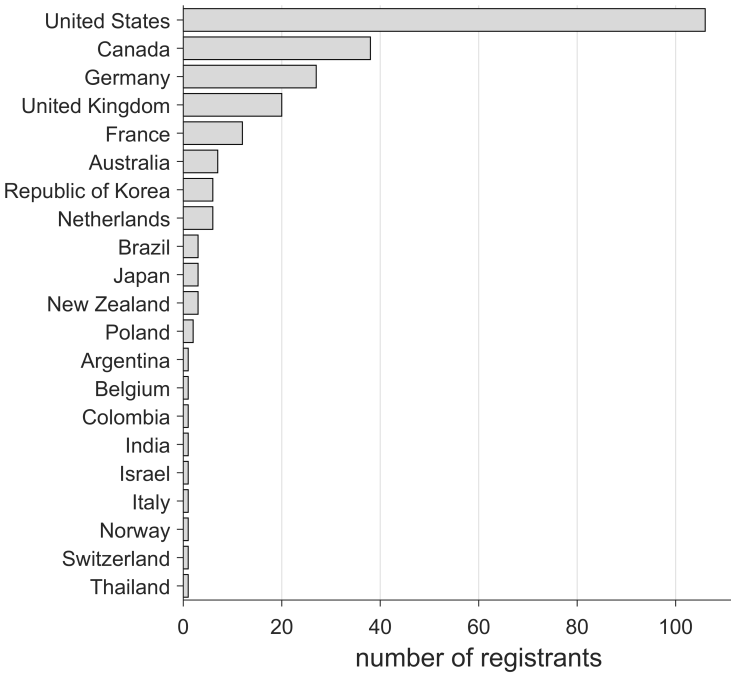
Conference statistics

316 abstracts were submitted. The acceptance rates for submissions from student and non-student first authors were 65% and 75%, respectively. Seven student submissions were selected for oral presentation, along with eleven non-student submissions.

	Submissions		
	accepted	not accepted	TOTAL
students	94	50	144
non-students	129	43	172
TOTAL	223 (70%)	93 (30%)	316

	Registrants		
	new members	members	TOTAL
students	25	79	104
non-students	70	79	149
TOTAL	95 (38%)	158 (62%)	253

When this booklet went to press there were 253 registered participants and 30+ invitees and volunteers. Registrants came from 21 countries. We were pleased to find that 38% of the registrants were new members of the Association of Laboratory Phonology, and that many of these new members were students.



Most common keywords:

speech perception (22), prosody (13), perception (12), speech production (12), articulation (10), coarticulation (10), intonation (10), production (10), english (9), phonology (9), sound change (9), korean (8), tone (8), french (7), mandarin (6), phonotactics (6), ultrasound (6), acoustics (5), acquisition (5), consonant clusters (5), individual differences (5), japanese (5), lexical representation (5), spanish (5), stress (5), vowel devoicing (5), vowel harmony (5), acoustic analysis (4), bilingualism (4), canadian french (4), electromagnetic articulography (4), lexical frequency (4), phonetics-phonology interface (4), prosodic prominence (4), spontaneous speech (4), talker variability (4), voicing (4), word recognition (4).

Conference information

Need Help

If you have questions or need assistance at any time please find the nearest volunteer or organizer wearing a blue LabPhon15 t-shirt, or go to the conference registration/information desk in the Physical Sciences Building (PSB map, back cover). For less immediate help, email LabPhon15@cornell.edu

Graduate student ambassadors

Graduate students: if you have a question for another graduate student, please email LabPhon15grad@gmail.com.

Conference packets and registration

Conference packets for pre-registrants are available for pick-up from the registration/information desk at any time during the conference. On-site registration payments can be processed at the following times:

On-site registration hours:

Wednesday 12-2pm, 4-7pm
Thursday 7:30-9am, 11:30am-1pm
Friday 7:30-9am

Badges

All participants should wear their badge during the conference. Badges are required for breakfast and lunch.

Certificate of Attendance

A certificate of attendance will be included in your conference packet.

WiFi Instructions

1. Select Cornell-Visitor from the list of available Wi-Fi networks on your device.
2. A browser window should open and you will see the Cornell-Visitor registration screen.
3. Enter your name and email address, then check the box that you accept the terms of use. Click Register.
4. You'll see a confirmation screen. Click Log In.
   Because this is a visitor network, you will need to register your device daily.

Alternatively, visitors from eduroam-participating institutions can used their home institution credentials to log in to the eduroam secure WiFi network. Instructions for WiFi access are also available at the following address:
www.it.cornell.edu/services/wifi/visitor/index.cfm

Graduate Student & Invited Speakers Dinner (Thursday, 7:15 pm, Kennedy Hall: Trillium)

All graduate students were invited to a dinner with the invited speakers, ALP Executive Council and LabPhon15 Organizing Committee. Graduate students who RSVP'd for this dinner will have a ticket for entry in their conference packet. If space is available, other graduate students can RSVP at the conference registration desk.

Conference BBQ (Friday, 7:15 pm, Willard Straight Hall)

All conference attendees will receive a meal ticket and two drink tickets for the conference barbecue in their conference packet.

Coffee breaks

There will be three coffee services each day: (1) with breakfast, (2) between the 2nd and 3rd talks in the morning oral session, and (3) between the 2nd and 3rd talks in the afternoon oral session.

Breakfast

Continental breakfast will be available at the conference venue from 7:30-8:15 on Thursday and from 7:30-8:30 on Thursday and Friday. Your badge is required.

Lunches

Buffet-style lunch will be available at the conference venue from 11:30-1pm during the lunchtime poster sessions. Your badge is required.

Photographing/recording

We advise that you obtain permission from presenters before taking pictures or video/audio recordings.

Live tweeting

Audience members are encouraged to live tweet during oral and poster sessions, using the hashtag #labphon15.

Oral Presentation Instructions

Each submitted oral presentation is allotted a total of 30 minutes (22 minutes for the talk, 8 minutes for questions).

A Windows PC with PowerPoint will be provided for talks, but oral presenters may use their own laptop if other software is required. Oral presenters should bring a copy of their talk on a USB drive in either case.

During the breakfast/lunch period on the day of their session, oral presenters should copy their presentations to the laptop and test audio and/or video files. Just prior to the start of each session, oral presenters should introduce themselves to the session chair.

Poster Instructions

Poster board dimensions are 47 inches wide x 69 inches tall. Posters should be in portrait orientation. For poster printing options visit labphon.org/LabPhon15/info_for_presenters.

Poster times

In all poster sessions, presenters with odd-numbered posters (e.g. P2-**01**,P2-**03**,…) are expected to be at their poster in the first 45 minutes of the session, and presenters with even-numbered posters (e.g. P2-**02**,P2-**04**,…) are expected to be at their poster in the last 45 minutes of the session.

Parking

Please visit the following site for instructions: transportation.fs.cornell.edu/parking/campusparking/visitors

Conference schedule

Wednesday, July 13

9:00 - 5:45 PM	**Satellite meetings**	
9:00 - 5:45 PM	**Speech dynamics, social meaning, and phonological categories** Organizers: *Jonathan Harrington, Gerry Docherty, Paul Foulkes, Jane Stuart-Smith*	Rockefeller 122
9:00 - 4:00 PM	**Tools for big data in laboratory phonology** Organizers: *Kathleen Currie Hall, Michael McAuliffe, Morgan Sonderegger, Yvan Rose*	PSB 401
9:00 - 1:30 PM	**Exploring speech planning and production in children** Organizers: *Katherine Demuth, Stefanie Shattuck-Hufnagel, Ivan Yuen, Jill Thorson*	Rockefeller 230
11:00 - 2:00 PM	**Dynamics and representation of turbulent sounds** Organizers: *Marzena Żygis, Mary E. Beckman*	Rockefeller 122
1:00 - 5:00 PM	**Reduction** Organizers: *Benjamin V. Tucker, Mirjam Ernestus, Natasha Warner*	Rockefeller 115
6:00 - 8:00 PM	Opening reception	Clark Atrium

Thursday Morning, July 14

7:30 - 8:15 AM	Breakfast	Baker Portico
8:15 - 8:30 AM	Opening remarks *Gretchen Ritter, The Harold Tanner Dean of Arts & Sciences, Cornell*	Baker 200
8:30 - 11:30 AM	**Oral session 1: Production dynamics** Chair: Caroline Smith	Baker 200
8:30 - 9:15 AM	**How local computation leads to global structure: the dynamics of gesture and word** Invited speaker: *Khalil Iskarous*	
9:15 - 9:45 AM	**Phonetic reduction, perceptual illusions, and phonotactic legality** *Alex McAllister and Matthew T. Carlson*	
9:45 - 10:00 AM	Coffee break	Baker Portico

10:00 - 10:30 AM	**Production effects in light of perceptual Evaluation: tempo effects for phonologization** *Kenneth de Jong and Kyoko Nagao*	
10:30 - 11:00 AM	**Probing the interaction of dynamic stability with grammar: evidence from Russian** *Marianne Pouplier, Stefania Marin, Conceição Cunha and Alexei Kochetov*	
11:00 - 11:30 AM	Discussant: *Elizabeth Zsiga*	
11:30 - 1:10 PM	**Poster session P1**	Baker Atrium
11:30 - 1:00 PM	Lunch (Baker Portico & Clark Atrium)	

Thursday Afternoon, July 14

1:15 - 4:15 PM	**Oral session 2: Perception dynamics** Chair: Marie Huffman	Baker 200
1:15 - 2:00 PM	**How are forms we rarely hear, understood so easily?** Invited speaker: *Meghan Sumner*	
2:00 - 2:30 PM	**Timing lag matters in the perception of Georgian stop sequences by native speakers** *Ioana Chitoran and Harim Kwon*	
2:30 - 2:45 PM	Coffee break	Baker Portico
2:45 - 3:15 PM	**Speech prediction from subphonemic production** *Donald Derrick and Daniel Bürkle*	
3:15 - 3:45 PM	**Relative cue weighting in perception and production of a sound change in progress** *Jianjing Kuang and Aletheia Cui*	
3:45 - 4:15 PM	Discussant: *Jennifer Hay*	
4:15 - 4:45 PM	General discussion Moderator: Pat Keating	Baker 200
4:45 - 6:15 PM	**Poster session P2**	Baker Atrium
6:15 - 7:15 PM	ALP board meeting	PSB 401
7:15 - 9:45 PM	Graduate student & Invited speakers dinner	Kennedy Hall (Trillium)

Friday Morning, July 15

7:30 - 8:30 AM	Breakfast	Baker Portico
8:30 - 11:30 AM	**Oral session 3: Prosodic organization** Chair: Christian DiCanio	Baker 200
8:30 - 9:15 AM	**What does prosodic variation tell us about prosodic organization?** Invited speaker: *Yiya Chen*	
9:15 - 9:45 AM	**Individual specificity, redundancy and the evolution of phonological systems: Intonation in a tone language** *Francesco Cangemi, Christian Weitz, Kieu-Phuong Ha, Marc Brunelle and Martine Grice*	
9:45 - 10:00 AM	Coffee break	Baker Portico
10:00 - 10:30 AM	**Non-canonical word order in Russian: processing and acoustic parameterization** *Tatiana Luchkina*	
10:30 - 11:00 AM	**The nature of variation in the tone sandhi patterns of Shanghai Wu** *Hanbo Yan and Jie Zhang*	
11:00 - 11:30 AM	Discussant: *Martine Grice*	
11:30 - 1:10 PM	**Poster session P3**	Baker Atrium
11:30 - 1:00 PM	Lunch (Baker Portico & Clark Atrium)	

Friday Afternoon, July 15

12:15 - 1:00 PM	Journal of *Laboratory Phonology* Information meeting *Mirjam Ernestus*	PSB 120
1:15 - 4:15 PM	**Oral session 4: Lexical dynamics and memory** Chair: Jennifer Cole	Baker 200
1:15 - 2:00 PM	**Representational dynamics in sound structure planning** Invited speaker: *Matthew Goldrick*	
2:00 - 2:30 PM	**Modelling phonetic and phonological variation with small data: evidence from Kaqchikel Mayan** *Ryan Bennett and Kevin Tang*	
2:30 - 2:45 PM	Coffee break	Baker Portico

