fosler@cse.ohio-state.edu
http://efosler.github.io

Dept. of Computer Science and Engineering The Ohio State University 2015 Neil Ave, 395 Dreese Labs Columbus, OH 43210 (614) 292-4890 College of Engineering The Ohio State University 2070 Neil Ave, 122 Hitchcock Hall Columbus, OH 43210

### Education

University of California, Berkeley
International Computer Science Institute
Ph.D., Computer Science 1999
University of Pennsylvania
B.A., Linguistics, summa cum laude with distinction in the major 1993
University of Pennsylvania
B.A.S., Computer and Cognitive Science, summa cum laude 1993

# **Employment History**

## The Ohio State University

John I. Makhoul Professor of Electrical and Computer Engineering,	
Department of Computer Science and Engineering	2022-2026
Assistant Dean for Faculty Lifecycle, College of Engineering	2025-present
Acting Chair, Department of Computer Science and Engineering	2025
Associate Chair for Academic Administration,	
Department of Computer Science and Engineering	2021-2024
Foundations of Data Science and AI Program co-Director, Translational Data Analytics Institute	2020-2023
Professor, Department of Computer and Science and Engineering	2016-present
Professor by Courtesy, Departments of Linguistics and Biomedical Informatics	2016-present
Associate Professor, Department of Computer and Science and Engineering	2010-2016
Associate Professor by Courtesy, Department of Linguistics	2010-2016
Visiting Researcher, Nisonger Center	2010-2011
Member, Center for Cognitive and Brain Sciences	2003-present
Assistant Professor, Department of Computer and Science and Engineering	2003-2010
Assistant Professor by Courtesy, Department of Linguistics	2004-2010
The University of Pennsylvania	
Visiting Professor, Department of Computer and Information Science	2019
Columbia University, Department of Electrical Engineering	
Visiting Researcher, Department of Electrical Engineering	2003

### **Bell Labs, Lucent Technologies**

Member of Technical Staff, Research	2000-2002

### **International Computer Science Institute**

Postdoctoral Researcher, Realization Group	1999-2000
Graduate Student Researcher, Realization Group	1994-1999

### University of California, Berkeley

Graduate Teaching Assistant, Department of Electrical Engineering and Computer Science GAANN Fellow, Department of Electrical Engineering and Computer Science

1995 1993-1994

# **Administrative Experience**

### Assistant Dean for Faculty Lifecycle, College of Engineering

2025-present

Responsible for managing college Promotion and Tenure meeting process and implementation of process changes due to changes in state law, including faculty annual review. Supported department chairs and school directors in implementation of faculty retention and promotion processes.

### Acting Department Chair, Dept. of Computer Science and Engineering

2025

Responsible for overall administration of CSE department, including managing \$21M budget, 62 professor-title faculty, 60 lecturers, and 9 staff. Developed contingency plans for changes in department and university finances during federal funding uncertainties. Developed new workload policy for department and led revision of promotion and tenure criteria for practice faculty.

Associate Chair for Academic Administration, Dept. of Computer Science and Engineering 2021-2024

Responsible for scheduling and staffing CSE department courses, coordinating programs for 3500+ undergraduate majors/pre-majors and 400+ graduate students. Directly managed four staff (Academic Services Assistant Director, Manager of Advising, Graduate Program Coordinators), and lecturing staff of roughly 70 lecturers. Coordinated department COVID response activities. Assisted chair with budgeting, policy, and strategic directions. Provided faculty promotion and tenure guidance to the department. Led revisions of promotion and governance documents. Coordinated cases of student complaints and student misconduct for the department.

### CS+X/AI+X Liaison, Department of Computer Science and Engineering

2020-202

Worked with Associate Chair for Growth to represent CSE in cross-departmental initiatives for new interdisciplinary programming with other units (Biomedical Informatics, Linguistics, Design, Astronomy). Developed graduate certificates in Artificial Intelligence and Digital Health.

## Promotion and Tenure Chair, Department of Computer Science and Engineering

2019-2021

Managed 20 appointment, promotion and tenure cases for the department. Led revisions of promotion criteria for faculty of practice and other significant changes to the appointments, promotion, and tenure departmental rules. Held first information sessions for assistant professors to help them understand the promotion and tenure process.

#### Chair, Speech and Language Technical Committee, IEEE Signal Processing Society

2019-2020

Elected by committee of 53 members to run administrative functions of committee. Reorganized subcommittee structure to improve efficiency of information flow and committee function. Coordinated committee responses to Society-level requests, served as representative to Society. Provided oversight for SLTC workshop reorganization in response to COVID-19 (SLT 2020). Managed ICASSP conference review process for speech and language area, most recently allocating 980 papers to roughly 1000 reviewers at three levels (area chair, technical committee, associate reviewer). Served as Vice Chair in 2018, Past Chair in 2021.

### **Academic Committees**

### *Ohio State University*

Computational Visual Design Faculty Search Committee, Department of Design, 2024-2025.

Presidential Fellowship Committee, The Graduate School, 2020-2023.

Batelle Endowment for Technology in the Humanities and Arts Committee, Office of Research, 2020-2022.

Computational Linguistics Faculty Search Committee, Department of Linguistics, 2011-2012.

Center for Cognitive and Brain Sciences Executive Committee, 2011-2018.

Buckeye Language Network Steering Committee, 2008-2010.

### College of Engineering

Clinical, Professional, and Teaching Faculty Working Group, 2023-2024.

Faculty Professional Leave Committee, The Ohio State University, 2011-2013.

### Department of Computer Science and Engineering

Undergraduate Studies Committee, 2004–2006, 2010–2016, 2019–2020, 2021-2024 ex officio.

Graduate Studies Committee, 2021-2024 ex officio.

Curriculum Committee, 2003–2005, 2007-2009, 2017–2018, 2021-2024 ex officio.

Promotion and Tenure Committee Chair, 2019-2020.

Diversity and Inclusion Committee, 2019–2020.

Faculty Search Committee, 2012–2018.

Advisory Committee, 2005–2010, 2013–2015.

Semester Transition Committee, 2009-2010.

Graduate Admissions Committee, 2006–2007.

Faculty meeting secretary, 2003–2004.

#### Honors

Lumley Interdisciplinary Research Award, College of Engineering, 2022.

Fellow, IEEE, 2022.

Fellow, International Speech Communication Association, 2021.

Growing Research Opportunities (GRO) Academy Fellow, The Ohio State University, 2021.

International Medical Informatics Association (IMIA) Yearbook Best Paper Award, Natural Language Processing Section, 2017.

International Medical Informatics Association (IMIA) Yearbook Best Paper Award, Natural Language Processing Section, 2015.

IBM Watson Faculty Award, 2014.

Computer Science & Engineering Faculty Teaching Award, The Ohio State University, 2011.

Lumley Research Award, College of Engineering, 2010.

IEEE Signal Processing Society Best Paper Award, 2010.

NSF Early Faculty CAREER Award, 2006.

Senior Member, IEEE, 2005.

European Language Resources Association Prize for Best Student Paper of the 6th European Conference on Speech Communication and Technology, 1999.

### **Teaching Experience**

### The Ohio State University, Department of Computer Science and Engineering

Lecture courses: Introduction to Artificial Intelligence (Undergraduate), Introduction to Artificial Intelligence (Graduate), Foundations of Speech and Language Processing, Neural Networks

Capstone course: Knowledge-Based Systems Capstone.

Seminars: Foundations of Spoken Language Processing, Statistical Sequence Recognition, Machine Learning for Language Processing, Advanced Topics in Speech Recognition and Keyword Spotting, Deep Learning: Applications, Neural Methods in Speech Processing

#### **Bell Labs, Lucent Technologies**

Project advisor or co-advisor for 2 undergraduate and 4 graduate student interns. Student Michel Galley won best student researcher prize at the 2001 DARPA Communicator PI meeting.

