Theodora Chaspari

CONTACT INFORMATION

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https://scholar.google.com/citations?user=po1Qa-MAAAAJ&hl=en

RESEARCH INTERESTS

- Machine learning, artificial intelligence
- Affective computing, behavioral signal processing
- Data science, health informatics
- Human-computer/human-AI interaction
- Signal processing, speech processing

EDUCATION

- Ph.D., Electrical Engineering, University of Southern California, 2017
    Ph.D. Advisor: Prof. Shrikanth Narayanan
    Ph.D. Thesis: "Knowledge-Driven Representations of Physiological Signals: Developing Measurable Indices of Non-Observable Behavior"
- M.S., Electrical Engineering, University of Southern California, 2012
- B.S., Electr. & Computer Engr., National Technical University of Athens, 2010
    Advisor: Prof. Petros Maragos
    B.S. Thesis: "Automatic Emotion Recognition from Speech"

PROFESSIONAL EXPERIENCE

- Associate Professor, Computer Science & Institute of Cognitive Science, University of Colorado Boulder (2023-)
- Assistant Professor, Computer Science & Engineering, Texas A&M University (2017-2023)
- Director, HUman Bio-Behavioral Signals (HUBBS) Lab (2017-)
- Research Affiliate, Texas A&M Institute of Data Science (2019-2023)
- Research Assistant, Signal Analysis and Interpretation Lab (SAIL), University of Southern California (2011 - 2017)
- Lab Associate Intern, Disney Research (Summer 2015)
- Undergraduate Researcher, National Technical University of Athens/Evgenidion Hospital University of Athens (2009 - 2010)

AWARDS

- TAMU College of Engineering Excellence Award – Teaching (2023)
- 9th Heidelberg Laureate Forum Alumni (2022)
- Dean of Engineering Excellence Award – Assistant Professor Level (2022)
- TEES Young Faculty Fellow Award (2022)
- NSF CAREER Award (2021)
- TAMU Montague Teaching Scholar (2021)
- Best Poster Award, Associated Schools of Construction (ASC) Conference (2021)
- NSF Aspiring PI Award (2020)
- Best paper award nomination, IEEE Conference on Affective Computing and Intelligent Interaction (ACII) (2019)
- Best Poster Runner-Up Award, ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation (BuildSys) (2019)
- U.S. Frontiers of Engineering, National Academy of Engineering Alumni (2019)
- Best paper award (1st place), ASCE International Conference on Computing in Civil Engineering (2019)
- TAMU CSE Graduate Faculty Teaching Excellence Award (2019)
- Runner-up best poster award, IEEE Body Sensor Networks (2018)
- Best presentation award, Big Data and Human Behavior Symposium, USC (2016)
- USC Women in Science and Engineering (WiSE) travel grant for attending EMBC 2016

- USC Women in Science and Engineering (WiSE) Merit Fellowship (2015)
- IEEE Signal Processing Society Travel Grant for attending ICASSP 2014
- USC Women in Science and Engineering (WiSE) travel grant for attending ICASSP 2014
- USC Annenberg Graduate Fellowship (2010)
- USC Women in Science and Engineering (WiSE) Graduate Top-off Fellowship (2010)
- Academic Honor, Federal Scholarship Institution of Greece (2005-2006, 2007-2008)

EXTERNALLY
FUNDED GRANTS

1. Cognitive Assistant for Training Estimators: Phase II; DoD Acquisition Innovation Research Center; D. Selva (PI), A. Salado (Co-PI), T. Chaspari (Co-PI); $355,000 (Share: $100,000); 2022-2023

2. Collaborative Research: FW-HTF-P: Assistive Artificial Intelligence for Diversifying and Reskilling the Disaster Management Workforce of the Future; National Science Foundation; Amir Behzadan (PI), Michelle Meyer (Co-PI), Theodora Chaspari (Co-PI); $100,000 (Share: $6,458); 2022-2023

3. CAREER: Enabling Trustworthy Speech Technologies for Mental Health Care: From Speech Anonymization to Fair Human-centered Machine Intelligence; National Science Foundation; Theodora Chaspari (PI); IIS-2046118, $600,000; 2021-2026

4. Investigating Human Trust in AI: A Case Study of Human-AI Collaboration on a Speech-Based Data Analytics Task; Air Force Office of Scientific Research (AFOSR); T. Chaspari (PI), J. Hirschberg (Senior Personnel), S. Ita Levitan (Senior Personnel); $100,000; 2021-2023 (# FA9550-22-1-0010)

5. Artificial intelligence for tracking micro-behaviors in longitudinal data and predicting their effect on well-being and team performance; Theodora Chaspari (PI), Suzanne Bell (Co-I); National Aeronautics and Space Administration (NASA) - Human Exploration Research Opportunities (HERO) Program; $150,000 (Share: $124,000); 2022-2023 (#80NSSC22K0775)

6. SCC-IRG Track 2: Digital Twin City for Age-friendly Communities - Crowd-biosensing of Environmental Distress for Older Adults; National Science Foundation; T. Chaspari (PI), Y. Ham (Co-PI), C. Lee (Co-PI), J. Ostlind (Co-PI); $1,500,000 (Share: $400,000); 2021-2025

7. A risky day: Identifying socio-emotional states that precipitate risky behaviors in adolescents' real lives; United States - Israel Binational Science Foundation; R. Arbel (Israel PI), T. Chaspari (U.S. PI); $208,150 (Share: $44,275); 2021-2023

8. Cognitive Assistants for Training Cost Estimators: Proof of Concept; DoD Acquisition Innovation Research Center; D. Selva (PI), A. Salado (Co-PI), T. Chaspari (Co-PI); $100,000 (Share: $33,333); 2021-2022

9. Identifying the causes of "Ghost Alarms" occurring in General Motors Paint Shops; General Motors; Theodora Chaspari (PI), Debdeep Pati (Co-PI); $395,928 (Share: $193,950); 2021-2022

10. CHS: Medium: Collaborative Research: Bio-behavioral data analytics to enable personalized training of veterans for the future workforce; National Science Foundation; Theodora Chaspari (Lead PI), Amir H. Behzadan (Co-PI), Winfred Arthur Jr. (Co-PI); $500,000; (Share: $303,664); 2020-2023

11. The Development and Systematic Evaluation of an AI-Assisted Just-in-Time Adaptive Intervention for Improving Child Mental Health; National Institutes of Health; Colliga Apps Corp, Adela Timmons (PI), Theodora Chaspari (Co-I); $416,800 (Share: $134,762); 2020-2022

12. Population-specific and context-aware machine learning for novel bio-behavioral markers of warfighter performance; Air Force Research Lab; Theodora Chaspari (PI), Winfred Arthur Jr. (PI); $34,000; 2020-2021