2:45 - 3:15 PM	**Coalescing sources of bias in perception: lexical and prelexical influences on the processing of phonological features** *Alexander Martin and Sharon Peperkamp*	
3:15 - 3:45 PM	**Epenthesis into nonnative consonant clusters: phonetic factors eclipse gradient phonotactics** *Colin Wilson and Lisa Davidson*	
3:45 - 4:15 PM	Discussant: *Keith Johnson*	
4:15 - 4:45 PM	General discussion Moderator: John Kingston	Baker 200
4:45 - 6:15 PM	**Poster session P4**	Baker Atrium
6:15 - 7:15 PM	ALP open meeting	PSB 401
7:15 - 11:00 PM	Conference barbecue	Willard Straight Hall

Saturday Morning, July 16

7:30 - 8:30 AM	Breakfast	Baker Portico
8:30 - 11:30 AM	**Oral session 5: Acquisition and life-span** Chair: Lisa Davidson	Baker 200
8:30 - 9:15 AM	**More is more: how trying to learn multiple aspects of language at once can actually help** Invited speaker: *Sharon Goldwater*	
9:15 - 9:45 AM	**L1 influence on L2 assimilation: an EPG study of English /n/+stop sequences** *Laura Colantoni, Alexei Kochetov and Jeffrey Steele*	
9:45 - 10:00 AM	Coffee break	Baker Portico
10:00 - 10:30 AM	**/l/ in clusters: an articulatory-acoustic study of children's productions** *Susan Lin, Sharon Inkelas, Lara Mcconnaughey and Michael Dohn*	
10:30 - 11:00 AM	**The effect of indexical cues on the distributional learning of sound categories** *Masaki Noguchi and Carla Hudson Kam*	
11:00 - 11:30 AM	Discussant: *Stefan Frisch*	
11:30 - 1:10 PM	**Poster session P5**	Baker Atrium
11:30 - 1:00 PM	Lunch (Baker Portico & Clark Atrium)	

Saturday Afternoon, July 16

1:15 - 4:15 PM	**Oral session 6: Social network dynamics** Chair: Peggy Renwick	Baker 200
1:15 - 2:00 PM	**Social dynamics and phonological representations: Observations from speech and society in Scotland** Invited speaker: *Jane Stuart-Smith*	
2:00 - 2:30 PM	**Network structural equivalence and the reversal of the Southern Vowel Shift** *Robin Dodsworth and Richard Benton*	
2:30 - 2:45 PM	Coffee break	Baker Portico
2:45 - 3:15 PM	**Effects of phonetic reduction and social factors on cross-modal lexical priming** *Zack Jones and Cynthia G. Clopper*	
3:15 - 3:45 PM	**What do you expect from an unfamiliar talker?** *Dave F Kleinschmidt and T. Florian Jaeger*	
3:45 - 4:15 PM	Discussant: *Erik Thomas*	
4:15 - 5:45 PM	**Poster session P6**	Baker Atrium
5:45 - 6:15 PM	Closing discussion Moderator: Mary Beckman	Baker 200

Sunday, July 17

9:00 - 5:00 PM	**Satellite meetings**	
9:00 - 5:00 PM	**Personality in speech perception & production** Organizers: *Daniela Müller, Keith Johnson*	Morrill 106
9:00 - 12:00 PM	**Holistic phonological representations and their use in speech-language production and word learning** Organizers: *Marilyn Vihman, Melissa Redford*	Baker 119
9:00 - 12:00 PM	**Higher-order structure in speech variability: phonetic/phonological covariation and talker adaptation** Organizers: *Meghan Clayards, Colin Wilson*	Baker 135
9:00 - 12:00 PM	**Perspectives on marginal contrasts** Organizers: *Kathleen Currie Hall, Peggy Renwick*	Baker 219

Oral session abstracts

Thursday Morning, July 14

How local computation leads to global structure: the dynamics of gesture and word

Khalil Iskarous

One of the great steps in science was the development of the idea of a dynamical system by Isaac Newton in the late 17th century. He realized that one can describe highly complex global trajectories of particles through a completely local constraint on how the position of a particle at each instant in time could relate to the position at neighboring instants. This deepest computational insight of dynamical systems analysis has been applied to all kinds of dependent variables other than particle position, and many independent variables other than time, in the physical, biological, and social sciences. This work is on the deep relation between two dynamical models of sound structure: the articulatory phonology approach to gestural dynamics (Browman and Goldstein) and the harmonic phonology dynamical approach to the metrical structure of words (Goldsmith, Larson, Prince). Both models, which treat different levels of sound structure, will be shown to be minimally different instances of one local computational principle leading to global gestural and metrical patterns at different time scales. First principles dynamic arguments will be presented on how this local principle predicts many well-attested phenomena relating to gestures (structural vs. non-strictural contrasts) and metrical structure (demarcativity, culminativity, rhythm, and extrametricality).

Phonetic reduction, perceptual illusions, and phonotactic legality

Alex McAllister and Matthew T. Carlson

This study probed the relationship between automatic phonotactic repair and speech production, by asking whether the repair structure (a prothetic vowel) may be susceptible to reduction in speech. Spanish productively repairs word-initial /s/-consonant clusters (henceforth #sC) with a prothetic /e/ in both production and perception. We asked whether the initial vowel in Spanish #esC words like espalda ‘back’, which matches the default repair vowel, is more prone to reduction than other initial vowels, such as in aspirina ‘aspirin’. We explore this question in the speech production of 15 speakers of Andalusian Spanish who produced half #esC and half #asC words in isolation (578 tokens). Outright vowel deletion was uncommon, but was more likely with initial /e/ (5%) than initial /a/ (0.3%, one token). Moreover, when the /s/ was realized with greater duration (cf. the common tendency to lenite syllable-final /s/ in Andalusian), shortening of /e/, but not /a/, was observed. These findings provide evidence that reduction may be enabled when the reduced material can be perceptually repaired, leading to the occurrence of apparently illicit sequences in actual speech, e.g. espalda produced as [spalda]. The influence of articulatory, frequency, and other factors on reduction is also evaluated.

Production Effects in Light of Perceptual Evaluation: Tempo Effects for Phonologization

Kenneth de Jong and Kyoko Nagao

The current paper presents a set of interlocking production and perception experiments, 1) a production study of how tempo modulation affects the articulation of the American English plosive laryngeal contrasts in prevocalic and postvocalic contexts, and 2) a perceptual study of how such productions are identified. Productions of syllables were elicited through a motor control task entraining speakers to metronomic pacers inducing extreme tempo variation. Acoustic analyses revealed extreme and pervasively non-proportional variation of VOT and other properties as a function of tempo, and different

variation patterns for pre-vocalic and post-vocalic contexts. To determine the effect of these tempo modulations, three-syllable productions were subjected to identification experiments. While listeners were generally readily able to account for the tempo variation, the extremely fast tempi induced many errors. The paper investigates the roots of these errors, and notes that they are in opposite directions for pre-vocalic and post-vocalic stops. Such opposite directional biases mirror the typical effects of syllabic position in phonological systems; onset segments tending toward the voiceless and aspirated variants, and coda segments tending toward voiced and unaspirated variants. Thus, production and perception experiments in an interlocking design seem useful for uncovering what production effects might contribute to phonological systems.

Probing the interaction of dynamic stability with grammar: Evidence from Russian

Marianne Pouplier, Stefania Marin, Conceição Cunha and Alexei Kochetov

We investigate whether there is an interaction between speech motor stability induced by grammar and physiological stability. We ask whether in situations in which universal production constraints have been argued to emerge (articulatory reorganizations in forced rate-scaling tasks), reorganization patterns may vary in a language-specific fashion, depending on a language's phonotactics. Specifically, cluster-like structures may emerge under speech rate pressure. Using Russian, we study whether the likelihood of cluster emergence is influenced by the existence of a lexical correspondence cluster and whether the overlap pattern of emergent clusters mirrors those of lexical clusters. Lexicality had neither a significant influence on the frequency of cluster emergence nor on the emergent overlap patterns. This supports the view these types of tasks trigger extra-linguistic, physiologically universal stability patterns. A more fine-grained analysis revealed a preference for obstruent-sonorant clusters to emerge over sonorant-obstruent clusters, in agreement with their lexical frequency in Russian. Moreover, overlap differences between cluster types seem to be enhanced by existence of a lexical correspondence cluster. We interpret our results as showing how grammars may capitalize on physiologically given patterns, yet at the same time the powerful mechanism of learning allows languages to overcome these patterns in a non-deterministic fashion.

Thursday Afternoon, July 14

How are forms we rarely hear, understood so easily?

Meghan Sumner

Episodic theories of representation and lexical access are now strongly supported with a wide range of data. With this in mind, we might wonder how listeners seemingly navigate a variable signal with ease. For example, while there are clear benefits for frequently experienced variants and forms during speech perception, rarely experienced variants and word forms (oftentimes idealized) seem to have a benefit both in terms of spoken word recognition, and detailed memory retention. This pattern runs counter to our hypotheses and theories about the atypical, infrequent linguistic unit, from an episodic perspective (and, the specific memories associated with these infrequent forms run counter to notions of variation-independent abstract representations). In this talk, I provide an overview of this bias, illuminate instances in which our assumptions about the phonetic composition of a word have contributed to the bias, and show that even after such considerations, these less common pronunciation types do indeed have a processing benefit that does not match with our theoretical expectations. To address this discrepancy, I show that the effects we see in both word recognition and memory can be attributed to differences in speech perception. Specifically, all linguistic events, or instances of spoken words, are not treated equally by the perceptual system, resulting in a domino effect, weighting form-based representations, available

for subsequent processing, differentially depending on both linguistic and social factors. This approach explains the idealized-form benefit, while shedding some insight on the representations and processes that underlie speech perception more generally.

Timing lag matters in the perception of Georgian stop sequences by native speakers

Ioana Chitoran and Harim Kwon

This study tests the relevance of perceptual recoverability to phonological grammar, with respect to the relative timing of adjacent consonantal gestures. We conducted two perception experiments in which native Georgian listeners were tested with Georgian C1C2 sequences, along with acoustic/articulatory (EMA) analyses of the stimuli. Production of Georgian consonant sequences was characterized as front-to-back sequences (bg) having a high degree of overlap, and back-to-front sequences (gd) having significantly less overlap (Chitoran, Goldstein, Byrd 2002). This variation was interpreted as speaker-controlled strategy for increasing C1 perceptibility in C1C2 contexts because longer lag favors an audible C1 release, and the presence of a C1 vocalic release favors clearer C1 formant transitions. Based on these findings, we test two hypotheses: (H1) Longer timing lag between C1 and C2 facilitates the recovery of C1 gestures; (H2) C1 vocalic releases facilitate C1 recovery. The results support H1, but not H2. Native Georgian listeners are sensitive to differences in timing lag: longer onset lag facilitates C1 recovery in front-to-back sequences and longer release lag does so in back-to-front sequences; the presence of a vocalic release does not facilitate C1 recovery. The results support the inclusion of timing lag rather than recoverability constraints in the grammar.

Speech Prediction from Subphonemic Production

Donald Derrick and Daniel Bürkle

Some North American English speakers demonstrate anticipatory coarticulation in VrVrV sequences such that during the first vowel, these speakers move and hold the tongue tip higher if the last vowel is rhotic (as in "editor") than they do if the last vowel is non-rhotic (as in "edit a"). Such anticipation of the tongue position of the final vowel shows articulatory planning at a level lower than the syllable, phoneme, or feature, analogous to Rosenbaum's end-state comfort effect in hand grasps.

This paper presents results from an eye-tracking study that suggest this anticipatory coarticulation is used in speech perception. We asked North American perceivers to identify the spoken word or phrase in VrVrV sequences produced by both speakers who produce this coarticulation and those who do not. We find that the tongue-tip differences are perceptible - anticipatory coarticulation allows perceivers to identify the word or phrase more quickly. This result provides evidence for increased speed of listener's speech perception as another benefit of anticipatory sub-phonemic coarticulation.

Relative cue weighting in perception and production of a sound change in progress

Jianjing Kuang and Aletheia Cui

This study investigates the mapping between production and perception during an ongoing sound change. The tense vs. lax register contrast in Southern Yi vowels is typically distinguished by phonation, and additional cues (F1, F2, and F0) have been introduced by coarticulation between glottal and supraglottal settings. Two perception experiments and one production experiment were conducted to explore the relative importance of each cue in producing and perceiving the tense vs. lax contrast. The same 41 speakers participated in all three experiments. The results show that Southern Yi is undergoing sound change, and the register contrast is shifting from using phonation as the primary cue to using formants. The change is more advanced in perception than production. These results support Ohala's (1993) hypothesis that change is initiated when listeners reinterpret coarticulated cues as inherent in perception.