#### **Professional Activities**

Organizational committees and offices, current roles in bold

ISCA Fellows Evaluation Committee, 2024-2027.

IEEE Technical Field Awards Council, 2025-2026.

IEEE James L. Flanagan Speech and Audio Processing Award Committee, 2021-2026.

Chair, 2024-2025; Past Chair, 2026.

International Speech Communication Association Advisory Council, 2021-2028.

IEEE Signal Processing Society Speech and Language Technical Committee

Chair, 2019-2020 (Vice Chair, 2018; Past Chair 2021).

Member, 2006-2008, 2011-2013, 2017-2021.

Advisory Member, 2022-2023, 2025-2026.

EDICS Subcommittee 2006-2008.

ICASSP Area Chair (handling decisions on 100+ papers), 2012-2014, 2017-2021.

Workshops Subcommittee 2017-2018.

IEEE Signal Processing Society Awards Board, 2021-2023.

IEEE Signal Processing Society Technical Directions Board, 2019-2020.

General co-chair, IEEE Automatic Speech Recognition and Understanding Workshop (ASRU), Singapore, 2019.

IEEE Journal of Biomedical Health Informatics Steering Committee (SPS Liaison), 2016-2017.

Tutorials chair, Interspeech 2016.

Organizing committee, Workshop on Speech Production in Automatic Speech Recognition (SPASR), Lyon, France, 2013.

Program co-chair, North American Association for Computational Linguistics - Human Language Technologies Conference, 2012.

Finance chair, IEEE Automatic Speech Recognition and Understanding Workshop, 2011.

Publications chair, Empirical Methods in Natural Language Processing Conference, 2010.

Panels co-chair, IEEE Spoken Language Technology Workshop, Berkeley, CA, 2010

Local arrangements committee, ACL annual meeting, Columbus, OH, 2008.

Publicity co-chair, IEEE Workshop on Automatic Speech Recognition and Understanding, St. Thomas, U.S. Virgin Islands, 2003; IEEE/ACL Workshop on Spoken Language Technology, Aruba, 2006; ACL annual meeting, Columbus, OH, 2008.

Archivist, Association for Computational Linguistics (ACL), 2006-2010.

Executive committee, ACL Special Interest Group in Computational Morphology and Phonology (SIGMOR-PHON), 2006-2007.

Faculty Advisor, HLT/NAACL 2004 Student Research Workshop, Boston, MA, May 2004.

General co-chair, International Speech Communication Association (ISCA) Tutorial and Research Workshop on Pronunciation Modeling and Lexicon Adaptation for Spoken Language Technology, Estes Park, Colorado, September 2002.

### Editorial and reviewing work

Senior Area Editor, IEEE/ACM Transactions on Audio, Speech, and Language Processing, 2023-2024.

Associate Editor, IEEE/ACM Transactions on Audio, Speech, and Language Processing, 2017-2021.

Action Editor, Transactions of the Association for Computational linguistics, 2012-2020.

Associate Editor, ACM Transactions on Speech and Language Processing, 2011-2013.

Best Paper Award Committee

ICASSP 2021.

NAACL-HLT Conference, 2013.

Guest Editor, Speech Communication Special Issue on Pronunciation Modeling and Lexicon Adaptation, 2003–2004.

#### Senior Area Chair

Association for Computational Linguistics annual meeting, 2020.

North American Association for Computional Linguistics - Human Language Technologies meeting, 2021.

#### Area Chair

IEEE Workshop on Automatic Speech Recognition and Understanding, 2005.

North American Association for Computational Linguistics annual meeting, 2009, 2010, 2016, 2018. Empirical Methods in Natural Language Processing Conference, Singapore, 2009.

Referee for the journals Speech Communication, Computer, Speech, and Language, Journal of the Acoustical Society of America, Computational Linguistics, IEEE Transactions on Speech and Audio Processing, IEEE Signal Processing Letters, IEEE Systems, Man & Cybernetics, Machine Learning Journal, and EURASIP Journal on Audio, Speech and Music Processing.

Proposal referee for the National Science Foundation, Netherlands Council of the Humanities, and Engineering and Physical Sciences Research Council, United Kingdom.

Regular reviewer/scientific committee for the following conferences: International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Interspeech, Annual Meeting of the Association for Computational Linguistics (ACL), North American Association for Computational Linguistics - Human Language Technologies Conference (NAACL), European Association for Computational Linguistics (EACL), IEEE Automatic Speech Recognition and Understanding Workshop, IEEE Speech and Language Technology Workshop. Also reviewer/scientific committee for Joint Meeting of the Conference on Empirical Methods in Natural Language Processing and the Conference on Computational Natural Language Learning (2007), Neural Information Processing Systems Conference (2004, 2005), HLT-NAACL-2006 Workshop on Computationally Hard Problems and Joint Inference in Speech and Language Processing, Midwest Computational Linguistics Colloquium, American Association for Artificial Intelligence (AAAI) Meeting, Student Workshop at Association for Computational Linguistics.

### **Selected Grants**

- "AI and Society," AI in Arts & Humanities & Engineering Program, Ohio State, M. Liu, Z. Atiq, H. Bench, M. Elsner, N. Ettinger, E. Fosler-Lussier, 2023, \$16,975.
- "Towards More Natural Conversational Interaction with a COSI Language Pod Guide" (second installment), M. White, J. Patterson, E. Fosler-Lussier, L. Wagner, 2023, \$31,975.
- "Towards More Natural Conversational Interaction with a COSI Language Pod Guide," AI in Arts & Humanities & Engineering Program, Ohio State, M. White (PI), J. Patterson (Co-PI), V. Berezina-Blackburn (Co-PI), M. Palazzi (Co-PI), E. Fosler-Lussier (Co-PI), 2022, \$25,000.
- "AI Institute for Intelligent CyberInfrastructure with Computational Learning in the Environment (ICICLE)," National Science Foundation, DK Panda (PI), V. Chaudhary (Co-PI), R. Machiraju (Co-PI), B. Plale (Co-PI), E. Fosler-Lussier (Co-PI), 2021-2026, \$19,999,999.
- "CyberTraining: Pilot: An Artificial Intelligence Bootcamp for Cyberinfrastructure Professionals," National Science Foundation, K. Tomko (PI), DK Panda (Co-PI), R. Machiraju (Co-PI), E. Fosler-Lussier (Co-PI), K. Cahill (Co-PI) 2021-2023, \$299,858.
- "Analyzing call center voice communications for business insights," Safe Auto Group Agency, Inc, R. Ramnath (PI), E. Fosler-Lussier (co-PI), 2021, \$79,715.
- "RI: Small: Early Elementary Reading Verification in Challenging Acoustic Environments," National Science Foundation, E. Fosler-Lussier (PI), R. Ramnath (co-PI), L. Wagner (co-PI), 2020-2023, \$450,000.
- "Improving patient safety using virtual reality (VR) to train and assess emergency personnel responding to a mass casualty incident (MCI)," Agency for Healthcare Reseach & Quality, Danforth (PI), Fosler-Lussier (co-PI), Kman(co-PI), McGrath (co-PI), Oliszewski (co-PI), Panchal (co-PI), Price (co-PI), Schuler (co-PI), Swearingen (co-PI), White (co-PI), 2018-2019, \$1,843,749.
- "Compact Browser-based Reading Verification for Early Childhood Reading Fluency," Battelle Engineering, Technology and Human Affairs (BETHA) Endowment Award, E.Fosler-Lussier (PI), G. Cartledge, R. Ramnath, 2018-2020, \$55,682.