13. TILES - Tracking Individual Performance with Sensors; Intelligence Advanced Research Projects Activity (IARPA); Shrikanth Narayanan (PI), Theodora Chaspari (PI, Texas A&M subcontract); $3,567,253 (Share: $50,000); 2019-2020

14. Doctoral Consortium at the 2019 International Conference On Affective Computing and Intelligent Interaction; National Science Foundation; Theodora Chaspari (PI); $8,000; 2019-2021

15. ENDEAVR: Reinventing Learning for Smart Cities; Keck Foundation; Wei Li (PI), Anatol Bologan (Co-PI), Alireza Talebpoor (Co-PI), Chanam Li (Co-PI), Theodora Chaspari (Co-PI); $150,000 (Share: $10,000); 2018-2021

16. Low-Cost In-The-Moment Bio-Signal Interventions to Promote Students' Public Speaking Skills in a Virtual Learning Environment; Engineering Information Foundation; Theodora Chaspari (PI), Amir Behzadan (co-PI); $25,000 (Share: $12,499); 2018-2019

17. TILES - Tracking Individual Performance with Sensors; Intelligence Advanced Research Projects Activity - MOSAIC; Shrikanth Narayanan (PI), Theodora Chaspari (PI, Texas A&M subcontract); $2,557,902 (Share: $46,433); 2018-2019

INTERNAL GRANTS

1. Data Science for Social Justice; Lu Tang (PI), Theodora Chaspari (Co-PI & Associate Director), Ruihong Huang (Co-PI); Texas A&M Data Science Institute (TAMIDS) - Thematic Labs Program; $200,000; 2021-2023

2. Design and delivery of personalized, AI-assisted, accessible, positive-affect treatments for depression and anxiety; TAMU X-Grant Program; A. MacNamara (PI), R. Gutierrez-Osuna (Co-PI), M. Meagher (Co-PI), T. Chaspari (Co-PI), S. Scherr (Co-PI), I. Liberzon (Co-PI)l; $1,283,542; 2021-2023

3. Preventing Opioid Relapse: Integrating Behavioral and Medication Treatment for Opioid Use Disorder in Jails; TAMU Presidential Clinical Research Partnership (PCRP) Grants; M. Meagher (PI), S. Fields (Co-PI), J. Alonzo (Co-PI), C. McCord (Co-PI), L. Osborne (Co-PI), R. Heffer (Co-PI), R. Hutchison (Co-PI), T. Chaspari (Co-PI), A. MacNamara (Co-PI); $199,980 (Share: $46,402), 2021-2023

4. Tracking Microaggressions In Science, Technology, Engineering, And Mathematics; Texas A&M Triads for Transformation (T3); Theodora Chaspari (PI), Ruihong Huang (Co-PI), Srividya Ramasubramanian (Co-PI); $30,000; 2021-2022

5. CoFABS-Q: A dataset of face, body, and speech cues in web-mined COVID-19 conversational vlogs; Texas A&M Data Science Institute (TAMIDS); Amir H. Behzadan (PI), Theodora Chaspari (Co-PI), Preeti Zanwar (Co-PI); $30,000; 2020-2021

6. Intelligent psychoacoustic spaces for health and well-being; Theodora Chaspari (PI), Anastasia Muliana (Co-PI), James Hubbard, Jr. (Co-PI), Youngjib Ham (Co-PI), Winfred Arthur (Co-PI); Texas A&M Innovation [X] Program, $20,000; 2020-2021

7. Digital Twin City for Age-friendly Communities: Crowd-biosensing of Environmental Distress for Older Adults; Texas A&M X-Grant; Changbum R. Ahn (PI), Theodora Chaspari (co-PI), Chanam Lee (co-PI), Youngjib Ham (co-PI); $325,000 (Share: $44,425); 2019-2021

8. Adaptive Responsive Environments for Physical and Mental Health; Texas A&M Innovation [X] Program; Theodora Chaspari (PI), Anastasia Muliana (Co-PI), James Hubbard, Jr. (Co-PI), Youngjib Ham (Co-PI), Winfred Arthur (Co-PI); $20,000; 2019-2020

9. Preserving speaker identity in cyber-interactions; Texas A&M PESCA Research Seed Grant Program; Theodora Chaspari (PI); $10,000; 2019-2020

10. Crowd-Biosensing Of Location-Based Physical And Emotional Distress For Walkable Built Environment; Texas A&M Triads for Transformation (T3); Changbum R. Ahn (PI), Theodora Chaspari (co-PI), Jane Winslow (co-PI); $35,777; 2019-2020

TEACHING EXPERIENCE	

TEACHING EXPERIENCE

- CSCE 633: Machine Learning (distance learning), Texas A&M University, Spring 2023
- Algorithmic Fairness, Course Module (distance learning), Texas A&M University
- CSCE 421: Machine Learning, Texas A&M University, Fall 2022 (4.68/5)
- CSCE 633: Machine Learning, Texas A&M University, Fall 2021 (4.64/5)
- CSCE 489: Artificial Intelligence for Social Good, Texas A&M University, Spring 2021 (4.50/5)
- CSCE 633: Machine Learning, Texas A&M University, Fall 2020 (4.70/5)
- CSCE 421/633: Machine Learning, Texas A&M University, Spring 2020 (CSCE 633: 4.81/5; CSCE 421: 4.56/5)
- CSCE 421: Machine Learning, Texas A&M University, Fall 2019 (4.78/5)
- CSCE 633: Machine Learning, Texas A&M University, Spring 2019 (4.59/5)
- CSCE 689: Human Behavioral Analytics, Texas A&M University, Fall 2018 (4.71/5)
- CSCE 689: Human Behavioral Analytics, Texas A&M University, Spring 2018 (4.64/5)
- CSCE 633: Machine Learning, Texas A&M University, Fall 2017 (4.62/5)

PATENTS

P1. A.C. Timmons, *T. Chaspari*, G. Margolin, and S.S. Narayanan, "*A Technology-Facilitated Support System for Monitoring and Understanding Interpersonal Relationships*," Provisional Patent 62/561,938, U.S. Patent Application No. 16/291,225.

P2. A.C. Timmons, *T. Chaspari*, M.W. Ahle, G. Margolin, and S.S. Narayanan, "*An Expert-Driven, Technology-Facilitated Intervention System for Improving Interpersonal Relationships*," Provisional Patent 62/563,192, U.S. Patent Application No. 16/291,399.