Similar to Harrington et al. (2012), production and perception become misaligned during the sound change. Nevertheless, the perceptibility of the phonological contrast is maintained because listeners establish perceptual equivalence between coarticulated cues (Beddor 2009). This study presents compelling evidence for the importance of perceptual bias at the initial stage of sound change and illustrates how sound change is perpetuated from perception to production.

Friday Morning, July 15

What does prosodic variation tell us about prosodic organization?

Yiya Chen

In this talk, I will use Chinese lexical tones as a lens to examine the prosodic representation and processing mechanisms required to transform incoming auditory stimuli so as to access the lexicon and comprehend the speech signal. Variation abounds in the multi-level realization of lexical tones in Chinese dialects, which signals indexical and lexical information and is further complicated by various types of tonal sandhi changes in connected speech. How does the Chinese brain deal with the complex patterns of tonal variation, and what can knowledge as such tell us about the prosodic organization of the mental lexicon? To address these questions, I will discuss tonal acoustic patterns, behavioral reaction time data, perceptual judgements, and neural responses from three sets of experiments, each concerning a different type of tonal variation: within-speaker idiolectal pitch variation, within-dialect context-specific tone sandhi variation, and pitch variation due to cross-dialect lexical tonal mapping. With evidence of both acoustic details and abstract categories in tonal processing, I will argue that lexical representation must contain abstract tonal categories stored along with their allophonic variants, while at the same time maintaining relatively weak episodic effects in lexical processing. Furthermore, I will suggest that the findings are compatible with a hierarchical account of how acoustic details are accessed during lexical activation but transformed into abstract representations for the later stage of lexical meaning processing.

Individual specificity, redundancy and the evolution of phonological systems: Intonation in a tone language

Francesco Cangemi, Christian Weitz, Kieu-Phuong Ha, Marc Brunelle and Martine Grice

Speakers encode phonological contrasts redundantly, i.e. using multiple cues which are distributed across different time domains. When multiple cues are available, different speakers are known to capitalize on different cues. This suggests that individual-specific strategies in the encoding of contrasts might be more frequent when contrasts are particularly redundant. Individual specificity in phonetic encoding might thus be expected to be particularly pervasive for contrasts which are usually encoded through non-phonetic devices, but which also have incipient, fading or non-grammaticalised phonetic encoding. We thus explore phonetic encoding of non-lexical or sentence-level contrasts in Northern Vietnamese, a tone language, where they are usually encoded through sentence final particles.

We develop an infrastructure for the quantification of speaker-specific variability, and use it to provide an in-depth analysis of a multi-speaker corpus. By performing both a top-down analysis (hypothesis-testing) and a bottom-up analysis (unsupervised clustering), we document unusual patterns in the phonetic encoding of sentence modality and affect. These patterns document the presence of intonation in a tone language, and suggest that speaker-specific effects might indeed be pervasive in the phonetic encoding of contrasts usually expressed through other devices.

Non-canonical Word Order in Russian: Processing and Acoustic Parameterization

Tatiana Luchkina

In this study, we test if prosodic augmentation of ex-situ constituents in Russian, a free word order language, is conducive to sentence processing and leads to faster recall and recognition of the ex-situ word. Results of production and probe recognition tasks reveal that augmented prosodic expression and a change in word order may co-occur in spoken language use. Cross-application of these cues facilitates subsequent recognition of the ex-situ word only when it is aligned with a natural prominence landing site, such as the utterance-final position in Russian.

The Nature of Variation in the Tone Sandhi Patterns of Shanghai Wu

Hanbo Yan and Jie Zhang

Shanghai Wu has two different tone sandhi patterns, tonal extension and tonal reduction, that can apply variably in a disyllabic sequence. Syntactic structure, semantic transparency, and lexical frequency have all been documented to affect the sandhi application. However, the exact influence of each factor on the variation pattern or how these factors interact was never made explicit. We report a goodness rating experiment for the variant forms with native Shanghai speakers in tandem with semantic transparency and subjective frequency ratings from the same speakers to shed light on the nature of Shanghai tone sandhi variation. The results show that disyllabic tone sandhi application in Shanghai is primarily determined by syntactic structure, with a strong tonal extension preference for modifier-noun compounds and a tonal reduction preference for verb-noun phrases. The effect of semantic transparency is only observed for verb-noun phrases, with semantically less transparent phrases preferring tonal extension more. The lexical frequency effect is only operative insofar as it enhances the prediction of compoundhood: a more frequent modifier-noun compound is more compound-like and hence has a greater tendency to undergo tonal extension, while a more frequent verb-noun item is more phrase-like and hence has a stronger tendency for tonal reduction.

Friday Afternoon, July 15

Representational dynamics in sound structure planning

Matthew Goldrick

Lexical neighbors (non-target words overlapping in form with the target) induce a range of effects on phonetic realization. When response preparation is difficult or disrupted, non-target representations serve to attract target articulations, resulting in productions. that reduce the contrast between the target and co-activated neighbors. When response preparation is facilitated, neighbors serve to repel the target, resulting in enhancement of contrasts between targets and neighbors. Parallel effects have been observed in bilingual speech, as well as in non-communicative motor movements (saccadic eye movements and reaching). This suggest that enhancement and reduction reflect general principles of motor planning. A dynamical framework for lexical access can account for this diverse array of effects. Reduction is the consequence of coactivation. Spreading activation enhances the activation of neighbors, causing the output of lexical access to be a blend of target and non-target properties. The resulting presence of neighbor articulatory properties during target production produces reduction. Building on exemplar accounts and adaptive speaker models, enhancement reflects learned inhibition of competing neighbor forms. This interacts with general selection processes to produce strong suppression of non-target forms, greatly reducing lingering effects of coactivation. This produces enhancement relative to cases that lack learned inhibition

Modelling Phonetic and Phonological Variation with Small Data: Evidence from Kaqchikel Mayan

Ryan Bennett and Kevin Tang

This work confronts the challenge of 'big data' research in under-resourced languages by demonstrating that small, well-annotated spoken and written corpora can reveal systematic patterns of phonetic and phonological variation. The empirical focus is Kaqchikel, a Guatemalan Mayan language. We provide a proof-of-concept that psycholinguistic and phonetic norms computed from less-than-ideal corpora can be used to study fine-grained phonetic and phonological phenomena, including the robustness of phonemic contrasts, allophonic variability, and word-frequency effects on sub-phonemic detail.

As there were no previous structured corpora for Kaqchikel (apart from dictionaries) we compiled two new corpora, one written and one spoken. The spoken corpus contains just ~40,000 word tokens (~4 hours of spontaneous spoken Kaqchikel). The written corpus contains ~1 million word tokens, constructed from existing religious texts, spoken transcripts, government documents and educational books.

We show that even these small corpora are sufficient to replicate phonetic reduction effects related to word frequency, and to investigate a more cutting-edge topic, the effect of functional load on vowel acoustics and vowel mergers. The practical conclusion of this work is that interpretable, reliable, and theoretically meaningful corpus research can be carried out minority and under-resourced languages for which only sparse, noisy corpora may be available.

Coalescing sources of bias in perception: Lexical and prelexical influences on the processing of phonological features

Alexander Martin and Sharon Peperkamp

Phonological features are known to be processed differentially during word recognition. Focusing on French listeners, who pay less attention to voicing than to place and manner, we explore two possible sources of these differences. (1) We consider universal bottom-up acoustic-perceptual influences, using an ABX discrimination task. We find that differences in manner are more reliably discriminated than differences in place or voicing. We attribute this to the stark acoustic difference between stops and fricatives. (2) We consider the influence of language-specific lexical knowledge by proposing a novel method for measuring functional load (FL), the amount of work a contrast does in a phonological system. We find that in French, place has a higher FL than manner or voicing. Taken together, these two results can explain why voicing is less important than the other two features for word recognition in French. We propose that listeners are biased not only by bottom-up acoustics (therefore lending attention to manner differences), but also by their knowledge of their native lexicon (for French, lending attention to place differences), making word recognition more efficient.

Epenthesis into nonnative consonant clusters: phonetic factors eclipse gradient phonotactics

Colin Wilson and Lisa Davidson

Errors in cross-language speech processing could potentially have several sources, including phonetic decoding, phonological repair, and production planning and articulation. The contribution of these factors to epenthesis into nonnative consonant clusters was investigated with production and transcription experiments. English listeners heard novel words beginning with a range of nonnative clusters, and matched fillers containing schwas, recorded by a native Russian speaker. When participants attempted to produce the nonwords, an intrusive schwa often appeared between the members of the cluster (e.g., bdafa → [bədafa]). The rate of epenthesis was modulated by the voicing of the initial consonant, with more epenthesis after voiced stops, as well as by a number of other phonological and phonetic properties of the clusters. A separate group of participants performed forced-choice transcription of the same

stimuli. While the production and transcription results were parallel in many respects, the strong effect of voicing observed in production was essentially nullified in transcription. These results suggest that the voicing asymmetry in production does not reflect greater perceptual similarity of voiced-stop releases to English schwa, or greater phonotactic markedness of nonnative clusters beginning with voiced obstruents, but instead arises from spontaneous voicing when nonnative clusters are produced with insufficient gestural overlap.

Saturday Morning, July 16

More is more: how trying to learn multiple aspects of language at once can actually help

Sharon Goldwater

The term "bootstrapping" appears frequently in the literature on child language acquisition (especially with respect to syntax and semantics), but is often defined vaguely (if at all) and may mean different things to different people. In this talk, I define bootstrapping as the use of structured correspondences between different aspects of linguistic structure as a way to aid learning, and discuss how probabilistic models can be used to investigate the nature of these correspondences and how they might help the child learner. I will present example models of early language acquisition tasks involving word segmentation, phonetic learning, and word meaning. My work with these models on naturalistic corpora illustrates how jointly learning multiple aspects of language at once can actually make the learning problem easier, rather than more difficult, and suggests the need for more research integrating multiple levels of linguistic structure.

L1 influence on L2 assimilation: An EPG study of English /n/+stop sequences

Laura Colantoni, Alexei Kochetov and Jeffrey Steele

This paper examines how gradient/variable patterns of nasal place assimilation in English (Ellis & Hardcastle, 2002) are acquired by advanced L2 English learners, whose native languages display different canonical realizations of nasal + stop sequences. Linguopalatal contact data using electropalatography (EPG) were collected from 3 speakers each of French, Japanese, and Spanish as well as from 2 native English controls. Sentences included words with a final /n/ followed by a word-initial /k/ (target items) or /t/ and /h/ (control items). Measurements of tongue front/back position and degree of palatal contact were extracted from the acoustically-defined nasal interval. The results showed that the L2 production of /n/+/k/ sequences was relatively uniform within each language group, and to a large extent, resembled the corresponding L1 patterns observed in data collected previously from the same speakers. These findings are consistent with previous studies in revealing that even advanced L2 learners continue to use L1 coarticulatory patterns, particularly across words (Zsiga, 2003). This, in turn, provides support for positionally-based acquisition models (Flege, 1995).

/l/ in clusters: an articulatory-acoustic study of children's productions

Susan Lin, Sharon Inkelas, Lara Mcconnaughey and Michael Dohn

This study uses audio and ultrasound data to illuminate young children's gestural coordination in consonant+/l/ clusters. The hypothesis is that children who are not yet capable of producing a fully adult-like /l/ will require more time (duration) to produce consonant clusters in which the other consonant also involves a lingual articulation. Analysis of audio recordings and associated lingual ultrasound video of five English-learning children producing onset singleton laterals (e.g., lip) and laterals in /kl-/ and /sl-/ clusters (e.g., clip, slap) in an elicited imitation task showed that /l/ duration was significantly longer in /sl-/ and

/kl-/ clusters overall, but covaried with articulation. Subjects with adult-like /l/ productions (posterior and anterior constriction) exhibited shorter /l/ duration in clusters than subjects with less adult-like, more advanced tongue position for /l/, a difference we attribute to the time needed for the tongue to move from a posterior position for /k/ and /s/ to the anterior position of the less adult-like /l/ productions. This result suggests that children's productions of clusters requiring gestural coordination depend on covert articulatory details of the consonants involved; these details, exposed by ultrasound imaging, vary across individuals, contributing to our understanding of why children's phonological patterns are so variable.