- "RI: Small: Using Automatically Generated Paraphrases and Discriminative ASR Training to Author Robust Question-Answering Dialogue Systems," National Science Foundation, M. White (PI), E. Fosler-Lussier (co-PI), 2016-2021, \$450,000.
- "RI: Medium: Deep Neural Networks for Robust Speech Recognition through Integrated Acoustic Modeling and Separation," National Science Foundation, E. Fosler-Lussier (PI), M. Mandel (co-PI), D. Wang (co-PI), 2014-2019, \$798,082.
- "CI-ADDO-NEW:Collaborative research:The speech recognition virtual kitchen," National Science Foundation, F. Metze (PI, Carnegie Mellon U., Lead institution), E. Fosler-Lussier (PI, Ohio State), Rebecca Bates (PI, Minnesota State University), 2013-2017, \$1,069,817 (OSU portion: \$382,082).
- "SWORDFISH: Spoken word search with rapid development and frugal invariant subword hierarchies,", E. Fosler-Lussier (PI), subcontract from International Computer Science Institute, IARPA Babel program, N. Morgan (Lead PI), 2012-2013, OSU portion \$818,503.
- "An information fusion approach to longitudinal health records," A. Lai (PI), P. Embi (co-PI), E. Fosler-Lussier (co-PI), National Library of Medicine, 2012-2016, \$954,463.
- "Virtual patients simulations to assess data-gathering and clinical reasoning," National Board of Medical Examiners, D. Danforth (PI), E. Fosler-Lussier (co-PI), C. Ledford (co-PI), B. Liston (co-PI), D. Post (co-PI), M. White (co-PI), 2012-2013 \$74.068.
- "Reducing special education/reading risk through an oral reading fluency intervention for urban learners," Institute of Education Sciences, Department of Education, G. Cartledge (PI), R. Ramnath (co-PI), E. Fosler-Lussier (co-PI), K. Xie (co-PI), R. Gardner (co-PI), 2012-2015, \$1,394,851.
- "CI-P:Collaborative research:The speech recognition virtual kitchen," National Science Foundation, F. Metze (PI, Carnegie Mellon U., Lead institution), E. Fosler-Lussier (PI, Ohio State), 2012-2013, \$98,154 (OSU portion: \$48,509).
- "Contextual resolution of locational references in human-computer dialogue," Honda Research Institute USA, E. Fosler-Lussier, 2011-2013, \$59,329.
- "Customization / Individualization of Reading Material for an Individual," Xerox Corporation, E. Fosler-Lussier (PI), 2010-2012, \$98,468.
- "(ARRA) RI:Medium:Collaborative Research: Explicit Articulatory Models of Spoken Language, with Application to Automatic Speech Recognition," NSF Robust Intelligence Program, K. Livescu (PI, Toyota Institute of Technology, Lead Institution), E. Fosler-Lussier (PI, Ohio State), J. Bilmes (PI, U. Washington), 2009-2012, \$1.107m (OSU portion: \$334,469).
- "DHB/Collaborative Research: Using machine learning to model the interplay of production dynamics and perception dynamics in phonological acquisition," NSF Human and Social Dynamics Program, M. Beckman (PI, Ohio State, Lead Institution), E. Fosler-Lussier (Co-PI), J. Edwards (Co-PI, Wisconsin Lead), B. Munson (Co-PI, Minnesota Lead), 2008-2010, \$700,000 (OSU portion: \$273,284).
- "NSF: HRI: Establishing and breaking conceptual pacts with dialog partners." Subaward from Northeastern University, D. Byron (PI), 2008-2009, \$85,638. This subaward is to maintain research infrastructure at Ohio State for the related NSF project; my role is mostly managerial and advisorial.
- "Building Expressive Synthetic Voices for Conversational Systems," Arts and Humanities Grants for Innovation, The Ohio State University, M. White (PI), C. Brew and E. Fosler-Lussier, 2007-2009, \$40k.
- "CAREER: Breaking the phonetic code: novel acoustic-lexical modeling techniques for robust automatic speech recognition," National Science Foundation, E. Fosler-Lussier (PI), 2006-2011, \$502,952.
- "Lexicon Building for Multi-Language Speech Recognition," AFRL/DAGSI Ohio Student-Faculty Fellowship Program, E. Fosler-Lussier (PI), J. Morris (student), 2006-2008, \$126,323.
- "ITR-(NHS+ASE)-(int+dmc+sim) Automatic Speech Attribute Transcription (ASAT): A Collaborative Speech Research Paradigm and Cyberinfrastructure with Applications to Automatic Speech Recognition," National Science Foundation, 2004-2008. C.-H. Lee (PI, Georgia Tech, Lead institution), E. Fosler-Lussier (PI, Ohio State Lead), L. Rabiner (PI, Rutgers U. Lead), M. Clements (Georgia Tech), K. Johnson (U.C. Berkeley), \$1,738,900 (OSU portion: \$416,000).
- "Recognizing phonological variants of spoken words," National Institute for Deafness and Other Communication Disorders, National Institutes of Health, 2004-2007. M. Pitt (PI, OSU Psychology), K. Johnson (co-PI, OSU Linguistics), E. Fosler-Lussier (co-PI, OSU Computer Science), \$768,771.

### **Invited Technical Presentations**

- Keynote, "Borderlands: When Speech Meets Text," Midwest Speech and Language Days, April 2024.
- Invited talk, "Low resourced and long tailed conversational AI systems," Symposium on NLP and Simulation, Miami University, 2022.
- Invited talk, "Fake it 'til ya make it: How imitative learning can improve robustness in spoken language systems," Meta (Facebook) Speech and Audio Summit, 2021.
- Invited talk, "Understanding how to understand teammates," Midwest Computational Computational Pathology Workshop, 2021.
- Keynote speech, "Low resourced but long tailed spoken dialogue system building," Singapore Symposium on Natural Language Processing, December 2020.
- Invited presentation, "The Imitation Game," National University of Singapore, Singapore, 2019.
- Invited presentation, "Towards a segmental framework for noise-robust speech recognition," Northwestern Polytechnical University, Xi'an, China, 2015.
- Invited presentation, "Exploring richer sequence models in speech and language processing," Microsoft Research, 2012.
- Invited presentation, "Integrating speech science and technology: New models for speech and audio processing," presented at U. Pennsylvania Natural Language Processing Seminar, 2011; Carnegie Mellon University Language Technology Institute Seminar, 2011; U. Southern California Signal Analysis and Interpretation Laboratory Seminar, 2011; Oregon Health & Science University Center for Speech and Language Understanding Seminar, 2011.
- Invited presentation, "Integrating evidence over time: a look at conditional models for speech and audio processing," Center for Language and Speech Processing Seminar, The Johns Hopkins University, 2009. Also presented at IBM Research Seminar, 2009.
- Invited presentation, "Statistical learning for integrating linguistic insights in automatic and human speech recognition models," Department of Statistics Seminar, The Ohio State University, 2009.
- Invited presentation, "Handling uncertainty and ambiguity in spoken language technology," Industrial, Systems, and Welding Engineering Department Seminar, 2007.
- Keynote speech, "Underspecified feature models for pronunciation variation in ASR," ITRW Workshop on Speech Recognition and Intrinsic Variation, Toulouse, France, 2006.
- Invited presentation, "Pronunciation variation as a problem for lexical representation," with K. Johnson, Linguistic Society of America Symposium on Phonetic Variation: What Does It Mean to Speakers and Listeners, Albuquerque, 2006.
- Invited presentation, "What speech technology can bring to information theory and phonology," Linguistic Society of America Symposium on Information Theory and Phonology, Albuquerque, 2006.
- Invited lecturer, Johns Hopkins University Summer School on Human Language Technology (supported by NSF and NAACL), Baltimore, MD, 2004, 2006, 2008.
- Invited presentation, "Speech Knowledge Integration," NSF Symposium on Next Generation ASR, Atlanta, GA, 2003.
- Invited lecturer, Eighth European Language and Speech Network (ELSNET) Summer School on Language and Speech Communication, Chios Island, Greece, 2000.
- Invited Papers, International Congress of Phonetic Sciences (ICPhS 1999), International Conference on Spoken Language Processing (ICSLP 1996).