BOOK CHAPTERS

B1. P. Paromita, A. Khader, S. Begerowski, S. T. Bell, and *T. Chaspari*, "*Speech descriptors of micro-behaviors during team interactions*," Computational Group and Team Dynamics: Forging an Interdisciplinary Science, Eds: Steve W. J. Kozlowski, Hayley Hung, Nale Lehmann-Willenbrock, & Albert Ali Salah. Oxford University Press (OUP), 2024. **(invited)**

B2. *T. Chaspari*, "*Sensor Integration for Behavior Modeling*," Elsevier Encyclopedia of Sensors and Biosensors, 2022. **(invited)**

B3. K. Feng* and *T. Chaspari*, "*Transfer learning and generalizability in automatic emotion recognition*," Frontiers in Computer Science, 2:9, DOI: 10.3389/fcomp.2020.00009. **(invited)**

B4. *T. Chaspari*, A.C. Timmons, G. Margolin, "*Population-specific and personalized (PSP) models of human behavior for leveraging smart and connected data*," Smart Data: State-of-the-Art and Perspectives in Computing and Applications, CRC Press, Taylor & Francis Group, USA, 2019.

B5. D. Bone, *T. Chaspari*, and S.S. Narayanan, "*Behavioral signal processing and Autism. Learning from multimodal behavioral signals*," Autism Imaging and Devices, 2017.

* advised students

JOURNAL PUBLICATIONS

J1. Y. Ryjova, A. I. Gold, A. C. Timmons, S. C. Han, *T.* Chaspari, C. Pettit, Y. Kim, A. Beale, K. F. M. Kazmierski, and G. Margolin, "*A day in the life: Couples' everyday communication and subsequent relationship outcomes*," APA Journal of Family Psychology, 2024, DOI: 10.1037/fam0001180

J2. P. Paromita*, K. Mundnich, A. Nadarajan, B. Booth, S. Narayanan, and *T.* Chaspari, "*Modeling inter-individual differences in ambulatory-based multimodal signals via metric learning: A case study of personalized well-being estimation of healthcare workers*," Frontiers in Digital Health, 5, 1195795, 2023, DOI: 10.3389/fdgth.2023.1195795

J3. W. Li, J. Bian, C. Lee, A. Bologan, *T.* Chaspari, T. Calvesbert, J. Masterson, J. Stillisano, K. Wright, S. Shields, D. Fowler, "*Interdisciplinary, Project-Based, Service-Learning for Smart and Connected Communities: Insights from ENDEAVR*," International Journal of Technology and Design Education, 12(2), 304–334, 2023.

J4. C.C. Li, *T.* Chaspari, E.M. Provost, D. Bone, S.S. Narayanan, "*An engineering view on emotions and speech: From analysis and predictive models to responsible human-centered applications*," Proceedings of the IEEE, pp. 1-17, DOI: 10.1109/JPROC.2023.3276209, 2023.

J5. E.H. Nirjhar*, J. Kim**, J.F. Winslow, *T.* Chaspari, and C.R. Ahn, "*Detecting Neighborhood Physical Disorders From Wearable Devices to Promote Walkability,*" Elsevier Smart Health, 29, DOI: 10.1016/j.smhl.2023.100414, 2023.

J6. J. Kim**, E.H. Nirjhar*, *T.* Chaspari, C. Lee, Y. Ham, J.F. Winslow, and R. C. Ahn, "*Location-based collective distress using large-scale biosignals in real life for walkable built environments,*" Scientific Reports, 13, 5940, DOI: 10.1038/s41598-023-33132-z, 2023.

J7. D. Liu, Z. Sahid, Y.H. Tung, A. Muliana, N. Kalantar, *T.* Chaspari, J. E. Hubbard, and E. Green, "*Tunable Acoustic Properties in Reconfigurable Kerf Structures,*" ASCE Journal of Architectural Engineering, 29(3), pp. 04023018, DOI: 10.1061/JAEIED.AEENG-1539, 2023.

J8. P. Paromita*, A. Khader, S. Begerowksi, S.T. Bell, and *T.* Chaspari, "*Vocal markers of micro-behaviors between astronaut team members during analog space exploration missions,*" IEEE Pervasive Computing, pp. 1-12, DOI: 10.1109/MPRV.2022.3232780, 2023.

J9. A.C. Timmons, S.C. Han, *T.* Chaspari, Y. Kim, S. Narayanan, and G. Margolin, "*Relationship Satisfaction, Fluctuating Feelings of Closeness and Annoyance, and Linkage in Electrodermal Activity in Dating Couples' Daily Lives,*" APA Emotion, DOI: 10.1037/emo0001201, 2023.

J10. A.C. Timmons, J.B. Duong, N. Simo Fiallo, T. Lee, H.P. Quynh Vo, M.W. Ahle, J.S. Comer, L.C. Brewer, S. Frazier, and *T.* Chaspari, "*A Call to Action on Assessing and Mitigating Bias in Artificial Intelligence Applications for Mental Health,*" SAGE Perspectives on Psychological Science, DOI: 10.1177/17456916221134490, 2022. (**impact factor 11.6**)

J11. B. Lee, C.R. Ahn, P. Mohan*, and *T.* Chaspari, "*Assessing Daily Activity Routines from High-dimensional Sensing Data Using an Unsupervised Approach,*" Journal of Computing in Civil Engineering, 37(1), DOI: 10.1061/JCCEE5.CPENG-4895, 2023.

J12. G. Margolin, M.E. Daspe, A.C. Timmons, G.W. Corner, C. Pettit, H.F. Rasmussen, *T.* Chaspari, S.C. Han, R. Arbel, L.S. Shapiro, K.F.M. Kazmierski, L. Del Piero, and H.L. Schacter, "*What Happens When Young Couples Discuss Personal Loss? Relational, Emotional, and Physiological Impacts,*" APA Journal of Family Psychology, DOI: 10.1037/fam0000979, 2022.

J13. J. Kim**, E.H. Nirjhar*, K. Kim, *T.* Chaspari, Y. Ham, J.F. Winslow, C. Lee, and C.R. Ahn, "*Capturing environmental distress of pedestrians using multimodal data: The interplay of biosignals and image-based data,*" Journal of Computing in Civil Engineering, 36(2), 04021039, 2022.

J14. A. Das, B. Mortazavi, S. Sajjadi, *T.* Chaspari, L. E. Ruebush, N.E. Deutz, G.L. Cote, R. Gutierrez-Osuna, "*Predicting the macronutrient composition of mixed meals from dietary biomarkers in blood,*" IEEE Journal of Biomedical Health Informatics, DOI: 10.1109/JBHI.2021.3134193, 2021.