The effect of indexical cues on the distributional learning of sound categories

Masaki Noguchi and Carla Hudson Kam

The distributional learning theory of phonetic category acquisition assumes that reliable distributional cues for the categorization of speech sounds exist in the input. In the real world, however, not all talkers produce exactly the same distribution of speech sounds, and this variability may undermine the reliability of distributional cues. Studies have demonstrated that listeners are sensitive to talker-specific information in the acoustic signal and that indexical information (i.e., the identity of talkers) is an integral part of linguistic knowledge, suggesting a potential solution to the reliability problem. In this study, we tested whether adults can learn two novel phonetic categories from input in which talker-dependent variation introduced potential ambiguities into the categorization. Specifically, the input was produced by multiple talkers. Each talker provided reliable distributional cues for the learning of two categories, but the locations of the distributional peaks varied from talker to talker such that the overall aggregate distribution of speech sounds did not have a bimodal shape. The results showed that adults could learn two novel phonetic categories from this input, suggesting that they could overcome the variation in the input by using indexical information to sort out statistical information.

Saturday Afternoon, July 16

Social dynamics and phonological representations: Observations from speech and society in Scotland

Jane Stuart-Smith

An important bundle of factors in constraining and shaping phonological representations seems to be the social dynamics which speakers and listeners are constantly engaged in. In this talk I will consider some different representations of social dynamics, and how these might relate to speech, from macro-social categories, to more intimate links formed through social networks, and to micro-social processes as speakers construct shared social and linguistic practices (Labov 2001; Eckert 2012). Also relevant for investigating possible links between social dynamics and phonological representation, is how social dynamics may be captured and/or inferred through different kinds of sampling and speech elicitation. Recent sociophonetic work on Scottish English, which includes a further dynamic of social and phonological change over time, provides illustrations through three complementary examples:

-- articulatory investigation of gestural and timing differences in coda /r/ in socially-stratified laboratory recordings of Scottish English, alongside dynamic acoustic diachronic consideration of coda /r/ in spontaneous Scottish English speech;

-- dynamic acoustic representations of /s/ in spontaneous Glaswegian vernacular speech with respect to the social dynamics of gender in a changing city over time;

-- consonantal and vocalic variation in spontaneous Glasgow Asian speech, with rich representations of social dynamics relating to ethnic identities.

Network structural equivalence and the reversal of the Southern Vowel Shift

Robin Dodsworth and Richard Benton

Network structural equivalence is explored as a factor in the reversal of the Southern Vowel Shift (SVS) in Raleigh. Structural equivalence refers to the extent to which nodes inhabit similar positions within a social network, as determined by the ties they have in common. The network data consist of a bipartite network of schools and speakers, thus approximating childhood and adolescent network. In Raleigh, the 5 front vowels all began retreating from their SVS positions around 1950, concurrent with white collar in-migration. F1 and F2 were measured at 25% of vowel duration in force-aligned conversational interviews with 155 native Raleigh speakers. A matrix of structural equivalence distances between pairs of speakers was calculated on the bipartite network. This matrix is a fixed effect in each of a set of quadratic assignment procedure (QAP) regressions; the dependent variable in each model is a matrix of differences in mean Z2-Z1 for a given vowel. For three vowels, the interaction among age differences, occupation, and structural equivalence is significant: pairs of speakers far apart in age are more different linguistically than speakers close in age, and greater network distance between 2 speakers corresponds to greater linguistic difference, especially among white collar speakers.

Effects of phonetic reduction and social factors on cross-modal lexical priming

Zack Jones and Cynthia G. Clopper

Different phonological variants of the same lexical item prime matching targets in lexical decision tasks, but canonical and familiar forms are more robust primes than less canonical and less familiar forms, suggesting that multiple phonological variants may be encoded in listeners' lexical representations. The goal of the current study was to explore the role of subphonemic vowel variation due to phonetic reduction and social factors in lexical representation. In a cross-modal lexical decision task, single words extracted from naturally-produced read passages by talkers from the Midland and Northern American English dialect regions served as primes. Matching and unrelated primes were balanced for talker dialect, talker gender, speaking style, lexical frequency, and phonological neighborhood density. Responses were slower overall to Northern primes and the largest priming effects were observed for high-frequency and high-density primes produced by male talkers in plain speech. Northern and male primes were less intelligible and high-frequency and plain speech primes were more reduced, suggesting that processing more difficult auditory primes (i.e., less intelligible, more reduced, and/or those with more lexical competitors) interferes with immediate, subsequent processing of an unrelated visual target. This processing cost reflects a mismatch between a difficult prime and the relevant lexical representation.

What do you expect from an unfamiliar talker?

Dave F Kleinschmidt and T. Florian Jaeger

Speech perception is made much harder by variability between talkers. As a result, listeners need to adapt to each different talker's particular acoustic cue distributions. Thinking of this adaptation as a form of statistical inference, we explore the role that listeners' prior expectations play in adapting to an unfamiliar talker. Specifically, we test the hypothesis that listeners will have a harder time adapting to talkers whose cue distributions fall outside the range of normal variation across talkers. We also show that it is possible to infer listeners' shared prior expectations based on patterns of adaptation to different cue distributions. This provides a potentially powerful tool for directly probing listeners' prior expectations about talkers that does not rely on speech produced by many different talkers, which is costly to collect and annotate, and only indirectly related to listeners' subjective expectations.

Poster session titles and authors

Abstracts available at www.labphon.org/labphon15/program

Poster Session P1 Thu 11:30 AM - 1:10 PM

P1-01 **English coda [m] adaptations in Standard Mandarin loanwords: Corpora data vs. bilingual and monolingual experimental results**
Ho-Hsin Huang and Yen-Hwei Lin

P1-02 **Plural predictability and OCP influence plural morpheme duration in English**
Darcy E. Rose

P1-03 **Speaking rate effect on consonant-vowel coarticulation and on stop consonant classification**
Mohammad Abuoudeh and Olivier Crouzet

P1-04 **Kinematic aspects of L2 production in an imitation task**
Mark Tiede, Christine Mooshammer, Dolly Goldenberg and Douglas Honorof

P1-05 **Variable aspiration of Spanish coda /s/: Laboratory evidence and Stochastic OT modeling**
Valentyna Filimonova and Kelly Berkson

P1-06 **How native and non-native listeners process schwa reduction in French: A combined eye-tracking and ERP study**
Kimberley Mulder, Sophie Brand and Mirjam Ernestus

P1-07 **Sonority profile and temporal organization of clusters: evidence from Russian**
Stefania Marin, Marianne Pouplier and Alexei Kochetov

P1-08 **Intonational qualities of strong and weak imperatives**
Megan Keough, Elise Kedersha McClay, Molly Babel and Lisa Matthewson

P1-09 **What reaction times reveal about listener groups: L1 Aboriginal English and Standard Australian English responses to a prelateral merger-in-progress**
Deborah Loakes, Janet Fletcher, John Hajek and Joshua Clothier

P1-10 **Prosodic Organization of Spontaneous Spanish-English Bilingual Speech**
Melinda Fricke, Marianna Nadeu and Michael Maslowski

P1-11 **Phonetic Shift /ɔr/ Phonemic Change? American English mergers over 40 years**
Joseph A. Stanley and Margaret E. L. Renwick

P1-12 **Social dynamics and phonological strength: Post-nasal devoicing in Tswana**
Grzegorz Dogil, Jagoda Bruni, Daniel Duran, Justus Roux and Andries Coetzee

P1-14 **Infants' use of phonological detail during foreign-accented word recognition**
Marieke van Heugten, Dena Krieger, Melissa Paquette-Smith and Elizabeth Johnson

P1-15 **Perception of acoustic, informational and structural prominence in English, French, and Spanish**
Jennifer Cole, Jose Ignacio Hualde, Caroline Smith, Christopher Eager, Tim Mahrt and Ricardo Napoleão de Souza

P1-16 **Corrective focus in conversational French**
Ricardo Napoleão de Souza and Caroline Smith

P1-17 **Levels of processing and their interaction in speech production**
Adam Buchwald and Michele Miozzo

P1-18 **L1 Use predicts imitation of metrical features in a typologically different L2**
Rossana Cavone and Mariapaola D'Imperio

P1-19 **Final lengthening in German**
Malte Belz, Oxana Rasskazova, Anja Riemenschneider, Jelena Krivokapić, Melanie Weirich and Christine Mooshammer

P1-20 **The link between anterior lingual gesture delay and loss of coda /r/: an ultrasound study**
Jane Stuart-Smith, Eleanor Lawson and James Scobbie

P1-21 **Ambivalent Consonantal Effects on F0**
Qian Luo, Karthik Durvasula and Yen-Hwei Lin

P1-22 **Attentional modulation and individual differences in explaining the changing role of f0 in the Korean laryngeal stop perception**
Eun Jong Kong and Hyunjung Lee

P1-23 **Illusory epenthesis and recoverability-conditioned sensitivity to phonetic detail**
James Whang

P1-24 **Lexical access and stereotypical 'word age' in Korean**
Jonny Kim

P1-25 **Rethinking reduction on the basis of phonetic variation in a discourse marker**
Mirjam Ernestus and Rachel Smith

P1-26 **Phonological Influence in Third Language Acquisition: L2 Spanish Effects on the Production of L3 Portuguese Voiced Stops**
Sarah Harper

P1-27 **How vowel variability relates to vowel perception**
Nhung Nguyen, Jason A. Shaw, Catherine T. Best and Michael D. Tyler

P1-28 **Different effects of production on spoken-word recognition for adults versus children**
Tania Zamuner, Stephanie Strahm, Elizabeth Morin-Lessard and Mike Page

P1-29 **Phonetic devices and the construction of the phonological space**
Elinor Payne, Brechtje Post, Nina Gram Garmann and Hanne Gram Simonsen

P1-30 **Estimating segments' cost using cross-linguistic information**
Uriel Cohen Priva and Emily Gleason

P1-31 **Dealing with 'inperfection': Affixes, allomorphy, and dual-route parsing**
Laurel Lawyer and David Corina

Poster Session P2 Thu 4:45 PM - 6:15 PM

P2-01 **L1 influence on the identification of intonational contours**
Elaine Schmidt, Carmen Kung, Brechtje Post, Ivan Yuen and Katherine Demuth

P2-02 **An experimental approach to perceptual salience**
Hanna Ruch

P2-03 **The Generation of Prosodic Frames in Speech Production: An Experimental Approach**
Hilary Wynne, Linda Wheeldon and Aditi Lahiri

P2-04 **Preserving speech dynamics in Parkinson's disease: an acoustic study of the production of glides by Belgian French patients**
Virginie Roland, Véronique Delvaux, Kathy Huet, Myriam Piccaluga, Marie-Claire Haelewyck and Bernard Harmegnies

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Marissa Barlaz, Ryan Shosted, Christopher Carignan, Maojing Fu, Zhi-Pei Liang and Brad Sutton

P2-06 **Perception, Production, and the Implementation of Phonological Opacity in the Bengali Vowel Chain Shift**
Traci Nagle

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Kodi Weatherholtz, Linda Liu and T. Florian Jaeger

P2-08 **Targetless /u/ in Tokyo Japanese**
Shigeto Kawahara, Jason Shaw and James Whang

P2-09 **Effects of Position, Stress and Manner of Articulation on Consonant-Vowel Co-occurrence in Three Languages**
Eleonora Albano

P2-10 **Intrinsic pitch of diphthongs in lexical tone perception**
Jessica Siddins and Eva Reinisch

P2-11 **The articulatory space of oral and nasal vowels in Brazilian Portuguese**
Ryan Shosted, Denise Pozzani, Francisco Meneses, Nicole Wong, Zainab Hermes and Torrey Loucks

P2-12 **I can't understand - The perception of native and non-native can and can't by native and non-native listeners of English**
Margot van Mulken, Huib Kouwenhoven and Mirjam Ernestus

P2-13 **ePGG, Pio, airflow and acoustic data on the phasing of glottal opening and three-way phonation contrast: implications for laryngeal features**
Hyunsoon Kim, Shinji Maeda, Kiyoshi Honda and Lise Crevier-Buchman

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Amanda Rysling, John Kingston, Adrian Staub, Andrew Cohen, Jeffrey Starns and Anthony Yacovone

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Shiri Lev-Ari

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Harim Kwon

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Rachel Walker, Michael Proctor, Caitlin Smith and Ewald Enzinger

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Robert Lennon, Rachel Smith and Jane Stuart-Smith

P2-24 **Cider apples and jeder Abend: the interplay of /r/-sandhi and word-initial glottalisation in English-accented German**
Maria Paola Bissiri and James M. Scobbie

P2-25 **An Experimental Investigation of Positionally Conditioned Tone Sandhi in Hailu Hakka**
Jie Zhang, Hanbo Yan, Yuwen Lai and Shao-Ren Lyu

P2-26 **Modeling new conceptions of functional load with perceptual confusability**
Zachary Burchill

P2-27 **Using ANNs for vowel identification from V-to-V coarticulation in non-harmonic VCV sequences**
Indranil Dutta, Irfan S. and Harsha K.R.S.