## **Patents**

- S. Thomas, V. Sunder, H.-K. Kuo, J. Ganhotra, B. Kingsbury, E. Fosler-Lussier, "End-to-end integration of dialog history for spoken language understanding," US Patent 12,119,008 B2, October 2024.
- M. Das, R. Ramnath, J. E. Fosler-Lussier, "Concept discovery from text via knowledge transfer," US Patent 11,803,583 B2f, October 2023.

### **Publications**

### **Book Chapters / Dissertation**

- Y. Ma and E. Fosler-Lussier, "Detecting 'Request Alternatives' User Dialog Acts from Dialog Context," in *Situated Dialog in Speech-Based Human Computer Interaction*, 97-102, Springer, 2016.
- E. Fosler-Lussier. "Linguistic Categories for Speech Recognition," (revised chapter) in N. Morgan, B. Gold, and D. Ellis, *Speech and Audio Signal Processing: Processing and Perception of Speech and Music*, 2nd edition, John Wiley and Sons, Inc., 2011, Chapter 23.
- E. Fosler-Lussier. "A Tutorial on Pronunciation Modeling for Large Vocabulary Speech Recognition," *Text and Speech Triggered Information Access*, Springer Verlag, 2003.
- E. Fosler-Lussier. "Linguistic Categories for Speech Recognition," in N. Morgan and B. Gold, *Speech and Audio Signal Processing: Processing and Perception of Speech and Music*, John Wiley and Sons, Inc., 1999, Chapter 23.
- J. E. Fosler-Lussier. "Dynamic Pronunciation Models for Automatic Speech Recognition," Ph.D. thesis, University of California, Berkeley, 1999. Reprinted as International Computer Science Institute technical report TR-99-015.

#### **Collections**

- X. Zhang, L. Xie, E. Fosler-Lussier, E. Vincent, eds. *Neural Networks* Special issue on advances in deep learning based speech processing, 158, 2023.
- K. Livescu, F. Rudzicz, E. Fosler-Lussier, M. Hasegawa-Johnson, and J. Bilmes, eds. *Computer Speech and Language* Special Issue on Speech Production in Speech Technologies, 36, March 2016.
- E. Fosler-Lussier, E. Riloff, and S. Bangalore, eds. *Proceedings of the North American Association for Computational Linguistics Annual Meeting: Human Language Technologies Conference*, Montreal, Canada, 2012.
- E. Fosler-Lussier, W. Byrne, and D. Jurafsky, eds. *Speech Communication* Special Issue on Pronunciation Modeling and Lexicon Adaptation, 46:2, June 2005.
- W. Byrne, E. Fosler-Lussier, and D. Jurafsky, eds. *Proceedings of the ISCA Tutorial and Research Workshop on Pronunciation Modeling and Lexicon Adaptation in Spoken Language Technology*, Estes Park, Colorado, 2002.

#### **Refereed Journal Articles**

- L. Wagner, S. Alghowinhem, A. Alwan, K. Bowdrie, C. Breazeal, C. G. Clopper, E. Fosler-Lussier, I. A. Jamsek, D. Lander, R. Ramnath, and others, "The Ohio Child Speech Corpus," Speech Communication, North-Holland, 170, 103206, 2025.
- D. K. Panda, V. Chaudhary, E. Fosler-Lussier, R. Machiraju, A. Majumdar, B. Plale, R. Ramnath, P. Sadayappan, N. Savardekar, K. Tomko, "Creating intelligent cyberinfrastructure for democratizing AI," AI Magazine, 45:1, 22-28, 2024.
- A. Stiff, M. White, E. Fosler-Lussier, L. Jin, E. Jaffe, D. Danforth, "A randomized prospective study of a hybrid rule-and data-driven virtual patient," *Natural Language Engineering*, 2022.
- K. Maicher, A. Stiff, M. Scholl, M. White, E. Fosler-Lussier, W. Schuler, P. Serai, V. Sunder, H, Forrestal, L. Mendella, M. Adib, C. Bratton, K. Lee, D. Danforth, "Artificial intelligence in virtual standardized patients: Combining natural language understanding and rule based dialogue management to improve conversational fidelity," *Medical Teacher*, 2022.
- P. Serai, V. Sunder, and E. Fosler-Lussier, "Hallucination of speech recognition errors with sequence to sequence learning," IEEE Transactions on Audio, Speech, and Language Processing, 2022.
- D. Newman-Griffis, and E. Fosler-Lussier, "Automated Coding of Under-Studied Medical Concept Domains: Linking Physical Activity Reports to the International Classification of Functioning, Disability, and Health," *Frontiers in Digital Health*, 2021.
- D. Newman-Griffis, G. Divita, B. Desmet, A. Zirikly, C. Rosé, and E. Fosler-Lussier, "Ambiguity in medical concept normalization: an analysis of types and coverage in electronic health record datasets," Journal of the American Medical Informatics Association, 2021.
- K. Maicher, L. Zimmerman, B. Wilcox, B. Liston, H. Cronau, A. Macerollo, L. Jin, E. Jaffe, M. White, E. Fosler-Lussier, W. Schuler, D. Way, D. Danforth, "Using virtual standardized patients to accurately assess information gathering skills in medical students," *Medical Teacher*, 41:9, 1-7, 2019.

- Y. He, P. Baumann, H. Fang, B. Hutchinson, A. Jaech, M. Ostendorf, E. Fosler-Lussier, and J. Pierrehumbert, "Morphology-based Subword Modeling for Handling OOV Words in Keyword Search," *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, 24:1, 79-92, 2016.
- K. Livescu, P. Jyothi, and E. Fosler-Lussier. "Articulatory feature-based pronunciation modeling," *Computer Speech and Language*, 36:212-232, 2016.
- K. Livescu, F. Rudzicz, E. Fosler-Lussier, M. Hasegawa-Johnson, and J. Bilmes, "Speech Production in Speech Technologies: Introduction to the CSL Special Issue," *Computer Speech and Language*, 36:165–172, March 2016
- C. Shivade, C. Hebert, M. Lopetegui, M-C. de Marneffe, E. Fosler-Lussier, and A.Lai, "Textual inference for eligibility criteria resolution in clinical trials," *Journal of Biomedical Informatics*, 58 Suppl:S211-218, Dec 2015
- C. Shivade, P. Malewadkar, E. Fosler-Lussier, and A. Lai., "Comparison of UMLS Terminologies to Identify Risk of Heart Disease in Clinical Notes," *Journal of Biomedical Informatics* 58 Suppl:S103-10, 2015.
- C. Shivade, P. Raghavan, E. Fosler-Lussier, P. Embi, N. Elhadad, S. Johnson, and A. Lai. "A review of approaches to identifying patient phenotype cohorts using electronic health records," *Journal of American Medical Informatics Association*, 21:221-230, 2014.
- W. Hartmann, A. Narayanan, E. Fosler-Lussier, and D. Wang, "A Direct Masking Approach to Robust ASR," *IEEE Transactions on Acoustics, Speech, and Language Processing*, 21:10, pp 1993-2005, Oct 2013.
- E. Fosler-Lussier, Y. He, P. Jyothi, and R. Prabhavalkar, "Conditional Random Fields in Speech, Audio and Language Processing," invited paper, *Proceedings of the IEEE*, 101:5, pp 1054-1075, 2013.
- K. Livescu, E. Fosler-Lussier, and F. Metze, "Sub-word Modeling for Automatic Speech Recognition," *Signal Processing Magazine*, 29:6, pp 44-57, Nov. 2012.
- M.J.F. Gales, S. Watanabe, and E. Fosler-Lussier, "Structured Discriminative Models for Speech Recognition," *Signal Processing Magazine*, 29:6, pp 70-81, Nov. 2012.
- C. A. Rytting, C. Brew, and E. Fosler-Lussier, "Segmenting words from natural speech: subsegmental variation in segmental cues" *Journal of Child Language*, 37:3, pp 513-543, 2010.
- I. Heintz, E. Fosler-Lussier, and C. Brew. "Discriminative Input Stream Combination for Conditional Random Field Phone Recognition," *IEEE Transactions on Speech and Language Processing*, 17:8, pp 1533-1546, 2009
- J. Morris and E. Fosler-Lussier, "Conditional Random Fields for Phonetic Recognition," *IEEE Transactions on Speech and Language Processing*, 16:3, pp 617-628, March 2008. **IEEE Signal Processing Society Best Paper Award.**
- E. Ammicht, E. Fosler-Lussier, and A. Potamianos. "Information Seeking Spoken Dialogue Systems Part I: Semantics and Pragmatics," *IEEE Transactions on Multimedia*, 9:3, pp. 532–549, April 2007.
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#### **Refereed Conferences and Workshops**