J15. K. Feng* and *T.* Chaspari, "*Few-shot Learning in Emotion Recognition of Spontaneous Speech Using a Siamese Neural Network with Adaptive Sample Pair Formation,*" IEEE Transactions on Affective Computing, DOI: 10.1109/TAFFC.2021.3109485, 2021. (**impact factor 10.5**)

J16. S.C. Han, H. Schacter, A.C. Timmons, Y. Kim, S. Sichko, C. Pettit, *T.* Chaspari, S. Narayanan, and G. Margolin, "*Romantic partner presence and physiological responses in daily life: Attachment style as a moderator,*" Elsevier Biological Psychology, vol. 161, DOI: 10.1016/j.biopsycho.2021.108082, 2021.

J17. M. N. Sakib**, *T. Chaspari*, A. Behzadan, "*A feedforward neural network for drone accident prediction from physiological signals,*" Emerald Publishing Smart and Sustainable Built Environment, DOI: 10.1108/SASBE-12-2020-0181, 2021.

J18. B. Nam, P. Paromita*, S. L. Chu, *T.* Chaspari, and S. Woltering, "*Moments of insight in problem solving relate to bodily arousal,*" The Journal of Creative Behavior, DOI: 10.1002/jocb.504, 2021.

J19. P. Zanwar, J. Kim**, M. Manser, Y. Ham, T. Chaspari, and R.C. Ahn, "*Use of Connected Technologies to Mitigate Barriers and Stressors for Older Adults,*" Frontiers in Public Health, 9:80, DOI: 10.3389/fpubh.2021.578832, 2021.

J20. M. Yadav*, M.N. Sakib*, E. H. Nirjhar, K. Feng, A. Behzadan, and *T.* Chaspari, "*Exploring individual differences of public speaking anxiety in real-life and virtual presentations,*" IEEE Transactions on Affective Computing, DOI: 10.1109/TAFFC.2020.3048299, 2020. (**impact factor 10.5**)

J21. P. Mohan*, B. Lee, *T. Chaspari*, and C.R. Ahn, "*Assessment of daily routine uniformity in a smart home environment using hierarchical clustering,*" IEEE Journal of Biomedical Health Informatics, DOI: 10.1109/JBHI.2020.3048327, 2020. (**impact factor 5.2**)

J22. V. Ravuri*, P. Paromita*, K. Mundnich, A. Nadarajan, B. Booth, S. Narayanan, and *T.* Chaspari, "*Investigating group-specific models of well-being for hospital workers: Implications on demographic and job-related bias,*" World Scientific Publishing Company, International Journal of Semantic Computing, Vol. 14, No. 04, pp. 477-499, 2020. (**invited paper**)

J23. B. Lee, C.R. Ahn, P. Mohan*, *T. Chaspari*, and H.S. Lee, "*Evaluating the Routine Variability of Daily Activities in Smart Homes with Image Complexity Measures,*" ASCE Journal of Computing in Civil Engineering, 34(6), 04020042, 2020. (impact factor 3.4)

J24. M. N. Sakib**, *T. Chaspari*, A. Behzadan, "*Physiological Data Models to Understand the Effectiveness of Drone Operation Training in Immersive Virtual Reality,*" ASCE Journal of Computing in Civil Engineering, 35(1), 04020053, 2020. (impact factor 3.4)

J25. J. Kim**, M. Yadav*, *T. Chaspari*, and C.R. Ahn, "*Environmental Distress and Physiological Signals: An Examination of the Saliency Detection Method,*" ASCE Journal of Computing in Civil Engineering, 34(6), 04020046, 2020. (impact factor 3.4)

J26. K. Gupta*, A. Gujral*, *T. Chaspari*, A. C. Timmons, S.C. Han, Y. Kim, S. Barrett, S. Sichko, and G. Margolin, "*Sub-population specific models of couples' conflict,*" DOI: 10.1145/3372045, ACM Transactions on Internet Technology, 20(2), 2020.

J27. H. Schacter, C. Pettit, Y. Kim, S. Sichko, A.C. Timmons, *T. Chaspari*, S.C. Han, and G. Margolin, "*A Matter of the Heart: Daytime Relationship Functioning and Overnight Heart Rate in Young Dating Couples,*" Annals of Behavioral Medicine, DOI: 10.1093/abm/kaaa019, 2020. (impact factor 4.4)

J28. J. Kim**, M. Yadav*, *T. Chaspari*, and C.R. Ahn, "*Saliency Detection Analysis of Physiological Responses of Pedestrians to Diagnose Built Environment Features in Neighborhood,*" Elsevier Journal of Advanced Engineering Informatics, 43: 101035, DOI: 10.1016/j.aei.2020.101035, 2020. (impact factor 3.9)

J29. N. Nath, *T. Chaspari*, and A.H. Behzadan, "*Single and Multi-Label Classification of Construction Objects Using Deep Transfer Learning Methods,*" Journal of Information Technology in Construction (ITcon), International Council for Research and Innovation in Building and Construction (CIB) (Special Issue on Virtual, Augmented and Mixed: New Realities in Construction), 24:511-526, 2019. (**invited paper**)

J30. A. C. Timmons, S.C. Han, *T. Chaspari*, Y. Kim, C. Pettit, S. Narayanan, and G. Margolin, "*Physiological stress reactivity in daily life as a mediator of the intergenerational transmission of aggression,*" Physiology & Behavior, 206, 85-92, DOI: 10.1016/j.physbeh.2019.03.020, 2019.

J31. N. D. Nath, *T. Chaspari*, and A. H. Behzadan, "*Automatic classification of overexertion and ergonomic risk levels using body-mounted sensors and machine learning,*" Elsevier Journal of Advanced Engineering Informatics, 38:514-526, 2018. (impact factor 3.9)

J32. G.W. Corner, D.E. Saxbe, *T. Chaspari*, H.F. Rasmussen, L. Perrone, C. Pettit, M. Friendly, A.C. Timmons, and G. Margolin, "*Compassion in a Heartbeat: Physiology During Couples' Loss Discussions,*" Journal of Social and Personal Relationships, DOI:0265407518770267, 2018.

J33. D. Bone, C.C. Lee, *T. Chaspari*, J. Gibson, and S.S. Narayanan, "*Signal Processing and Machine Learning for Behavioral and Mental Health Research and Clinical Applications,*" IEEE Signal Processing Magazine, 34(5):196-195, 2017. (**impact factor 11.35**)

J34. A.C. Timmons, *T. Chaspari*, S.C. Han, L. Perrone, S.S. Narayanan, and G. Margolin, "*Multimodal detection of conflict in couples using wearable technology,*" IEEE Computer, 50(3): 50-59, 2017.

J35. A.C. Timmons, S.C. Han, L. Perrone, *T. Chaspari*, B.R. Baucom, S.S. Narayanan, and G. Margolin, "*New frontiers in ambulatory assessment: Big data methods for capturing couples' emotions, vocalizations, and physiology in daily life,*" Social Psychological and Personality Science, 2017.