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Amelia Kimball and Jennifer Cole

P2-29 **Contrast preservation at the level of the individual: Evidence from Spanish plosive lenition**
Christopher D. Eager

P2-30 **Language-internal behavior of typologically rare sounds: Production, perception, and distribution of breathy sonorants in Marathi**
Kelly Berkson

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Abdulaziz Alarifi and Benjamin V. Tucker

P3-02 **Dynamic hyper-articulation: Effects of context and lexical representations**
Esteban Buz, Scott Seyfarth and T Florian Jaeger

P3-03 **High frequency prototypes do not facilitate phonotactic generalizations**
Timo Roettger and Dinah Baer-Henney

P3-04 **Production Influences on Phonological Representation in an Emergentist Grammar**
Tara Mcallister Byun and Anne-Michelle Tessier

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Doris Muecke, Anne Hermes, Timo B. Roettger, Johannes Becker and Michael Barbe

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Larisa Bainton, Emily Rowe, Zach Burchill, Linda Liu, Kodi Weatherholtz and T. Florian Jaeger

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Ruben van de Vijver and Hae-Eun Cho

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Tyler Heston

P3-09 **Like a square peg in a round hole: Why contour shape matters for learning new intonation patterns**
Mariapaola D'Imperio and James Sneed German

P3-10 **Gradient phonological relationships: Evidence from vowels in French**
Sophia Stevenson and Tania Zamuner

P3-11 **Focus, accentuation and phonetic variability in Greek**
Argyro Katsika and Amalia Arvaniti

P3-12 **Vowel lengthening in syllables without vowels**
Jamison Cooper-Leavitt and Rachid Ridouane

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Jiseung Kim

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Félix Desmeules-Trudel and Tania Zamuner

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Pittayawat Pittayaporn and Sujinat Jitwiriyanont

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Geoff Schwartz, Jarosław Weckwerth, Kamil Kazmierski, Aperlinski Grzegorz, Malarski Kamil and Mateusz Jekiel

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Ivan Yuen, Felicity Cox and Katherine Demuth

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Amy Smolek and Vsevolod Kapatsinski

P3-20 **Language-specificity in Speakers' Strategies of Focus Expression**
Martin Ho Kwan Ip and Anne Cutler

P3-21 **Dynamic listening: temporal expectations guide perception of phonetic detail**
Jason Shaw

P3-22 **Investigating Conflicting Aerodynamic Requirements in CC Clusters**
Manfred Pastätter and Marianne Pouplier

P3-23 **Sleep-dependent consolidation in the learning of natural vs. unnatural phonological rules**
Sharon Peperkamp and Alexander Martin

P3-24 **'/t,d/ Deletion': Articulatory Gradience in Variable Phonology**
Ruaridh Purse and Alice Turk

P3-25 **Vowel movement as a function of voicing in simple CV sequences**
Stavroula Sotiropoulou, Tanner Sorensen, Stephen Tobin and Adamantios Gafos

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Linda Polka, Matthew Masapollo and Lucie Menard

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Elizabeth Stelle, Eric Vatikiotis-Bateson and Caroline L. Smith

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Noriko Yamane, Phil Howson, Masaki Noguchi and Bryan Gick

P3-29 **Individual Differences in Perceptual Compensation and Lexical Effects and Implications for Sound Change**
Yanyu Long

P3-30 **Coarticulation magnitude in German children**
Dzhuma Abakarova, Elina Rubertus, Khalil Iskarous, Mark Tiede, Jan Ries and Aude Noiray

P3-31 **Interactions of speaking rate and prosodic organization in non-native speech production**
Tuuli Morrill and Melissa Baese-Berk

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P4-01 **Embodied dynamics: A unified approach to local, non-local and global coarticulation**
Bryan Gick, Chenhao Chiu and Ian Stavness

P4-02 **Imitation of non-native clusters: the role of transitional schwa**
Tomas Lentz, Marianne Pouplier, Ioana Chitoran and Phil Hoole

P4-03 **Uncovering the Origins of Nucleus Raising in Liverpool English: Dynamic Analysis of Diphthongs**
Amanda Cardoso

P4-04 **Regional variation in formant dynamics and the phonologization of pre-velar raising in American English**
Michael J. Fox and Jeff Mielke

P4-05 **Children's sensitivity to degrees of mispronunciation: Enriching the preferential looking paradigm with pupillometry.**
Katalin Tamasi, Cristina McKean, Adamantios Gafos and Barbara Hoehle

P4-06 **Seeing focalization: The role of visual information from lip movements in the natural referent vowel bias**
Matthew Masapollo, Linda Polka and Lucie Ménard

P4-07 **When oui becomes ou[i̥]: The role of vowel type, preceding consonant and lexical frequency on total final vowel devoicing in Continental French**
Amanda Dalola

P4-08 **An empirical and computational study of generalized adaptation to natural talker-specific VOT**
Eleanor Chodroff, Alessandra Golden and Colin Wilson

P4-09 **Influence of palatalization on tongue-tip velocity in trills**
Taja Stoll, Philip Hoole and Jonathan Harrington

P4-10 **Effects of boundary tones on the coordination of lexical tones**
Hao Yi and Sam Tilsen

P4-11 **Cross-linguistic gender priming in speech processing**
Grant Mcguire, Molly Babel and Alexandra Bosurgi

P4-12 **Intonation and Sentence Type: The Emergence of Conventions for Attitudinal Meanings**
Sunwoo Jeong

P4-13 **Prosodic organization and microprosodic effects in Shanghai Chinese**
Jiayin Gao and Pierre André Hallé

P4-14 **Downstep in Japanese revisited: Lexical category matters**
Manami Hirayama and Hyun Kyung Hwang

P4-15 **Incomplete neutralization and the (a)symmetry of paradigm uniformity**
Abby Kaplan

P4-16 **Is there cross-linguistic evidence for prosodic bootstrapping of word order?**
Angeliki Athanasopoulou and Irene Vogel

P4-17 **The adaptation of Mandarin falling diphthongs in Heritage Korean in China: The interaction of linguistic and sociolinguistic factors**
Na-Young Ryu, Yoonjung Kang and Sung-Woo Han

P4-18 **Perception of anticipatory labial coarticulation by Belgian French blind listeners: A comparison with sighted listeners in audio-only, visual-only and audiovisual conditions**
Véronique Delvaux, Kathy Huet, Myriam Piccaluga and Bernard Harmegnies

P4-19 **Blending of articulator activation in a dynamical model of phonological planning**
Kevin Roon and Adamantios Gafos

P4-20 **MALD: Massive Auditory Lexical Decision**
Benjamin Tucker and Daniel Brenner

P4-21 **Linguistic contrast enhancement under prosodic strengthening in L1 and L2 speech**
Sahyang Kim, Jiyoun Choi and Taehong Cho

P4-22 **The phonological representation of Japanese vowel devoicing**
Marco Fonseca, Maria Cantoni and Thaïs Cristófaro Silva

P4-23 **The Role of Tongue Root in Laryngeal Contrasts: An Ultrasound Study of English, Spanish, Hindi, and Korean**
Suzy Ahn

P4-24 **Accent-meter/tune alignment in Japanese vocal music**
Sunghye Cho

P4-25 **Comparing neighborhood density and clear speech effects in the French vowel system**
Rebecca Scarborough and Cecile Fougeron

P4-26 **Stress clash avoidance by 6- to 7-month-olds**
Barbara Höhle, Natalie Boll-Avetisyan and Jürgen Weissenborn

P4-27 **Vowel dynamics and social meaning in York, Northern England**
Daniel Lawrence

P4-28 **How much does the talker matter? Depends who's listening: Age-related variability in the use of social information in speech perception**
Jessamyn Schertz, Yoonjung Kang and Sungwoo Han

P4-29 **On the link between glottal vibration and sonority**
Megan Risdal, Ann Aly, Adam Chong, Patricia Keating and Jesse Zymet

P4-30 **Articulatory uniformity in Suzhou fricative vowels**
Matthew Faytak

P4-31 **The role of fundamental and formant frequency information on voice and speaker perception in children with Autism and Attention Deficit Hyperactivity**
Georgia Zellou, Santiago Barreda, Nancy McIntyre, Lindsay Swain-Lerro, Matthew Zajic and Peter Mundy

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P5-01 **Category typicality in perceptual learning**
Molly Babel, Michael McAuliffe, Zoe Lawler and Carolyn Norton

P5-02 **On the relation between speech perception and loanword adaptation: new evidence from Korean**
Mira Oh, Robert Daland and Lisa Davidson

P5-03 **Vowel Lengthening Effects in Natural Speech: Learning under sparse data and high variance**
Becca Morley

P5-04 **A phonologically weak contrast can induce phonetic overlap**
Margaret Renwick, Ioana Vasilescu, Camille Dutrey, Lori Lamel and Bianca Vieru

P5-05 **Prosodic phonological characteristics of speech directed to adults and to infants with and without hearing impairment**
Laura Dilley, Evamarie Burnham, Elizabeth Wieland, Derek Houston, Maria Kondaurova and Tonya Bergeson

P5-06 **Patterns of vowel laxing and vowel harmony in Peninsular Spanish**
Nicholas Henriksen

P5-07 **Variability in the French Mid Vowels: Vowel Harmony, Syllable Structure, and the Creation and Effects of Phonological Representations**
Jeffrey Lamontagne

P5-08 **A system for unified corpus analysis, applied to polysyllabic shortening across 12 languages**
Michael Mcauliffe, Morgan Sonderegger and Michael Wagner

P5-09 **Representation of Acoustic Detail**
Michelle Sims and Benjamin V. Tucker

P5-10 **Representations of Place and Airstream Mechanism: A real-time MRI study of Tigrinya ejectives**
Zainab Hermes, Mao-Jing Fu, Sharon Rose, Ryan Shosted and Brad Sutton

P5-11 **An acoustic study of Punjabi tone and stress (Doabi dialect)**
Kiranpreet Nara

P5-12 **Obstruent voicing, aspiration, and tone: implications for laryngeal phonology**
James Kirby

P5-13 **Morpho-phonology without semantics? The roles of lexical memory and experience in influencing the nature of lexical representations in a rote learning context**
Siti Syuhada Binte Faizal and Ghada Khattab

P5-14 **The Effect of Phonological Context on the Perception of Strong Place Assimilation in Nasal and Stop Consonants**
Mercedeh Mohaghegh and Craig Chambers

P5-15 **The role of palate shape in individual articulatory and acoustic variability**
Sarah Bakst

P5-16 **Influence of Syllable Structure on Musical Text Setting**
Murray Schellenberg

P5-17 **Acoustic-phonetic modelling of historical and prehistoric sound change**
John Coleman

P5-18 **Investigating the perceptual hypocorrection hypothesis with sibilant harmony**
Avery Ozburn

P5-19 **Investigating the origins of pre-consonantal /s/-retraction: acoustic, perceptual and articulatory evidence from English**
Mary Stevens and Jonathan Harrington

P5-20 **The Perceptual Effects of Phonotactic Rareness and Partial Allophony in Canadian French**
Patrick Murphy, Philip Monahan and Margaret Grant

P5-21 **When intonation fails to phonologize: the case of Southern Vietnamese**
Marc Brunelle

P5-23 **Phonology Modulates the Illusory Vowels in Perceptual Illusions**
Karthik Durvasula, Ho-Hsin Huang, Sayako Uehara, Qian Luo and Yen-Hwei Lin

P5-24 **Post-pubescent long-term exposure to non-rhoticity causes qualitative and quantitative changes in the realization of postvocalic /r/**
Marie-Christin Himmel and Baris Kabak

P5-25 **Car-talk: How physical environment influences speech production and perception**
Ryan Podlubny, Jen Hay and Megan McAuliffe

P5-26 **The role of echoic memory in the initial learning of a second dialect: the case of bilinguals**
Laura Spinu, Jiwon Hwang and Renata Lohmann

P5-27 **ERP evidence for the ecological validity of artificial language learning**
Lisa Sanders, Claire Moore-Cantwell, Joe Pater, Robert Staubs and Benjamin Zobel

P5-28 **Effect of phrasal accent on vocalic and consonantal nuclei**
Lia Saki Bucar Shigemori, Marianne Pouplier and Štefan Beňuš