- V. Sunder, B. Kingsbury, G. Saon, S. Thomas, S. Shechtman, H. Aronowitz, E. Fosler-Lussier, and L. Lastras, "A Non-autoregressive Model for Joint STT and TTS," In International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2025.
- V. Sunder and E. Fosler-Lussier, "Improving Transducer-Based Spoken Language Understanding With Self-Conditioned CTC and Knowledge Transfer," In IEEE Spoken Language Technology Workshop (SLT), 1123-1130, 2024.
- J. Jones, L. Mo, E. Fosler-Lussier, H. Sun, "A Multi-Aspect Framework for Counter Narrative Evaluation using Large Language Models," NAACL 2024.
- D. Palzer, M. Maciejewski, E. Fosler-Lussier, "Improving Neural Diarization through Speaker Attribute Attractors and Local Dependency Modeling," ICASSP 2024.
- V. Sunder, B. Karrolla, E. Fosler-Lussier, "End-To-End Real Time Tracking of Children's Reading with Pointer Network," ICASSP 2024.
- S. Chang and E. Fosler-Lussier, "Selective Demonstrations for Cross-domain Text-to-SQL," Findings of the Association for Computational Linguistics: EMNLP 2023.
- S. Chang and E. Fosler-Lussier, "How to Prompt LLMs for Text-to-SQL: A Study in Zero-shot, Single-domain, and Cross-domain Settings," Table Representation Learning Workshop @ NeurIPS, 2023.
- V. Sunder, E. Fosler-Lussier, S. Thomas, H.-K. J. Kuo, B. Kingsbury, "ConvKT: Conversation-Level Knowledge Transfer for Context Aware End-to-End Spoken Language Understanding," Interspeech 2023.
- P. Arya, M. Bloomquist, S. Chakraborty, A. Perrault, W. Schuler, E. Fosler-Lussier and M. White, "Bootstrapping a Conversational Guide for Colonoscopy Prep," SIGDIAL 2023.
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- V. Sunder, S. Thomas, H.K. J. Kuo, B. Kingsbury, E. Fosler-Lussier, "Fine-grained Textual Knowledge Transfer to Improve RNN Transducers for Speech Recognition and Understanding," International Conference on Acoustics, Speech, and Signal Processing, 2023.
- S. Chang, D. Palzer, J. Li, E. Fosler-Lussier, N. Xiao. "MapQA: A Dataset for Question Answering on Choropleth Maps," NeurIPS First Table Representation Workshop, 2022.
- V. Sunder, S. Thomas, H.K.J. Kuo, J. Ganhotra, B. Kingsbury, E. Fosler-Lussier, "Towards End-to-End Integration of Dialog History for Improved Spoken Language Understanding," International Conference on Acoustics, Speech, and Signal Processing, 2022.
- V. Sunder, E. Fosler-Lussier, S. Thomas, H.K.J. Kuo, B. Kingsbury, "Tokenwise Contrastive Pretraining for Finer Speech-to-BERT Alignment in End-to-End Speech-to-Intent Systems," In Interspeech 2022.
- C. Kulkarni, J. Chan, E. Fosler-Lussier, and R. Machiraju, "Learning Latent Structures for Cross Action Phrase Relations in Wet Lab Protocols," In ACL-IJCNLP, 2021.
- V. Sunder, and E. Fosler-Lussier, "Handling Class Imbalance in Low-Resource Dialogue Systems by Combining Few-Shot Classification and Interpolation," In International Conference on Acoustics, Speech, and Signal Processing, 2021.
- A. Aljanaideh, E.Fosler-Lussier, and M. de Marneffe, "Contextualized Embeddings for Enriching Linguistic Analyses on Politeness," In International Conference on Computational Linguistics, 2020.
- A. Stiff, Q. Song, E. Fosler-Lussier. "How Self-Attention Improves Rare Class Performance in a Question-Answering Dialogue Agent," The 21st SIGDIAL Meeting on Discourse and Dialogue, 2020.
- M. Das, J. Li, E. Fosler-Lussier, S. Lin, S. Rust, Y. Huang, R. Ramnath, "Sequence-to-Set Semantic Tagging for Complex Query Reformulation and Automated Text Categorization in Biomedical IR using Self-Attention," BioNLP 2020.
- D. R. Danforth, A. Stiff, K. R. Maicher, M. Scholl, M. White, E. Fosler-Lussier and W. Schuler. Artificial Intelligence in Virtual Standardized Patients: Combining Natural Language Understanding and Rule Based Dialogue Management to Improve Conversational Fidelity. In Proc. of the 20th International Meeting on Simulation in Healthcare, 2020.
- P. Plantinga, D. Bagchi, E. Fosler-Lussier. "Phonetic Feedback For Speech Enhancement With and Without Parallel Speech Data," Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020.

- P. Serai, A. Stiff, E. Fosler-Lussier. "End-to-end Speech Recognition Error Prediction with Sequence to Sequence Modeling," Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020
- P. Plantinga, E. Fosler-Lussier. "Towards Real-Time Mispronunciation Detection in Kids' Speech," Proceedings of the IEEE Automatic Speech Recognition and Understanding Workshop, 2019.
- G. Moon, D. Newman-Griffis, J. Kim, A. Sukumaran-Rajam, E. Fosler-Lussier, P. Sadayappan, "Parallel Data-Local Training for Optimizing Word2Vec Embeddings for Word and Graph Embeddings," 5th Workshop on Machine Learning in HPC Environments, 2019.
- D. Newman-Griffis, E. Fosler-Lussier "HARE: a Flexible Highlighting Annotator for Ranking and Exploration," Empirical Methods in Natural Language Processing Conference, Demo Session, 2019.
- P. Serai, P. Wang, E. Fosler-Lussier. "Improving speech recognition error prediction for modern and off-the-shelf speech recognizers," Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019.
- A. Stiff, P. Serai, E. Fosler-Lussier. "Improving human-computer interaction in low-resource settings with text-to-phonetic data augmentation," Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019.
- S. Xu, E. Fosler-Lussier. "Spatial and Channel Attention Based Convolutional Neural Networks for Modeling Noisy Speech," Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019
- B. Whitaker, D. Newman-Griffis, A. Haldar, H. Ferhatosmanoglu, E. Fosler-Lussier. "Characterizing the impact of geometric properties of word embeddings on task performance," 4th Workshop on Representation Learning for NLP, 2019.
- P. Plantinga, D. Bagchi, E. Fosler-Lussier. "An exploration of Mimic architectures for Residual Network Based Spectral Mapping," Proceedings of the IEEE Workshop on Spoken Language Technology (SLT), 2018.
- M. Das, E. Fosler-Lussier, S. Lin, S. Moosavinasab, D. Chen, S. Rust, Y. Huang, R. Ramnath, "Phrase2VecGLM: Neural generalized language model–based semantic tagging for complex query reformulation in medical IR," Proceedings of BioNLP, 2018.
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- S. Xu, E. Fosler-Lussier, "Application of Progressive Neural Networks for Multi-Stream WFST Combination in One-Pass Decoding," Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2018.
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- S. Xu, E. Fosler-Lussier, "A WFST Framework for Single-Pass Multi-Stream Decoding". Interspeech, 2016.
- R. Bates, E. Fosler-Lussier, F. Metze, M.A. Larson, G.A. Levow, E.M. Provost, "Experiences with shared resources for research and education in speech and language processing". Interspeech, 2016.
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- C. Shivade, C. Hebert, K. Regan, E. Fosler-Lussier, A.M. Lai, "Automatic data source identification for clinical trial eligibility criteria resolution". AMIA Annual Symposium Proceedings, 2016.