J36. *T. Chaspari*, A. Tsiartas, P. Tsilifis, and S.S. Narayanan, "*Markov Chain Monte Carlo Inference of Parametric Dictionaries for Sparse Bayesian Approximations,*" IEEE Transactions on Signal Processing, 64(12): 3077-3092, 2016.

J37. *T. Chaspari*, A. Tsiartas, L.I. Stein, S.A. Cermak, and S.S. Narayanan, "*Sparse Representation of Electrodermal Activity with Knowledge-Driven Dictionaries*," IEEE Transactions on Biomedical Engineering, 62(3): 960-971, 2015.

J38. *T. Chaspari*, C. Soldatos, and P. Maragos, "*The development of the Athens Emotional States Inventory (AESI): collection, validation and automatic processing of emotionally loaded sentences*," World Journal of Biological Psychiatry, 23: 1-11, 2015.

* advised students ** co-advised students

CONFERENCE
PUBLICATIONS

C1. D. Nartey, R. Karthikeyan, *T.* Chaspari, and R. Mehta, "*Exploring Cognitive Fatigue: Machine Learning, Forecasting, Generalization, Personalization, Inference and Labels*," Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 67(1): 978-979, DOI: 10.1177/2169506723119227

C2. A.A. Tutul*, *T.* Chaspari, S.I. Levitan, J. Hirschberg, "*Human-AI collaboration for the detection of deceptive speech: Investigating measures and factors of human trust*," IEEE International Conference on Affective Computing & Intelligent Interaction (ACII) Late Breaking Results, Cambridge, MA, 2023, DOI: 10.1109/ACIIW59127.2023.10388114

C3. L. Jin, T. Liu, A. Haroon, and R. Stoleru, M. Middleton, Z. Zhu, and *T.* Chaspari, "*EMSAssist: An End-to-End Mobile Voice Assistant at the Edge for Emergency Medical Services*," Proceedings of the 21st ACM Annual International Conference on Mobile Systems, Applications and Services (MobiSys), pp. 275–288, 2023, DOI: 10.1145/3581791.3596853

C4. K. Feng* and *T.* Chaspari, "*A knowledge-driven vowel-based approach of depression classification from speech using data augmentation*," IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Rhodes Island, Greece, pp. 1-5, doi: 10.1109/ICASSP49357.2023 2023.

C5. R. Pranjal*, R. Seshadri*, R. Kumar Sanath Kumar Kadaba*, T. Feng, S. S. Narayanan, and *T.* Chaspari, "*Toward privacy-enhancing ambulatory-based well-being monitoring: Investigating user re-identification risk in multimodal data*," IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Rhodes Island, Greece, pp. 1-5, doi: 10.1109/ICASSP49357.2023.10096235, 2023.

C6. K. Feng* and *T.* Chaspari, "*Toward Knowledge-Driven Speech-Based Models of Depression: Leveraging Spectrotemporal Variations in Speech Vowels*," IEEE-EMBS International Conference on Biomedical Health Informatics (BHI), DOI: 10.1109/BHI56158.2022.9926939, 2022. (**30% acceptance**)

C7. R. Verrap*, E.H., Nirjhar*, A., Nenkova, and *T.* Chaspari,. "*"Am I Answering My Job Interview Questions Right?": A NLP Approach to Predict Degree of Explanation in Job Interview Responses*," Conference on Empirical Methods in Natural Language Processing (EMNLP), Second Workshop on NLP for Positive Impact (NLP4PI), pp. 122-129, 2022.

C8. D. Yang*, J. Kim, E.H. Nirjhar*, C.R. Ahn, and *T.* Chaspari, "*Explainable Prediction of Pedestrians' Distress in the Urban Built Environment*," Asilomar Conference on Signals, Systems, and Computers, 2022.

C9. *T.* Chaspari, J., Kim**, C., Lee, Y., Ham, S., Lee, C.R. Ahn, "*A Digital Twin City Model for Capturing Walkability Distress of Elderly Adults*," IEEE International Conference on Digital Twins and Parallel Intelligence (DTPI), pp. 1-2, 2022.

C10. V. Ravuri*, R. Gutierrez-Osuna, and *T.* Chaspari, "*Preserving Mental Health Information in Speech Anonymization via an Adversarial Learning Approach*," 2nd Workshop on What's Next in Affect Modeling, ACM International Conference on Multimodal Interaction (ICMI), 2022.

C11. J. Raether*, E.H. Nirjhar*, and *T.* Chaspari, "*Evaluating Just-In-Time Vibrotactile Feedback for Communication Anxiety*," ACM International Conference on Multimodal Interaction (ICMI), DOI: 10.1145/3536221.3556590, 2022. (**30% acceptance**)

C12. E.H. Nirjhar*, M.N. Sakib**, E. Hagen, N. Rani, S.L. Chu, W. Arthur, Jr., A. Behzadan, and *T.* Chaspari, "*A pilot study on self-reported and bio-behavioral measures of stress of U.S. veterans during civilian job interviews*," IEEE International Conference on Affective Computing and Intelligent Interaction (ACII), DOI: 10.1109/ACII55700.2022.9953815, 2022.

C13. M.K. Batra*, *T.* Chaspari, and C.R. Ahn, "*Toward Sensor-Based Early Diagnosis of Cognitive Impairment using Poisson Process Models*," International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), pp. 2839-2843, 2022.

C14. A. Agarwal*, E.H. Nirjhar*, A.H. Behzadan, and *T. Chaspari*, "*Evaluating in-the-moment feedback in virtual reality based on physiological and vocal markers for personalized speaking training*," International Conference on Construction Applications of Virtual Reality (CONVR), pp. 94-103, 2021.

C15. A.A. Tutul*, E.H. Nirjhar*, and *T.* Chaspari, "*Investigating Trust in Human-Machine Learning Collaboration: A Pilot Study on Estimating Public Anxiety from Speech*," ACM International Conference on Multimodal Interaction, DOI: 10.1145/3462244.3479926, 2021. **(30% acceptance)**

C16. E.H. Nirjhar*, A. Behzadan, and *T.* Chaspari, "*Knowledge- and data-driven models of multimodal trajectories of public speaking anxiety in real and virtual settings*," ACM International Conference on Multimodal Interaction, DOI: 10.1145/3462244.3479964, 2021. **(30% acceptance)**

C17. M. Yang*, P. Paromita*, *T.* Chaspari, S. Sajjadi, A. Das, B. J. Mortazavi, and R. Gutierrez-Osuna, "*A Metric Learning Approach for Personalized Meal Macronutrient Estimation from Postprandial Glucose Response Signals*," IEEE Conference on Biomedical Health Informatics (BHI), DOI: 10.1109/BHI50953.2021.9508528, 2021. **(32.7% acceptance)**

C18. *T.* Chaspari, V. Dubagunta*, P. Paromita*, S.C. Han, Y. Kim, A.C. Timmons, and G. Margolin, "*Investigating racial bias in machine learning models of mental health: Implications for equitable telebehavioral health*," IEEE Conference on Body Sensor Networks (BSN), 2021.