P5-29 **Style-shifting and phonetic alignment in non-native discourse**
Grant M. Berry and Mirjam Ernestus

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Hyun Kyung Hwang

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Irene Vogel and Angeliki Athanasopoulou

P6-02 **How is lexical gemination transposed in Tashlhiyt whistled speech?**
Rachid Ridouane and Julien Meyer

P6-03 **Spectral Trajectories of Spanish /s/: Temporal Variability, Vowel Context, and Duration**
Eric Wilbanks

P6-05 **The emergence of an inflectional edge tone morpheme in Samoan**
Kristine Yu

P6-06 **Shanghai Chinese obstruent durations vary with voicing: A phonological or phonetic effect?**
Pierre Hallé and Jiayin Gao

P6-07 **Subcategorical contrasts in Korean affricates: Implications for English loanword adaptation**
Yongeun Lee and Matthew Goldrick

P6-08 **Production dynamics and phonetic motivations for English raised /æ/ and intrusive [l]**
Jeff Mielke, Christopher Carignan and Erik Thomas

P6-09 **The perception of stop/sibilant clusters in Modern Hebrew**
Kyle Jones

P6-10 **Building a proto-lexicon: Does input variability matter?**
Helen Buckler and Elizabeth Johnson

P6-11 **Articulatory dynamics of degemination in Dutch**
Patrycja Strycharczuk and Koen Sebregts

P6-12 **Acquisition of word-level prominence in L2 English by Canadian French speakers**
Guilherme Duarte Garcia and Natalia Brambatti Guzzo

P6-13 **Articulation and Representation of Laterals in Australian-accented English**
Jia Ying, Jason Shaw, Catherine Best, Michael Proctor, Donald Derrick and Christopher Carignan

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Martin Krämer and Natalia Mitrofanova

P6-15 **Evidence for vowel targets in formant distributions and within-syllable adjustments**
D. H. Whalen

P6-16 **Categorical perception of lexical stress: A cross-linguistic study**
Natalie Boll-Avetisyan, Saioa Larraza, Aislyn Rose, Sylvie Margules, Ranka Bijeljac-Babic, Thierry Nazzi and Barbara Höhle

P6-17 **The effects of listener age and language experience on talker identification**
Natalie Fecher, Katrina Aranas and Elizabeth K. Johnson

P6-18 **Lenition and segmentation**
Jonah Katz and Melinda Fricke

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Kevin Mullin

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Phil Howson and Philip Monahan

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Sawsan Alwabari and Tania Zamuner

P6-22 **Characterizing vocal tract dynamics with real-time MRI**
Tanner Sorensen, Asterios Toutios, Louis Goldstein and Shrikanth Narayanan

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Sabrina Bendjaballah and Rachid Ridouane

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Annika Nijveld, Kimberley Mulder, Louis ten Bosch and Mirjam Ernestus

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Yoonjeong Lee, Samantha Gordon Danner, Benjamin Parrell, Sungbok Lee, Louis Goldstein and Dani Byrd

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Oriana Kilbourn-Ceron, Michael Wagner and Meghan Clayards

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Daniel Szeredi

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Ruth Maddeaux and Yoonjung Kang

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Melissa Baese-Berk and Katherine White

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Sarah Plane and Gwendolyn Hyslop

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Donghyun Kim, Meghan Clayards and Heather Goad

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Exploring Speech Planning and Production in Children

Organizers: Katherine Demuth, Stefanie Shattuck Hufnagel, Ivan Yuen, Jill Thorson

Wednesday, July 13th, 9:00 AM - 1:30 PM

Rockefeller 230

Models of human speech production developed over the past few decades have been shaped by a number of sources of information, including linguistic theory, observational studies and experimental studies of both typical and atypical adult speakers. But few studies have addressed the question of the *developmental course* of changes in the speech production process in children who are learning to talk. The goal of this workshop is therefore to bring together researchers working on models of speech production planning to explore methods suitable for testing hypotheses about the role of higher-level structure in these processes in both adults and children aged 2-12, with special focus on the development of speech planning mechanisms during the course of language acquisition.

Invited Speakers

Sonia Frota (Universidade de Lisboa)
Prosody shapes early speech production and early word segmentation

Melissa Redford (University of Oregon)
Towards a developmentally sensitive model of speech-language production

Hilary Wynne (University of Oxford), Linda Wheeldon (Birmingham University), Aditi Lahiri (University of Oxford)
Compounds and encliticised prosodic words in language planning and phonological planning

Michael Wagner (McGill University)
Allophonic variation and the locality of production planning

Poster Presentations

D'Imperio, M., Zanchi, P., Zampini, L., Fasolo, M. *Preplanning strategies in narrative intonation: a comparison between Italian pre-schoolers and adults*

Franz, I., Kentner, G., Domahs, F. *The impact of animacy and rhythm on the linear order of conjuncts in child language*

Jackson, E. S., Spencer, J. P., Nam, H. *Dynamic field-based task dynamic application (DFTaDA): an embodied model of speech production*

Ko, E-S. *Mothers speak slowly to accommodate to the processing capacity of infants*

McAllister Byun, T., Inkelas, S., Rose, Y. *Stable motor plans as local attractors in speech development*

Noiray, A., Rubertus, E., Mooshammer, C. *Phonological competition in young learners of English*

Noiray, A., Abakarova, D., Rubertus, E., Mooshammer, C.: *Lexical and phonological effects on word planning in English children*

Zamuner, T., Yeung, H. *Audio-visual priming and children's spoken word production*

Tools for Big Data in Laboratory Phonology

Kathleen Currie Hall (University of British Columbia), Michael McAuliffe (McGill University), Morgan Sonderegger (McGill University), & Yvan Rose (Memorial University of Newfoundland)

Wednesday, July 13th, 9:00 AM – 4:00 PM
Physical Sciences Building 401

This workshop will give participants hands-on experience with various software tools for working with large datasets in Laboratory Phonology. The day will start with mini-overviews from each tool developer, describing what each tool does and how it can be applied, and then the afternoon will consist of small tutorial sessions where participants can visit up to four stations to get hands-on experience working with the tools of their choice.

Schedule:

9:00 AM – 11:30 AM: Ten-minute overview talks by each tool developer
11:30 AM – 1:00 PM: Lunch (on your own)
1:00 PM – 4:00 PM: Rotating 45-minute tutorial sessions (see below for tools presented in each):

1:00 – 1:45: Session 1
1:45 – 2:30: Session 2
2:30 – 3:15: Session 3
3:15 – 4:00: Session 4

Tools to be presented (listed in order of presentation in the ten-minute overview session):

1. **Deep neural networks tools for automatic measurement of vowel duration, positive and negative voice onset time, and formant estimation and tracking** – Yossi Adi, Yehoshua Dissen, Joseph Keshet, Emily Cibelli & Matt Goldrick [Sessions 1 & 3]
2. **Prosodic Finder: A web application** – Shakuntala Mahanta, Debanjan Borthakur & Nilutpal Sundi [Sessions 2 & 3]
3. **Semi-automated pitch and formant analysis for mid-sized corpora** – Daniel R. McCloy & José Joaquín Atria [Sessions 1 & 4]
4. **Speech Corpus Tools: An application for easier analysis of large speech corpora** – Michael McAuliffe & Morgan Sonderegger [Sessions 2 & 4]
5. **FlowAnalyzer: Measuring behavioral motion from video** – Adriano Vilela Barbosa & Eric Vatikiotis-Bateson [Sessions 1 & 3]
6. **Speeding up automatic and semiautomatic phonetic annotation with PraatR** – Aaron Albin [Sessions 2 & 3]
7. **Utilizing the EMU-SDMS and BAS Web Services in big data analysis** – Raphael Winkelmann, Florian Schiel & Klaus Jänsch [Sessions 1 & 4]
8. **LaBB-Cat: Browser-based corpus annotation and analysis** – Robert Fromont [Sessions 2 & 4]
9. **Phon: A database system for transcript-based and acoustic data analysis** – Yvan Rose [Sessions 1 & 3]
10. **Phonological CorpusTools** – Scott Mackie & Kathleen Currie Hall [Sessions 2 & 3]
11. **LAPSyD: A phonological database and query tool** – Ian Maddieson [Sessions 1 & 4]

For details, see http://mlmlab.org/bigphon/. *No pre-registration necessary!*

Speech dynamics, social meaning, and phonological categories

Organisers: Jonathan Harrington (Ludwig-Maximilians-University of Munich, Germany),
Gerry Docherty (Griffith University, Queensland, Australia), Paul Foulkes (University York, UK),
Jane Stuart- Smith (Glasgow University, UK)

Wednesday, July 13th, 9:00 AM - 5:45 PM; Rockefeller 122

The overall concern of the workshop[1] is with speech signals that change in time and the relevance of such dynamic information for the knowledge that speakers have or acquire about social and phonological categories.

The workshop which includes 7 oral (Docherty et al; Gubian; Harrington & Schiel; Hughes & Foulkes; Plummer; Sóskuthy; Vietti) and 3 poster (Lawrence; Miller; Nguyen) presentations will address the relationship between dynamic speech signals and categories from various perspectives including:

- Forensics and the extent to which time-varying signals encode speaker-specific and regional information (Hughes & Foulkes).
- First language acquisition and the emergence of social and phonological knowledge as children learn to map between their own and adult vowel spaces (Plummer).
- Social-indexical information and how knowledge about gender, social class, and region are conveyed by dynamic signals (Docherty et al; Lawrence; Miller).
- Sound change and its emergence and/or propagation from dynamically changing speech signals (Harrington & Schiel; Lawrence; Sóskuthy).

As Sóskuthy notes, there is, in contrast to static approaches (in which e.g. sound change and dialect contact are explained from information based on a single spectral snapshot at the vowel target) little consensus about which techniques to use for quantifying speech dynamics within a sociophonetic framework. For this reason, another focus of the workshop is on such dynamic techniques, including:

- Functional Data Analysis and its application to fundamental frequency and formant data (Gubian) and to modelling tongue shapes from ultrasound data (Vietti).
- The decomposition of speech signals as a weighted sum of basis functions (e.g. discrete cosine transformation: Harrington & Schiel; polynomials: Hughes & Foulkes).
- Statistical techniques in which dynamic information is encoded in mixed models (Docherty et al) and generalised additive mixed models (Sóskuthy).

The data that are analysed in the workshop are predominantly acoustic/formant based but also make use of perceptual (Lawrence, Nguyen) and physiological (ultrasound) techniques (Miller, Vietti).

The workshop reports on some common findings and conclusions:

- Social meaning can become attached to dynamically changing signals: in click production and its relationship to following vowels (Miller); in how vowel dynamics communicate differences of social class (Lawrence), sex (Docherty et al), and neighbourhood/regional affiliation (Docherty et al; Hughes & Foulkes).
- Functional data analysis can provide an integrated representation of contour shape and segment duration (Gubian) and for finding groupings among dynamically changing tongue shapes (Vietti).
- A sound change in progress can affect how different groups of listeners interpret the social meaning in dynamic signals (Lawrence); it can magnify inherent coarticulatory biases as demonstrated by a computational model in which agents update their phonological categories based on memorising each other's dynamic signals (Harrington & Schiel).

[1] The workshop is jointly organized with the workshop on 'Dynamics and Representation of Turbulent Sounds' with which it shares the poster presentation and discussion sessions: See http://www.phonetik.uni-muenchen.de/labphon15-satellite-sociophonetic/program.html for details.

Dynamics and representation of turbulent sounds

Organizers: Marzena Żygis, Centre for General Linguistics (ZAS) & Humboldt University, Berlin; Germany
Mary E. Beckman, Ohio State University, Columbus, Ohio, USA

Wednesday, July 13th, 11:00 AM - 2:00 PM

Rockefeller 122

Theme: The acoustics of turbulent sounds are notoriously difficult to model because of nonlinearities in the aerodynamic interactions between source and filter. These difficulties are compounded by the inherently dynamic characteristics of plosives, and evidence is mounting that sibilant fricative turbulence is also inherently dynamic. This workshop addresses the challenges of representing and modeling the production and perception dynamics of turbulent sounds, focusing especially on sibilant fricatives.

Schedule: The workshop is on July 13th, and consists of two invited tutorial presentations, a dedicated poster session where audience members can interact in a more dynamic exchange with authors of submitted papers, and an extended discussion period. [1]

Tutorial 1: [11:00-11:30] Khalil Iskarous (University of Southern California, USA). Vortices and how they contribute to the sound of fricatives.