- D. Bagchi, M.I. Mandel, Z. Wang, Y. He, A. Plummer, E. Fosler-Lussier. "Combining spectral feature mapping and multi-channel model-based source separation for noise-robust automatic speech recognition," *IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU)*, 2015.
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- K. Han, Y. He, D. Bagchi, E. Fosler-Lussier, and D. Wang. "Deep Neural Network Based Spectral Feature Mapping for Deep Neural Network Based Spectral Feature Mapping for Robust Speech Recognition," Interspeech 2015, Dresden, Germany, 2015.
- F. Metze, E. Riebling, E. Fosler-Lussier, A. Plummer, and R. Bates. "The Speech Recognition Virtual Kitchen Turns One," Proceedings of Interspeech Show and Tell Session, 2015.
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- B. Dorr, L. Galescu, I. Perera, K. Hollingshead-Seitz, D. Atkinson, M. Clark, W. Clancey, Y. Wilks, and E. Fosler-Lussier. "Speech Adaptation in Extended Ambient Intelligence Environments," Proc. of the Annual Conference of the Association for the Advancement of Artificial Intelligence (AAAI), Austin, TX, 2015.
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- C. Shivade, C. Hebert, M. Lopetegui, M.C. de Marneffe, E. Fosler-Lussier, A. Lai, "Towards Textual Inference for Eligibility Criteria Resolution in Clinical Trials," Seventh i2b2 Shared Task and Workshop: Challenges in Natural Language Processing for Clinical Data (Oral Presentation), Washington DC, 2014.
- Y. Ma and E. Fosler-Lussier. "A Discriminative Sequence Model for Dialog State Tracking using User Goal Change Detection," IEEE Spoken Language Technology Workshop (SLT 2014), South Lake Tahoe, NV, 2014.
- H. Su, J. Hieronymus, Y. He, E. Fosler-Lussier, and S. Wegmann, "Syllable Based Keyword Search: Transducing Syllable Lattices to Word Lattices," IEEE Spoken Language Technology Workshop (SLT 2014), South Lake Tahoe, NV, 2014.
- A. Plummer, E. Riebling, A. Kumar, F. Metze, E. Fosler-Lussier, and R. Bates, "Speech Recognition Virtual Kitchen: Launch Party," Proceedings of Interspeech Show and Tell Session, 2014.
- P. Raghavan, E. Fosler-Lussier, N. Elhadad, and A. Lai, "Cross-narrative Temporal Ordering of Medical Events," Association for Computational Linguistics Annual Meeting, 2014. **Best NLP Paper, IMIA Yearbook 2015.**
- Y. He, B. Hutchinson, P. Baumann, M. Ostendorf, E. Fosler-Lussier, and J. Pierrehumbert, "Subword-based modeling for handling OOV words in keyword spotting," ICASSP, 2014.
- P. Raghavan, J. Chen, E. Fosler-Lussier, and A. Lai, "How essential are unstructured clinical narratives and information fusion to clinical trial recruitment?" AMIA Joint Summits on Translational Science, 2014. **Nominee for student best paper award.**
- Y. Ma and E. Fosler-Lussier, "Detecting 'Request Alternatives' User Dialog Acts from Dialog Context," International Workshop on Spoken Dialog Systems, Napa, CA, 2014.

- R. Prabhavalkar, K. Livescu, E. Fosler-Lussier, J. Keshet, "Discriminative Articulatory Models for Spoken Term Detection in Low-Resource Conversational Settings," ICASSP, 2013.
- E. Fosler-Lussier, P. Jyothi, J. Keshet, K. Livescu, R. Prabhavalkar, and H. Tang, "Discriminative learning with latent articulatory variables," Workshop on Speech Production in Automatic Speech Recognition, Lyon, France, 2013. (2pp abstract)
- P. Jyothi, E. Fosler-Lussier, and K. Livescu, "Discriminative Training of WFST Factors with Application to Pronunciation Modeling," Proceedings of Interspeech, 2013.
- F. Metze, E. Fosler-Lussier, and R. Bates, "The Speech Recognition Virtual Kitchen," Show and Tell Session, Interspeech 2013.
- W. Chen, E. Fosler-Lussier, N. Xiao, S. Raje, R. Ramnath, and D. Sui, "A Synergistic Framework for Geographic Question Answering," Seventh IEEE International Conference on Semantic Computing (ICSC 2013), Irvine, CA, 2013.
- P. Raghavan, E. Fosler-Lussier, and A. Lai, "Inter-Annotator Reliability of Medical Events, Coreferences and Temporal Relations in Clinical Narratives by Annotators with Varying Levels of Clinical Expertise," AMIA Annual Symposium, 2012.
- P. Raghavan, E. Fosler-Lussier, and A. Lai, "Temporal Reasoning and Information Fusion in Longitudinal Clinical Narratives," AMIA Pre-Symposium NLP Working Group, 2012. **First Place Doctoral Consortium presentation.**
- P. Raghavan, E. Fosler-Lussier, and A. Lai, "Temporal Classification of Medical Events," BioNLP 2012.
- P. Raghavan, E. Fosler-Lussier, and A. Lai, "Learning to Temporally Order Medical Events in Clinical Text," (Short Paper) Association for Computational Linguistics Annual Meeting (ACL 2012), 2012.
- P. Raghavan, E. Fosler-Lussier, and A. Lai, "Exploring Semi-Supervised Coreference Resolution of Medical Concepts using Semantic and Temporal Features," North American Association for Computational Linguistics Annual Meeting Human Language Technologies Conference (NAACL HLT 2012), 2012.
- P. Raghavan, E. Fosler-Lussier, C. Brew, and A. Lai, "Medical Event Coreference Resolution using the UMLS Metathesaurus and Temporal Reasoning," ACM SIGHIT International Health Informatics Symposium, 2012.
- Y. Ma, R. Singh, E. Fosler-Lussier, and R. Lofthus, "Comparing human versus automatic feature extraction for fine-grained elementary readability assessment," NAACL HLT Workshop on Predicting and Improving Text Readability for Target Reader Populations, 2012.
- Y. Ma, E. Fosler-Lussier, and R. Lofthus, "Ranking-based readability assessment for early primary children's literature," North American Association for Computational Linguistics Annual Meeting Human Language Technologies Conference (NAACL HLT 2012), Short Paper Track, 2012.
- R. Prabhavalkar, J. Keshet, K. Livescu, and E. Fosler-Lussier, "Discriminative Spoken Term Detection with Limited Data," Symposium on Machine Learning in Speech and Language Processing (MLSLP), 2012.
- F. Metze and E. Fosler-Lussier, "The Speech Recognition Virtual Kitchen: An Initial Prototype," Demo Session, Interspeech 2012.
- W. Hartmann and E. Fosler-Lussier, "Improved Model Selection for the ASR-Driven Binary Mask," Interspeech 2012.
- Y. He and E. Fosler-Lussier, "Efficient Segmental Conditional Random Fields for One-Pass Phone Recognition," Interspeech 2012.
- P. Jyothi, E. Fosler-Lussier, and K. Livescu, "Discriminatively learning factorized finite state pronunciation models from dynamic Bayesian networks," Interspeech 2012. **Best Student Paper Award**
- E. Iosif, M. Giannoudaki, E. Fosler-Lussier and A. Potamianos. "Associative and Semantic Features Extracted From Web-Harvested Corpora," Proceedings of the Eighth International Conference on Language Resources and Evaluation (LREC 2012), Istanbul, Turkey, 2012.
- W. Hartmann and E. Fosler-Lussier, "ASR-Driven Top-Down Binary Mask Estimation Using Spectral Priors," Proc. ICASSP, 2012.
- R. Prabhavalkar, E. Fosler-Lussier, and K. Livescu, "A Factored Conditional Random Field Model for Articulatory Feature Forced Transcription," IEEE Automatic Speech Recognition and Understanding Workshop (ASRU), 2011. **Selected as Top-3 Spotlight Paper within its session.**