C19. P. Paromita*, *T.* Chaspari, S. Sajjadi, A. Das, B. J. Mortazavi, and R. Gutierrez-Osuna, "*Personalized Meal Classification Using Continuous Glucose Monitors*," ACM IUI Workshop on Healthy Interfaces, 2021.

C20. A. Das, B. J. Mortazavi, *T.* Chaspari, S. Sajjadi, P. Paromita*, L. Ruebush, N. Deutz, and R. Gutierrez-Osuna, "*A sparse coding approach to automatic diet monitoring with continuous glucose monitors*," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 2900-2904, DOI: 10.1109/ICASSP39728.2021.9414452, 2021.

C21. S. Sajjadi, B. J. Mortazavi, A. Das, *T.* Chaspari, P. Paromita*, L. Ruebush, N. Deutz, and R. Gutierrez-Osuna, "*Towards the development of subject-independent inverse metabolic model*," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 3970-3974, DOI: 10.1109/ICASSP39728.2021.9413829, 2021.

C22. B. Lee, P. Mohan*, *T.* Chaspari, and C.R. Ahn, "*Assessing ADL Routine Variability from High-dimensional Sensing Data using Hierarchical Clustering*," ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation (Buildsys '20), pp. 282-285, DOI: 10.1145/3408308.3427626, 2020. **(35% acceptance)**

C23. V. Ravuri*, P. Paromita*, K. Mundnich, A. Nadarajan, B. Booth, S. Narayanan, and *T.* Chaspari, "*Group-specific models of healthcare workers' well-being using iterative participant clustering*," Proc. IEEE Transdisciplinary AI Conference (TransAI), 2020. (**invited paper**)

C24. M. von Ebers*, E.H. Nirjhar*, A. Behzadan, and *T.* Chaspari, "*Predicting the Effectiveness of Systematic Desensitization Through Virtual Reality for Mitigating Public Speaking Anxiety*," Proc. ACM International Conference on Multimodal Interaction, pp. 670-674, DOI: 10.1145/3382507.3418883, 2020. **(10% acceptance for short papers)**

C25. V. Narula*, K. Feng*, and *T.* Chaspari, "*Preserving privacy in image-based emotion recognition through user anonymization*," Proc. ACM International Conference on Multimodal Interaction, pp. 10.1145/3382507.3418833, DOI: 452-460 2020. **(35% acceptance)**

C26. G. Hadjiantonis*, P. Paromita*, K. Mundnich, A. Nadarajan, B. Booth, S. Narayanan, and *T.* Chaspari, "*Dynamical systems modeling of day-to-day signal-based patterns of emotional self-regulation and stress spillover in highly-demanding health professions*," Proc. IEEE Engineering in Medicine and Biology Society Conference (EMBC), Montreal, Canada, 2020.

C27. E. Dutta, A. Bothra, *T.* Chaspari, T. Ioerger, and B. Mortazavi, "*Reinforcement Learning Using EEG Signals for Therapeutic Use of Music in Emotion Management*," Proc. IEEE Engineering in Medicine and Biology Society Conference (EMBC), Montreal, Canada, 2020.

C28. E.H. Nirjhar*, A. Behzadan, and *T.* Chaspari, "*Exploring Bio-Behavioral Signal Trajectories of State Anxiety During Public Speaking*," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Barcelona, Spain, 2020, pp. 1294-1298, DOI: 10.1109/ICASSP40776.2020.9054160. **(47% acceptance)**

C29. K. Feng* and *T. Chaspari*, "*A Siamese Neural Network with Modified Distance Loss For Transfer Learning in Speech Emotion Recognition*," AAAI-20 Workshop on Affective Content Analysis (AffCon 2020), pp. 29-35, New York, NY, 2020.

C30. P. Mohan*, B. Lee, *T.* Chaspari, and C.R. Ahn, "*Capturing occupant routine behaviors in smart home environment using hierarchical clustering models*," ASCE Construction Research Congress (CRC), Tempe, AZ, 2020.

C31. J. Kim**, M. Yadav*, *T.* Chaspari, J.F. Winslow, and C.R. Ahn, "*Can pedestrians' physiological signals be indicative of urban built environment conditions?*," ASCE Construction Research Congress (CRC), Tempe, AZ, 2020.

C32. M. Yadav*, A. Behzadan, and *T.* Chaspari, "*Speak Up! Studying the interplay of individual and contextual factors to physiological-based models of public speaking anxiety*," IEEE Transdisciplinary AI Conference (TransAI), Laguna Hills, CA, DOI: DOI: 10.1109/TransAI46475.2019.00017, 2019. **(invited paper)**

C33. K. Feng*, M. Yadav*, M.N. Sakib**, A. Behzadan, and *T.* Chaspari, "*Estimating Public Speaking Anxiety from Speech Signals Using Unsupervised Transfer Learning*," IEEE Global Conference on Signal Processing (GlobalSip), Ottawa, Canada, DOI: 10.1109/GlobalSIP45357.2019.8969502, 2019.

C34. M.N. Sakib**, M. Yadav*, *T.* Chaspari, and A. Behzadan, "*Coupling virtual reality and physiological markers to improve public speaking performance*," 19th International Conference on Construction Applications of Virtual Reality, Bangkok, Thailand, 2019.

C35. K. Feng* and *T.* Chaspari, "*Low-resource language identification from speech using transfer learning*," Proc. IEEE International Workshop on Machine Learning for Signal Processing (MLSP), Pittsburgh, PA, DOI: 10.1109/MLSP.2019.8918833, 2019.