Tutorial 2: [11:30-12:00] Patrick Reidy (University of Wisconsin-Madison, USA). Methods for analyzing time-varying spectral change in sibilant fricatives.

Poster session: [12:00-13:30]. Eight papers have been accepted for presentation as posters:

- Melissa Baese-Berk. Perception and production of Basque sibilant fricatives by native and non- native fricatives.
- Matthew Faytak and Keith Johnson. Evaluating a new measure of fricative source intensity.
- Jeffrey J. Holliday and Patrick Reidy. Dynamic aspects of the production and perception of Korean sibilant fricatives.
- Hyunsoon Kim, Shinji Maeda, Kiyoshi Honda, and Lise Crevier-Bushman. The mechanism and representation of the two-way phonation contrast in Korean /s, s'/: ePGG, Pio, airflow and acoustic data.
- Bin Li, Jing Shao, and Si Chen. Acoustic analysis of L1 and L2 production of Mandarin coronal sibilants.
- Lyra Magloughlin and Eric Wilbanks. An apparent time study of turbulent sounds in Raleigh, NC English.
- Amanda L. Miller. Anterior release dynamics of Mangetti Dune !Xung coronal click consonants.
- Daniel Pape and Marzena Żygis. The puzzle of two major spectral peaks in Polish sibilants: Acoustic analysis and articulatory synthesis.

Discussion: [13:30-14:00] Interactive discussion among the tutorial presenters, the poster authors, and the audience, to be led by the workshop organizers.

[1] The workshop is jointly organized with the workshop on **Speech dynamics, social meaning, and phonological categories** with which it shares the poster and discussion sessions. See http://www.phonetik.uni- muenchen.de/labphon15-satellite-sociophonetic/program.html for the parts of the other workshop's schedule that precede and follow this workshop.

Reduction

Organizers: Benjamin V. Tucker (University of Alberta), Mirjam Ernestus (Radbound University & Max Planck Institute), Natasha Warner (University of Arizona)

Wednesday, July 13th, 1:00 PM - 5:00 PM

Rockefeller 115

In conversational speech words are often produced shortened and run together. Many of the resulting reduced variants do not obey the typical phonological and phonotactic constraints of the language. Moreover, these variants raise all kinds of questions about the structure of the mental lexicon and about the processes underlying speech production and speech comprehension. These different issues can only be well addressed if they are considered simultaneously. This workshop will bring together researchers studying different aspects of reduced pronunciation variants and will enhance our understanding of the phenomenon but also our general understanding of phonology in speech production and comprehension.

Schedule

13:00		Introduction	
13:10		Reduction of *can't* in American and Spanish English	Mirjam Ernestus, Huib Kouwenhoven, Margot van Mulken
13:30		Gemination and Degemination in English Affixation: a phonetic investigation of *dis-* and *–ly*	Sonia Ben Hedia
13:50		Obstruent lenition and voicing in a Yoloxóchitl Mixtec corpus	Christian DiCanio, Jonathan Amith, Rey Castillo García, Jason Lilley
14:10-14:30		**Break**	
14:30		Sources of variability in second mention reduction	Cynthia G. Clopper
14:50		Quantifying Kinematic Aspects of Reduction in a Contrasting Rate Production Task	Mark Tiede, Carol Espy-Wilson, Dolly Goldenberg, Vikramjit Mitra, Hosung Nam, Ganesh Sivaraman
15:10		The Acoustics of Conversational Fricatives in Mid-Western American English	Viktor Kharlamov, Daniel Brenner, Benjamin V. Tucker
15:30-16:00		**Break**	
16:00		Modeling spontaneous speech comprehension with naive discriminative learning	Denis Arnold, Fabian Tomaschek, Tino Sering, Florence Lopez, and R. Harald Baayen
16:20		Dutch learners can reconstruct reduced pronunciation variants in English running speech, while Spanish learners cannot	Annika Nijveld
16:40		Differential processing of acoustically reduced and full forms: Evidence from alpha and gamma band oscillations	Kimberley Mulder

HOLISTIC PHONOLOGICAL REPRESENTATIONS AND THEIR USES

Marilyn M. Vihman (*University of York*) & Melissa A. Redford (*University of Oregon*)

Sunday, July 17th, 9:00 AM - 12:00 PM

Baker 119

The purpose of this workshop is to reintroduce the idea of holistic or 'whole-word' representations to an audience of experimental phoneticians and phonologists in the context of (i) specific models of production, (ii) data on word learning, and (iii) cross-linguistic patterning in child and adult language. The argument is that, from a developmental perspective, holistic representations are more likely to have psychological reality than are representations composed of segments. The goal of the workshop is to elicit discussion about the merits and limitations of this argument, which is based largely on the functionalist assumption that both development and production are driven by the child's/speaker's desire to communicate. We also hope to elicit discussion as to why holistic representations never really competed with the structuralism of modern linguistics. Does this reflect the goals of the field? Perhaps it is time to consider an expansion of these goals.

The workshop will include four talks, two commentaries, and plenty of time for discussion. The first 2 talks and commentary will address the development and use of holistic representations. Melissa Redford (*University of Oregon*) will argue that, from a developmental perspective, holistic representations provide an opportunity to unify speech and language in a model of production that is grounded in the activity of speaking and structured during language acquisition. Sharon Inkelas (*University of California, Berkeley*) will argue for an expanded definition of templates on the basis of phonological patterns across languages, and suggest "a large-tent approach to templatic effects in adult phonology" in order to unify analyses of and better compare sound patterns in child and adult systems. Mary Beckman (*The Ohio State University*), whose interests range from phonological acquisition to intonation and prosody to sound change, will provide commentary. The second pair of talks and commentary will address how templates shape adult and child language. Ghada Khattab (*Newcastle University*) and Tamar Keren-Portnoy (*University of York*) will focus on emerging linguistic representations in Semitic languages, well-known for their non-concatenative morphology. They will present perception data from Hebrew-learning infants, which suggest early familiarity with whole-word vowel melodies, and production data from Hebrew- and Arabic-learning children, which suggest that this sensitivity is not carried through to production. Marilyn Vihman (*University of York*) will survey cross-linguistic data to sketch a typology of templates in child language. She will also address the relationship between children's forms and the adult grammar. Lise Menn (*University of Colorado*), whose expertise spans from child phonology to neurolinguistics, will provide commentary.

Higher-order structure in speech variability: phonetic/phonological covariation and talker adaptation

Meghan Clayards, McGill University Colin Wilson, Johns Hopkins University

Sunday, July 17th, 9:00 AM - 12:00 PM; Baker 135

A fundamental challenge for the theory of speech perception is to explain how listeners successfully map signals that vary extensively across talkers to a common set of sounds and words. Discovery of higher-order structure in phonetic and phonological variation — patterns of variation that transcend individual phonetic or phonological units, and that can be encoded by a relatively small number of talker-specific parameters — could provide the key for understanding the robustness of speech perception and patterns of generalization observed in talker adaptation. This workshop brings together empirical findings that bear on talker variability and adaptation as well as theoretical proposals about the underlying sources of variability and the cognitive representations and computations that support adaptation. We hope to identify *higher-order structure* within talker variability and discuss how knowledge of such structure could facilitate adaptation on the part of human listeners or automatic recognition systems.

Program:

9:00 ***Welcome***

9:10-9:35 **Bob McMurray & Allard Jongman**
Layers of variance in the speech onion: There's no need to cry over the problem of variability. Evidence from perceptually motivated analyses of fricatives.

9:35-10:00 **Nhung Nguyen, Jason A. Shaw, Catherine T. Best, & Michael D. Tyler**
How socio-indexical information modulates the relationship between formant variability and vowel categorization

10:00-10:25 **Jacob B. Phillips**
Phonological and prosodic conditioning of /s/-retraction in American English

10:25-11:10 ***Poster Session***

Ildiko Emese Szabo
Modeling lexical and stochastic exceptions in phonotactics: a categorizational problem

Rachel Miller Olsen
Glottalization as a Higher-Order Prosodic Cue

Chris Neufeld
Modeling categorical perception with Hilbert spaces

Dave F. Kleinschmidt, Kodi Weatherholz, & T. Florian Jaeger
How informative is dialect about vowel distributions?

Charlotte Vaughn & Tyler Kendal
Listeners use sociolinguistic production conditioning in speech perception

Doug H. Whalen, Mark K. Tiede, & Wei-Rong Chen
Prediction of articulator positions from subsets of natural variability

Kristine Yu
Temporal aspects of talker variability in lexical tones

Andrew R. Plummer
Higher-order structure for vowel variation is specific to the culture and individual listener

Jeff Mielke & Kuniko Nielson
Modeling Voice Onset Time in English: Factors and their cross-speaker variability

11:10-11:35 **Charlotte Vaughn, Melissa Baese-Berk, Kaori Idemaru, & Misaki Kato**
Dimensions of variability in non-native speech

11:35-12:00 **James Kirby**
Cross-linguistic variability in cue weighting of consonant voicing

Perspectives on Marginal Contrasts

Kathleen Currie Hall (University of British Columbia) & Peggy Renwick (University of Georgia)

Sunday, July 17th, 9:00 AM – 12:00 PM
Baker 219

Despite claims that the classical notion of a discrete distinction between *phoneme* and *allophone* isn't tenable, it still forms the backbone of much descriptive, theoretical, experimental, and clinical work in linguistics. At the same time, mounting evidence shows that "marginal contrasts" are cross-linguistically prevalent, that they affect perception and production, and that they have consequences for phonological representations and patterning, both synchronic and diachronic. As this previously understudied type of phenomenon is brought into the limelight, more researchers are grappling with it from diverse theoretical and empirical perspectives. However, we currently lack consensus on many aspects of marginal contrasts: how to identify them, whether all should be treated equally, what set of empirical and theoretical tools should be used to investigate them, or how phonological theory must shift to accommodate them. This workshop is an opportunity to bring together viewpoints on the notion of marginal contrast, to discuss the methodological state-of-the-art, and to establish directions for future research.

Session 1: Perception, Production, and Diachrony

9:00 – 9:25 "**Phonological emergence in Dutch: Relating perception and production in contact-induced change**"
Alexander Martin, Marieke van Heugten, René Kager, & Sharon Peperkamp

9:25 – 9:50 "**On the historical origin of marginal contrasts: Canadian raising in Illinois**"
José Hualde, Tatiana Luchkina, Christopher D. Eager, & Sarah Little

9:50 – 10:15 "**Fuzzy contrasts in sound change**"
Patrycja Strycharczuk & James M. Scobbie

10:15 – 10:35 Session 1 Discussion

10:35 – 10:50 COFFEE BREAK

Session 2: Granularity of Contrasts in Synchronic Phonology

10:50 – 11:15 "**Contrasts in intonation -- Probabilistic and continuous distributions**"
Timo B. Roettger & Martine Grice

11:15 – 11:40 "**Lexical Allophones**"
D. R. Ladd

11:40 – 12:00 Session 2 Discussion

No pre-registration necessary! *http://labphon.org/labphon15/event_contrast*

Personality in Speech Perception & Production

Organizers: Daniela Müller (*Institut für Phonetik und Sprachverarbeitung, Ludwig-Maximilians-Universität München*) and Keith Johnson (Department of Linguistics, University of California, Berkeley)

Sunday, July 17th, 9:00 AM – 5:00 PM

Morrill 106

The purpose of the workshop is to provide a platform for current investigations into the link between speech perception and production strategies and the personality profile of the individual speaker-listener. The goal is to close the gap in our understanding of the relation between change and variation in one individual and her abilities to pass that change on to her wider linguistic community or, conversely, to resist change when she is exposed to it.

The morning session will be devoted to the establishment and perception of a phonetic persona. Invited speaker **Kathryn Campbell-Kibler** will examine the relationship of metalinguistic assumptions about regional accent and the actual perception of accented speech within the listener. Four contributed talks will follow her presentation: The phonetic persona attributed to women and the actual acoustic signatures of Lesbian speech is the topic of **Auburn Barron-Lutzross**'s contribution. The second contributed talk of the morning session, by **Caitlin Gaffney**, moves into the field of second language acquisition: She asks in which way a language learner's personality factors and intelligence affects degree of fluency in an L2. Staying with second language acquisition, **Zakaria Touhami** examines how English native speakers perceive creaky voice in female French learners of American English and which phonetic persona they attribute to these learners. The last talk of the morning session focuses again on female speakers: **Meredith Tamminga** investigates whether /eɪ/-raising in Philadelphia is influenced by the personality of the speakers as reflected in their degree of empathy and self-monitoring.