- A. Narayanan, X. Zhao, D. Wang, and E. Fosler-Lussier, "Robust Speech Recognition using Multiple Prior Models for Speech Reconstruction," Proc. ICASSP, 2011.
- P. Jyothi, K. Livescu, and E. Fosler-Lussier, "Lexical Access Experiments with Context-Dependent Articulatory Feature-Based Models," Proc. ICASSP, 2011.
- W. Hartmann and E. Fosler-Lussier, "Investigations into the Incorporation of the Ideal Binary Mask in ASR," Proc. ICASSP, 2011.
- R. Prabhavalkar, P. Jyothi, W. Hartmann, J. Morris and E. Fosler-Lussier, "Investigations into the Crandem Approach to Word Recognition," Proc. NAACL-HLT 2010.
- P. Jyothi and E. Fosler-Lussier, "Discriminative Language Modeling Using Simulated ASR Errors," Proc. Interspeech, 2010.
- D. Espinosa, M. White, E. Fosler-Lussier, and C. Brew, "Machine Learning for Text Selection with Expressive Unit-Selection Voices," Proc. Interspeech, 2010.
- J. Woodruff, R. Prabhavalkar, E. Fosler-Lussier, and D. Wang, "Combining Monaural and Binaural Evidence for Reverberant Speech Segregation," Proc. Interspeech, 2010.
- A. Plummer, M. Beckman, M. Belkin, E. Fosler-Lussier, and B. Munson, "Learning speaker normalization using semisupervised manifold alignment," Proc. Interspeech, 2010.
- T. Weale, C. Brew and E. Fosler-Lussier, "Using the Wiktionary Graph Structure for Synonym Detection," ACL-IJCNLP 2009 Workshop on Collaboratively Constructed Semantic Resources (short paper), Singapore, 2009.
- R. Prabhavalkar and E. Fosler-Lussier, "Backpropagation Training for Multilayer Conditional Random Field Based Phone Recognition," Proceedings of ICASSP, Dallas, TX, 2009.
- I. Heintz, M. Beckman, E. Fosler-Lussier, L. Ménard, "Evaluating parameters for mapping adult vowels to imitative babbling," Proceedings of Interspeech, Brighton, UK, 2009.
- W. Hartmann and E. Fosler-Lussier, "Investigating phonetic information reduction and lexical confusability," Proceedings of Interspeech, Brighton, UK, 2009.
- R. Prabhavalkar, Z. Jin, and E. Fosler-Lussier, "Monaural Segregation of Voiced Speech using Discriminative Random Fields," Proceedings of Interspeech, Brighton, UK, 2009.
- P. Jyothi and E. Fosler-Lussier, "A Comparison of Audio-free Speech Recognition Error Prediction Methods," Proceedings of Interspeech, Brighton, UK, 2009.
- J. Morris and E. Fosler-Lussier, "CRANDEM: Conditional Random Fields for Word Recognition," Proceedings of Interspeech, Brighton, UK, 2009.
- S. Dimopoulos, A. Potamianos, E. Fosler-Lussier, and C.-H. Lee, "Multiple time resolution analysis of speech signal using MCE training with application to speech recognition" International Conference on Acoustics, Speech and Signal Processing, Taipei, 2009.
- P. Mohapatra and E. Fosler-Lussier, "Investigations into phonological attribute classifier representations for CRF phone recognition," Proc. Interspeech, Brisbane, Australia, 2008.
- P. Mohapatra and E. Fosler-Lussier, "Incorporating Suprasegmental Knowledge for Phone Recognition with Conditional Random Fields," ISCA Tutorial and Research Workshop on Speech Analysis and Processing for Knowledge Discovery, Aalborg, Denmark, 2008.
- E. Fosler-Lussier and J. Morris, "CRANDEM systems: Conditional Random Field Acoustic Models for Hidden Markov Models," International Conference on Acoustics, Speech and Signal Processing (ICASSP 2008), Las Vegas, Nevada, 2008.
- I. Heintz, E. Fosler-Lussier, and C. Brew, "Latent Phonetic Analysis: Use of Singular Value Decomposition to Determine Features for CRF Phone Recognition," International Conference on Acoustics, Speech and Signal Processing (ICASSP 2008), Las Vegas, Nevada, 2008.
- L. Stoia, D. Shockley, D. Byron, and E. Fosler-Lussier, "SCARE: A Situated Corpus with Annotated Referring Expressions," 6th Language Resources and Evaluation Conference (LREC), Marrakech, Morocco, 2008.
- E. Fosler-Lussier, "Strategies for teaching 'mixed' computational linguistics classes," The Third Workshop on Issues in Teaching Computational Linguistics (TeachCL-08), Columbus, OH, 2008.
- E. Fosler-Lussier, L. Dilley, N. Tyson, and M. Pitt, "The Buckeye Corpus of Speech: Updates and Enhancements," Proc. Interspeech, Antwerp, Belgium, August 2007.

- C.-H. Lee, M. A. Clements, S. Dusan, E. Fosler-Lussier, K. Johnson, B.-H. Juang, L. R. Rabiner, "An Overview on Automatic Speech Attribute Transcription (ASAT)," Proc. Interspeech, Antwerp, Belgium, August 2007.
- I. Bromberg, J. Morris, and E. Fosler-Lussier, "Joint versus independent phonological feature models within CRF phone recognition," NAACL-HLT (short paper session), Rochester, NY, 2007.
- J. Morris and E. Fosler-Lussier, "Further Experiments with Detector-based Conditional Random Fields in Phonetic Recognition," International Conference on Acoustics Speech and Signal Processing (ICASSP 2007), Honolulu, Hawaii, 2007.
- J. Morris and E. Fosler-Lussier, "Combining phonetic attributes using conditional random fields," Proc. Interspeech, pp 597-600, Pittsburgh, 2006.
- Y. Wang and E. Fosler-Lussier, "Integrating phonetic boundary discrimination explicitly into HMM systems," Proc. Interspeech, pp 1567-1570, Pittsburgh, 2006.
- E. Fosler-Lussier. "Underspecified Feature Models for Pronunciation Variation in ASR," **Keynote paper**, ISCA Tutorial and Research Workshop on Speech Recognition and Intrinsic Variation, pp. 1-6, Toulouse, France, 2006.
- L. Stoia, D. Byron, D. Shockley, and E. Fosler-Lussier. "Noun Phrase Generation for Situated Dialogs," International Natural Language Generation Conference, Sydney, Australia, 2006.
- L. Stoia, D. Byron, D. Shockley, and E. Fosler-Lussier. "Sentence Planning for Realtime Navigational Instruction," Human Language Technology conference North American chapter of the Association for Computational Linguistics annual meeting (HLT-NAACL), Short paper session, New York, 2006.
- E. Iosif, A. Tegos, A. Pangos, E. Fosler-Lussier, and A. Potamianos, "Unsupervised Combination of Metrics for Semantic Class Induction," IEEE/ACL 2006 Workshop on Spoken Language Technology (SLT 2006), pp 86-89, Palm Beach, Aruba, 2006.
- D. Byron and E. Fosler-Lussier, "The OSU Quake 2004 corpus of two-party situated problem-solving dialogs," Fifth international conference on Language Resources and Evaluation (LREC), Genoa, Italy, 2006.
- J. Li, C. Brew, and E. Fosler-Lussier, "Robust Extraction of Subcategorization Data from Spoken Language," International Workshop on Parsing Technologies, short paper, Vancouver, WA 2005.
- A. Pangos, E. Iosif, A. Potamianos, E. Fosler-Lussier, "Combining statistical similarity measures for automatic induction of semantic classes," IEEE Workshop on Automatic Speech Recognition and Understanding, San Juan, Puerto Rico, 2005.
- L. Stoia, T. Xu, D. Byron, and E. Fosler-Lussier. "Populating Semantic Classes Using Large-scale Corpora" MEANING-2005 Workshop, Trento, Italy, 2005.
- E. Fosler-Lussier and C. A. Rytting. "A Cost-Benefit Analysis of Hybrid Phone-Manner Representations for ASR," Joint Conference on Human Language Technologies and Empirical Methods for Natural Language Processing, Vancouver, B.C., Canada, 2005.
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- E. Fosler-Lussier. "Contextual word and syllable pronunciation models," 1999 International Workshop on Automatic Speech Recognition and Understanding (ASRU '99), Keystone, Colorado, 1999.
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- E. Fosler-Lussier, S. Greenberg, and N. Morgan. "Incorporating Contextual Phonetics into Automatic Speech Recognition," Invited paper for the symposium "The Phonetics of Spontaneous Speech," International Congress of Phonetic Sciences (ICPhS '99), San Francisco, California, 1999.
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### **Databases**