C36. Q. Li* and *T.* Chaspari, "*Exploring Transfer Learning between Scripted and Spontaneous Speech for Emotion Recognition*," ACM International Conference on Multimodal Interaction (ICMI), pp. 435-439, Suzhou, China, `https://doi.org/10.1145/3340555.3353762`, 2019. **(30% acceptance)**

C37. A.R.S. Murthy, C. Green, R. Stoleru, S. Bhunia, C. Swanson, and *T.* Chaspari, "*Machine Learning-based Irrigation Control Optimization*," ACM International Conference on Systems for Energy-Efficient Built Environments, Cities, and Transportation (BuildSys), New York, NY, pp. 213-222, https://doi.org/10.1145/3360322.3360854, 2019. **(30% acceptance)**

C38. M. Yadav*, M.N. Sakib**, K. Feng*, A. Behzadan, and *T.* Chaspari, "*Virtual reality interfaces and population-specific models to mitigate public speaking anxiety*," IEEE International Conference on Affective Computing and Intelligent Interaction (ACII), DOI: 10.1109/ACII.2019.8925509, 2019. **(30% acceptance, nominated for best paper award)**

C39. A. Gujral*, K. Feng*, G. Mandhyan, N. Snehil, and *T.* Chaspari, "*Leveraging transfer learning techniques for classifying infant vocalizations*," DOI: 10.1109/BHI.2019.8834666, IEEE Biomedical Health Informatics (BHI), 2019. **(30% acceptance)**

C40. Z. Huo, B. J. Mortazavi, *T.* Chaspari, N. Deutz, L. Ruebush, and R. Gutierrez-Osuna, "*Predicting the meal macronutrient composition from continuous glucose monitors*," IEEE Biomedical Health Informatics (BHI), DOI: 10.1109/BHI.2019.8834488, 2019. **(30% acceptance)**

C41. Y. Wang, H. Wang, X. Zhang, *T.* Chaspari, Y. Choe, and M. Lu, "*An attention-aware bidirectional multi-residual recurrent neural network (ABMRNN): A study about better short-term text classification*," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), DOI: 10.1109/ICASSP.2019.8682565, 2019. **(46.5% acceptance)**

C42. A.M. Pena**, *T. Chaspari*, E.D. Ragan, "*Exploratory Study on Interaction Behaviors During Visual Analysis*," Workshop on User Interfaces for Building Knowledge, ACM International Conference on Intelligent User Interfaces, Los Angeles, CA, 2019.

C43. J. Kim**, M. Yadav*, C.R. Ahn, *T. Chaspari*, "*Saliency Detection Analysis of Pedestrians' Physiological Responses to Assess Adverse Built Environment Features*," ASCE International

Conference on Computing in Civil Engineering, Atlanta, GA, 2019. **(Best paper award, 1st place)**

C44. A. Gujral*, *T.* Chaspari, A.C. Timmons, Y. Kim, S. Barrett, and G. Margolin, "*Population-specific detection of couples' interpersonal conflict*," Proc. ACM International Conference on Multimodal Interaction, Boulder, CO, 2018, `https://doi.org/10.1145/3242969.3243007`. **(18.5% acceptance for oral presentations)**

C45. M. Yadav*, *T.* Chaspari, J. Kim, and C.R. Ahn, "*Capturing and quantifying emotional distress in the built environment*," Proc. Human-Habitat for Health (H3) Workshop, ACM International Conference on Multimodal Interaction, Boulder, CO, 2018, `https://doi.org/10.1145/3279963.3279967`.

C46. P. Arora* and *T. Chaspari*, "*Exploring Siamese Neural Network Architectures for Preserving Speaker Identity in Speech Emotion Classification*, Proc. Multimodal Analyses enabling Artificial Agents in Human-Machine Interaction (M3HMI) Workshop, ACM International Conference on Multimodal Interaction, Boulder, CO, 2018, `https://doi.org/10.1145/3279972.3279980`.

C47. *T. Chaspari*, A. Metallinou, L.I. Stein Duker, A. Behzadan, "*Human-Habitat for Health (H3): Human-habitat Multimodal Interaction for Promoting Health and Well-being in the Internet of Things Era*," Proc. ACM International Conference on Multimodal Interaction, Boulder, CO, 2018, `https://doi.org/10.1145/3242969.3265862`.

C48. N. Nath, *T. Chaspari*, A. Behzadan, "*A Transfer Learning Method for Deep Neural Network Annotation of Construction Site Imagery*", Proc. 18th Int. Conference on Construction Applications of Virtual Reality, Auckland, New Zealand, 2018.

C49. N. Goel*, *T. Chaspari*, B. J. Mortazavi, T. Prioleau, A. Sabharwal, and R. Gutierrez-Osuna, "*Knowledge-driven dictionaries for sparse representation of continuous glucose monitoring signals*", Proc. International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Honolulu, HI, 2018.

C50. *T. Chaspari*, B. J. Mortazavi, T. Prioleau, A. Sabharwal, and R. Gutierrez-Osuna, "*Sparse representation models of continuous glucose monitoring time-series*," IEEE Body Sensor Networks, Las Vegas, NV, 2018. **(runner-up best poster award)**

C51. A. Gujral*, *T. Chaspari*, A. C. Timmons, S. C. Han, and G. Margolin, "*Real-life detection of interpersonal conflict in couples through the use of wearable and mobile technology*," IEEE Body Sensor Networks, Las Vegas, NV, 2018.

C52. *T. Chaspari*, A. C. Timmons, B. Baucom, L.Perrone, K. J. W. Baucom, P. Georgiou, G. Margolin, and S.S. Narayanan, "*Exploring Sparse Representation Measures of Physiological Synchrony for Romantic Couples*," Proc. Affective Computing and Intelligent Interaction Conference (ACII), DOI: 10.1109/ACII.2017.8273611, San Antonio, TX, 2017. **(26% acceptance)**

C53. R. Balasubramanian**, *T. Chaspari* and S.S. Narayanan, "*A Knowledge-Driven Framework for ECG Representation and Interpretation for Wearable Applications*," Proc. IEEE International Conference on Audio, Speech and Signal Processing (ICASSP), pp. 1018-1022, New Orleans, LA, 2017.

C54. *T. Chaspari*, S.C. Han, D. Bone, A.C. Timmons, L. Perrone, G. Margolin, and S.S. Narayanan, "*Quantifying Regulation Mechanisms in Dating Couples through a Dynamical Systems Model of Acoustic and Physiological Arousal*," Proc. IEEE International Conference on Audio, Speech and Signal Processing (ICASSP), pp. 3001-3005, New Orleans, LA, 2017.

C55. D. Bone, J. Gibson, *T. Chaspari*, D. Can, and S.S. Narayanan, "*Speech and Language Processing for Mental Health Research and Care*," Proc. Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, 2016.

C56. *T. Chaspari* and J. Fain Lehman, "*An Acoustic Analysis of Child-Child and Child-Robot Interactions for Understanding Engagement during Speech-Controlled Computer Games*," Proc. Interspeech, pp. 595-599, San Francisco, CA, 2016.

C57. *T. Chaspari*, A. Tsiartas, L.I. Stein Duker, S.A. Cermak, and S.S. Narayanan, "*EDA-Gram: Designing Electrodermal Activity Fingerprints for Visualization and Feature Extraction*," Proc. International Conference of the IEEE Engineering in Medicine and Biology Society, pp. 403-

406, Orlando, FL, 2016.

C58. A. Youn**, *T. Chaspari*, R. Gupta, and S.S. Narayanan, "*Capturing the Structure of Electrodermal Activity with Deep Neural Networks*," Proc. International Conference of the IEEE Engineering in Medicine and Biology Society, Orlando, FL, 2016.