The afternoon session is centered around personality factors influencing speech production and perception in social interaction. The topic of the second invited speaker will be announced on our website. Taking up the topic of self-monitoring from the end of the morning session, **Antje Schweitzer and colleagues** ask what exactly makes people converge and diverge in conversation. In the second afternoon contributed talk, **Reza Falahati and colleagues** then tackle the contribution of autistic traits to listeners' perception of consonant clusters and consonant cluster simplification in Persian. Autistic traits and their effects not on segment perception, but on perception of suprasegmentals at the prosody-syntax interface is the topic of **Jason Bishop and Grace Kuo**'s study. Finally, the perception of prosodic focus marking as modulated by the listener's inclination toward taking the perspective of the interlocutor is examined by **Tomas Lentz and Aoju Chen**.

Each session will conclude with a half-hour panel-style discussion designed to foster the exchange between the audience and the speakers and to allow for debate of the ideas and findings presented at the workshop.

Wednesday 7/13

Sunday 7/17

Posters

Restrooms

Elevators

Baker Labs

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Baker Atrium

Physical Sciences Building

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Rockefeller Hall

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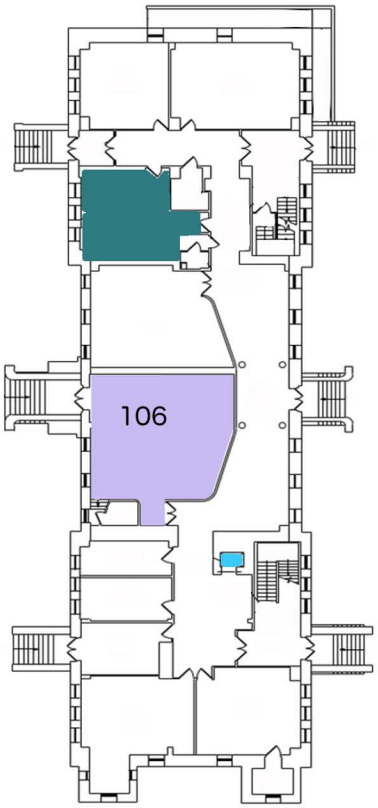
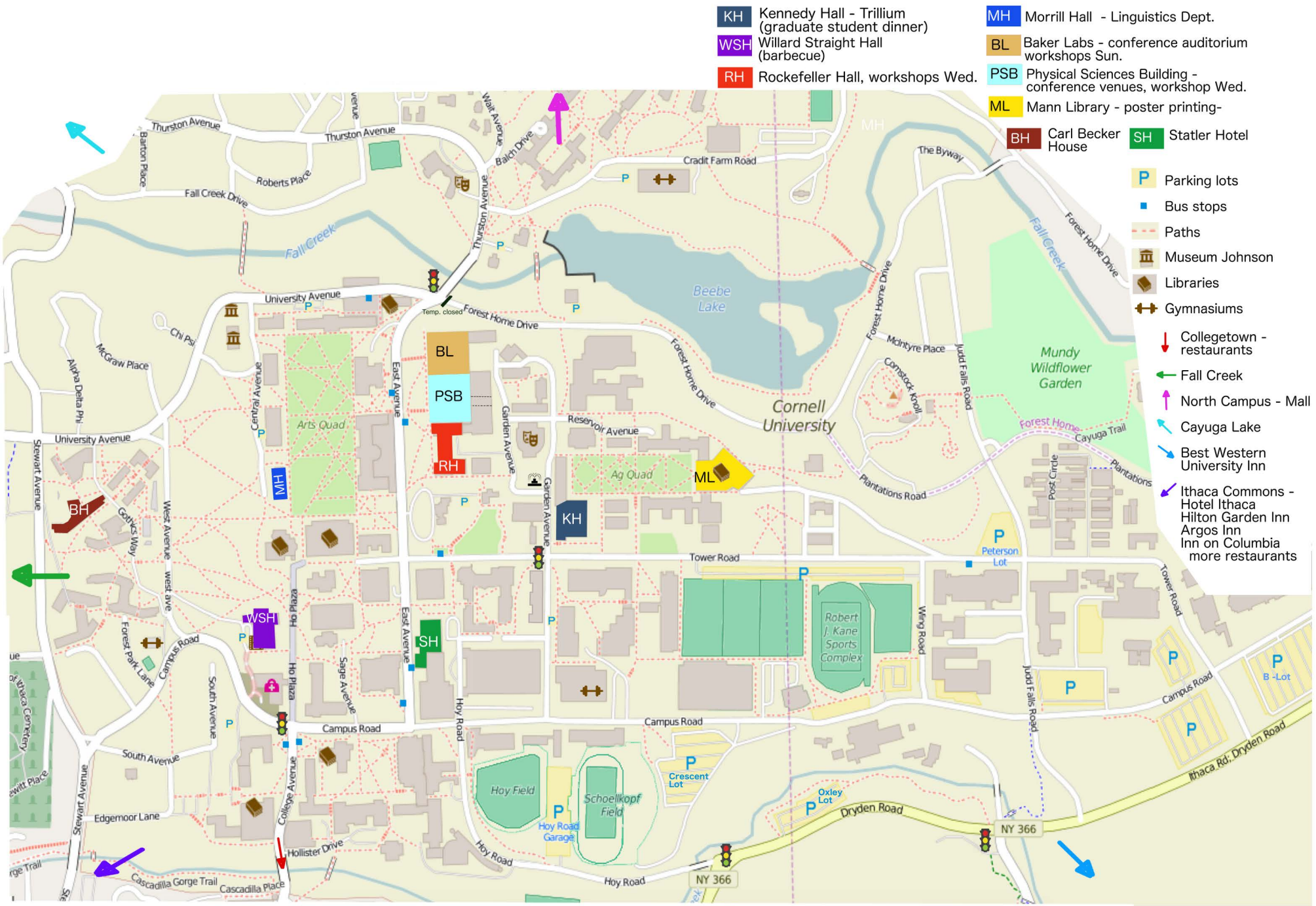
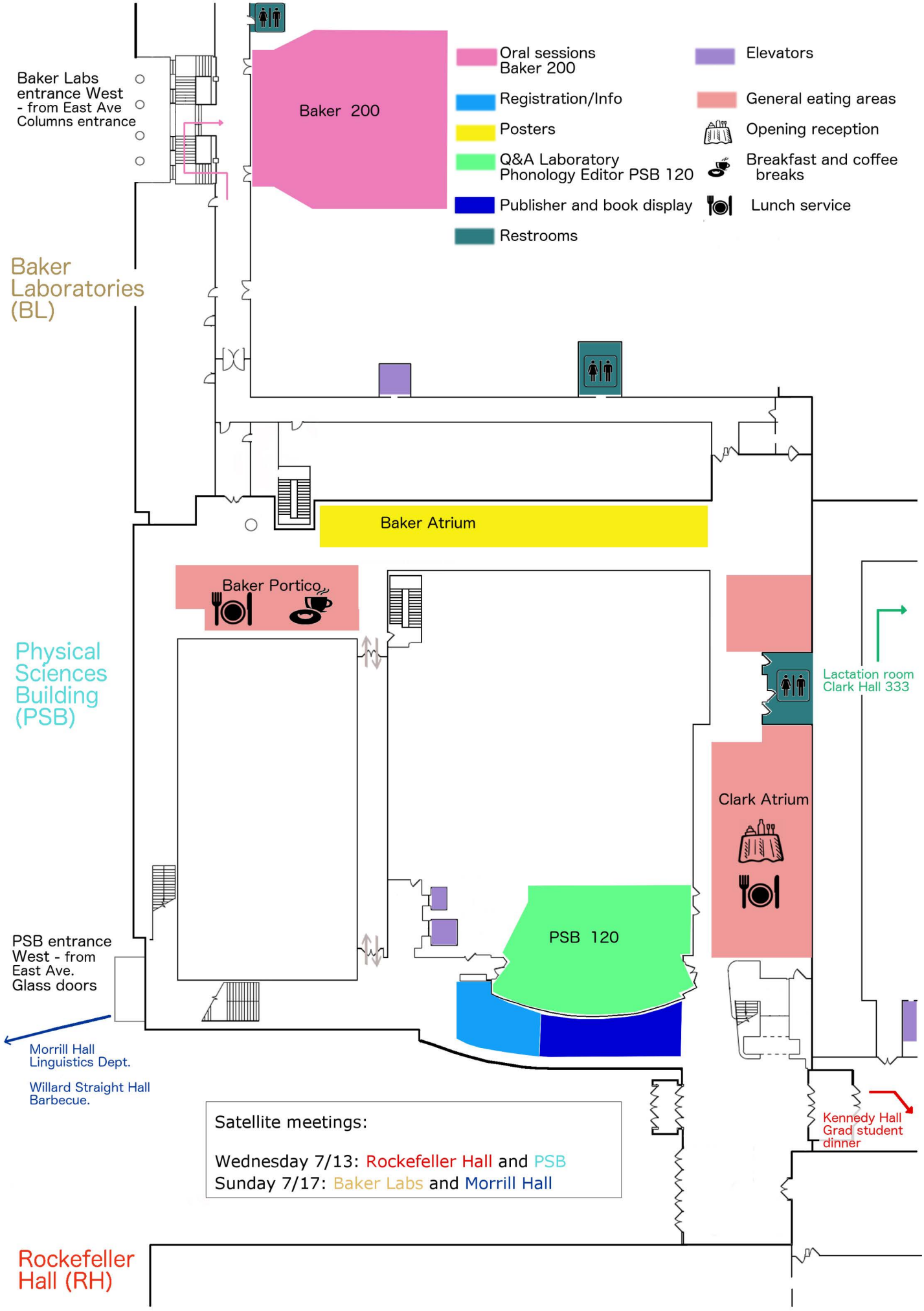
Morrill Hall




KH Kennedy Hall - Trillium (graduate student dinner)
WSH Willard Straight Hall (barbecue)
RH Rockefeller Hall, workshops Wed.
MH Morrill Hall - Linguistics Dept.
BL Baker Labs - conference auditorium workshops Sun.
PSB Physical Sciences Building - conference venues, workshop Wed.
ML Mann Library - poster printing-
BH Carl Becker House
SH Statler Hotel
P Parking lots
Bus stops
Paths
Museum Johnson
Libraries
Gymnasiums
Collegetown - restaurants
Fall Creek
North Campus - Mall
Cayuga Lake
Best Western University Inn
Ithaca Commons - Hotel Ithaca Hilton Garden Inn Argos Inn Inn on Columbia more restaurants
Thurston Avenue
Fall Creek Drive
Roberts Place
Barton Place
Fall Creek
Balch Drive
Cradit Farm Road
The Byway
Forest Home Drive
Beebe Lake
Mundy Wildflower Garden
Cornell University
University Avenue
Temp. closed
McGraw Place
Alpha Delta Phi
Chi Psi
Central Avenue
Arts Quad
East Avenue
Garden Avenue
Reservoir Avenue
Ag Quad
McIntyre Place
Comstock Knoll
Judd Falls Road
Forest Home
Cayuga Trail
Plantations
Plantations Road
Post Circle
Stewart Avenue
Gothics Way
West Avenue
west ave
Tower Road
Peterson Lot
Robert J. Kane Sports Complex
Wing Road
Ho Plaza
Forest Park Lane
Campus Road
South Avenue
Sage Avenue
Hoy Road
Hoy Field
Schoellkopf Field
Hoy Road Garage
Crescent Lot
Oxley Lot
Dryden Road
NY 366
Ithaca Rd; Dryden Road
B -Lot
Ithaca Cemetery
Edgemoor Lane
College Avenue
Hollister Drive
Cascadilla Gorge Trail
Cascadilla Place


Baker Labs entrance West - from East Ave Columns entrance
Baker 200
Oral sessions Baker 200
Registration/Info
Posters
Q&A Laboratory Phonology Editor PSB 120
Publisher and book display
Restrooms
Elevators
General eating areas
Opening reception
Breakfast and coffee breaks
Lunch service
Baker Laboratories (BL)
Baker Atrium
Baker Portico
Physical Sciences Building (PSB)
Lactation room Clark Hall 333
Clark Atrium
PSB 120
PSB entrance West - from East Ave. Glass doors
Morrill Hall Linguistics Dept.
Willard Straight Hall Barbecue.
Kennedy Hall Grad student dinner
Satellite meetings:
Wednesday 7/13: Rockefeller Hall and PSB
Sunday 7/17: Baker Labs and Morrill Hall
Rockefeller Hall (RH)