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### **Technical Reports, Preprints, and Presentations**

K. Cahill, K. Tomko, J. Chan, E. Fosler-Lussier, A. Jain, R. Machiraju, S. Oottikkal, D. K. Panda, R. Ramnath, A. Shafi, H. Subramoni, "An Artificial Intelligence Bootcamp for Cyberinfrastructure Professionals," Lightning Talk, Edu-HPC Workshop, 2022.

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- N. Mirghafori, E. Fosler, and N. Morgan. "Making Automatic Speech Recognition More Robust to Fast Speech," International Computer Science Institute Technical Report TR-95-067, Berkeley, California, 1995.

#### Outreach

Pros and Cons of AI tools in Med-Ed at OSU, panelist. School of Medicine 2024 Annual Education Symposium.

AI and the Classroom: A discussion about the shifting landscape. College of Engineering Coffee Chat, March 2024.

Panelist, Human Centered Computing Workshop, OSU, March 2024.

What is Artificial Intelligence? Columbus Bar Association Continuing Legal Education Program, November 2023.

Science fair mentor for Upper Arlington High School student (speech recognition project), 2013-2014. This young woman won an honorable mention at the district science fair and presented in the state science fair.

Invited presentation, "Bits 'o CAREER Wisdom," UT Arlington NSF Career Workshop, May 2013.

Invited presentation, "Research and assistive technologies," Ohio Autism Society, 2011.

Invited presentation, "Integrating statistics and linguistics to improve models of human and computer speech recognition," Ohio State representative to Coalition for National Science Funding Capitol Hill Exhibition, Washington DC, 2008.

### **Advisees**

### Ph.D.

C. Anton Rytting, 2006, Ph.D. Linguistics (co-advised with C. Brew), currently Associate Research Scientist at U. Maryland.

Jeremy Morris, 2010, Ph.D. Computer Science and Engineering, currently Assistant Professor of Practice at Ohio State.

Ilana Heintz, 2010, Ph.D. Linguistics (co-advised with C. Brew), currently Strategist at Synoptic Engineering.

Tim Weale, 2010, Ph.D. Computer Science and Engineering (co-advised with C. Brew), currently at US Dept. of Defense.

William Hartmann, 2012, Ph.D. Computer Science and Engineering, currently Senior Scientist at Raytheon Technologies.

Rohit Prabhavalkar, 2013, Ph.D. Computer Science and Engineering, currently Research Scientist at Google.

Preethi Jyothi, 2013, Ph.D. Computer Science and Engineering, currently Associate Professor at IIT Bombay.

Preethi Raghavan, 2014, Ph.D. Computer Science and Engineering (co-advised with A. Lai), currently VP Data Science Lead at Fidelity.

Yanzhang (Ryan) He, 2015, Ph.D. Computer Science and Engineering, currently Senior Software Engineer at Google.

Chaitanya Shivade, 2016, Ph.D. Computer Science and Engineering (co-advised with A. Lai), currently Senior Applied Scientist at Amazon.

Yi Ma, 2016, Ph.D. Computer Science and Engineering, currently Software Engineer at Apple.

Joo-Kyung Kim, 2017, Ph.D. Computer Science and Engineering, currently Senior Applied Scientist at Amaxon Alexa.

Sirui Xu, 2018, Ph.D. Computer Science and Engineering, currently Senior Research Scientist at ObEN, Inc.

Deblin Bagchi, 2019, Ph.D. Computer Science and Engineering, currently Speech Scientist at 3M.

Manirupa Das, 2019, Ph.D. Computer Science and Engineering (coadvised with Rajiv Ramnath), currently at Applied Scientist at Amazon Search.

Denis Newman-Griffis, 2020, Ph.D. Computer Science and Engineering, currently Postdoc at University of Pittsburgh Biomedical Informatics, currently Lecturer (Assistant Professor) at U. Sheffield.

Adam Stiff, 2020, Ph.D. Computer Science and Engineering, currently at Infoscitex Corporation.

Peter Plantinga, 2021, Ph.D. Computer Science and Engineering, currently at J. P. Morgan Chase.

Prashant Serai, 2021, Ph.D. Computer Science and Engineering, currently at Meta.

Chaitanya Kulkarni, 2021, Ph.D. Computer Science and Engineering (coadvisied with Raghu Machiraju).

Ahmed Aljanaideh, 2021, Ph.D. Computer Science and Engineering (coadvised with Marie de Marneffe), currently Assistant Professor, Bentley University.

Shuaichen Chang, 2023, Ph.D. Computer Science and Engineering, currently at Amazon.

Vishal Sunder, 2025, Ph.D. Computer Science and Engineering, currently at IBM.

David Palzer, 2025, Ph.D. Computer Science and Engineering.

### MS / BS Honors

Monica Rajamanohar, 2005, MS Electrical and Computer Engineering

Annatala Wolf, 2006, BS Honors, Computer and Information Science

Yu Wang, 2007, MS Computer Science and Engineering

Adriane Boyd, 2008, MS Computer Science and Engineering

Prateeti Mohapatra, 2009, MS Computer Science and Engineering

Darla Shockley, 2010, MS Computer Science and Engineering

Jacob Mainzer, 2011, MS Computer Science and Engineering

Ritu Singh, 2012, MS Computer Science and Engineering

Akshay Deshpande, 2013, MS Computer Science and Engineering

Yuanlong (Louis) Shao, 2014, MS Computer Science and Engineering

Smrite Dua, 2015, MS Computer Science and Engineering

Meghan Day, 2017, MS Computer Science and Engineering

Qi Song, 2020, MS Computer Science and Engineering

Bharat Suri, 2021, MS Computer Science and Engineering

Jialin Li, 2021, MS Computer Science and Engineering

Lavanya Venkatasubramaniam, 2022, MS Computer Science and Engineering

Tony Ramirez, 2024, MS Computer Science and Engineering

Beulah Karrolla, 2024, MS Computer Science and Engineering