C59. *T. Chaspari*, S.C. Han, D. Bone, A.C. Timmons, L. Perrone, G. Margolin, and S.S. Narayanan, "*Dynamical Systems Modeling of Acoustic and Physiological Arousal in Young Couples*," Proc. Association for the Advancement of Artificial Intelligence (AAAI) Spring Symposia, pp. 21-24, Stanford, CA, 2016.

C60. R. Gupta, *T. Chaspari*, J. Kim, N. Kumar, D. Bone, and S.S. Narayanan, "*Pathological Speech Processing: State-of-the-art, current challenges, and future directions*," Proc. IEEE International Conference on Audio, Speech and Signal Processing (ICASSP), pp. 6470-6474, Shanghai, China, 2016.

C61. *T. Chaspari*, S. Al Moubayed, and J. Fain Lehman, "*Exploring children's verbal and acoustic synchrony: Towards promoting engagement in speech-controlled robot-companion games*," Proc. First International Workshop on Modeling Interpersonal Synchrony, International Conference on Multimodal Interaction (ICMI), pp. 21-24, Seattle, WA, 2015.

C62. R. Gupta, *T. Chaspari*, P. Georgiou, D.C. Atkins, and S.S. Narayanan, " *Analysis and modeling of the role of laughter in motivational interviewing based psychotherapy conversations*," Interspeech, pp. 1962-1966, Dresden, Germany, 2015.

C63. *T. Chaspari*, B. Baucom, A. C. Timmons, A. Tsiartas, L. Borovsky Del Piero, K. J. W. Baucom, P. Georgiou, G. Margolin, and S.S. Narayanan, "*Quantifying EDA synchrony through joint sparse representation: A case-study of couples' interactions*," Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 817-821, Brisbane, Australia, 2015.

C64. *T. Chaspari*, M. Goodwin, O. Wilder-Smith, A. Gulsrud, C. A. Mucchetti, C. Kasari, and S.S. Narayanan, "*A non-homogeneous Poisson Process model of skin conductance responses integrated with observed regulatory behaviors for Autism intervention*," Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 1611-1615, Florence, Italy, 2014.

C65. *T. Chaspari*, D. Dimitriadis, and P. Maragos, "*Emotion classification of speech using modulation features*," Proc. European Signal Processing Conference (EUSIPCO), Lisbon, Portugal, 2014.

C66. *T. Chaspari*, E. Mower Provost, and S.S. Narayanan, "*Analyzing the Structure of Parent-Moderated Narratives from Children with ASD Using an Entity-Based Approach*," Proc. Interspeech, pp. 2430-2434, Lyon, France, 2013.

C67. A. Tsiartas, *T. Chaspari*, A. Katsamanis, P. Kumar Gosh, M. Li, M. Van Segbroeck, A. Potamianos, and S.S. Narayanan, "*Multi-band long-term signal variability features for robust voice activity detection*," Proc. Interspeech, pp. 718-722, Lyon, France, 2013.

C68. D. Bone, *T. Chaspari* and K. Audhkhasi and J. Gibson and A. Tsiartas and M. Van Segbroeck and M. Li and S. Lee, and S.S. Narayanan, "*Classifying Language-Related Developmental Disorders from Speech Cues: the Promise and the Potential Confounds*," Proc. Interspeech, pp. 182-186, Lyon, France, 2013.

C69. D. Bone, C.C. Lee, *T. Chaspari*, M. P. Black, M. Williams, S. Lee, P. Levitt, and S.S. Narayanan, "*Acoustic-Prosodic, Turn-taking, and Language Cues in Child-Psychologist Interactions for Varying Social Demand*," Proc. Interspeech, pp. 2400-2404, Lyon, France, 2013.

C70. *T. Chaspari*, D. Bone, J. Gibson, C.C. Lee, and S.S. Narayanan, "*Using physiology and language cues for modeling verbal response latencies of children with ASD*," Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 3702-3706, Vancouver, BC, Canada, 2013.

C71. *T. Chaspari*, C.C. Lee, and S.S. Narayanan, "*Interplay between verbal response latency and physiology of children with autism during ECA interactions*," Proc. Interspeech, pp. 1319-1322, Portland, OR, 2012.

C72. *T. Chaspari*, E. Mower Provost, A. Katsamanis, and S.S. Narayanan, "*An acoustic analysis of shared enjoyment in ECA interactions of children with Autism*," Proc. IEEE International

Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 4485-4488, Kyoto, Japan, 2012.

C73. E. Mower, C.C. Lee, J. Gibson, *T. Chaspari*, M.E. Williams, and S.S. Narayanan, "*Analyzing the Nature of ECA Interactions in Children with Autism,*" Proc. Interspeech, pp. 2989-2993, Florence, Italy, 2011.

* advised students ** co-advised students

TECHNICAL REPORTS

1. A.H. Behzadan and *T. Chaspari*, "*Panel report on veteran, race, and gender bias in tech hiring, Virtual Workshop on Gender and Racial Bias in Tech Industry Hiring,*" DOI: 10.18738/T8/SLYTC9.

CONFERENCE ABSTRACTS

1. Begerowski, S. R., Khader, A. M., Paromita, P.*, *Chaspari, T.*, and Bell, S. T., "*Through Thick and Thin: Predicting Team Performance Using History of Interaction Patterns via Deep Learning Models,*" Society for Industrial Organizational Psychology (SIOP), Chicago, IL, 2024.

2. Paromita, P., Khander, A., Begerowski, S.R., Bell, S.T, and *T. Chaspari*, "*S*peech-based artificial intelligence for detecting micro-behaviors and predicting their effect on team performance," NASA Human Research Program Investigators' Workshop (IWS), Galveston, TX, 2024. (**accepted for oral presentation**)

3. Paromita, P., Khander, A., Begerowski, S.R., Bell, S.T, and *T. Chaspari*, "*A* linguistic analysis on the impact of team interactions on team performance during space exploration missions," NASA Human Research Program Investigators' Workshop (IWS), Galveston, TX, 2024.

4. J.B. Duong, K. Feng, G. Jumonville, and *T. Chaspari*, AI Bias in Passive Sensing Technology. In Carta, K.E. (Chair), and Timmons, A.C. (Chair), "*I*ntegrating Artificial Intelligence in Mental Health: Bias Mitigation, Inclusive Tools, and Personalized Digital Interventions," Symposium under review at the American Psychological Science Conference, San Francisco, CA (under review).

5. Paromita, P., Khander, A., Begerowski, S.R., Bell, S.T, and *T. Chaspari*, "*L*inguistic and Vocal Markers of Micro-behaviors between Team Members During Analog Space Exploration Missions," NASA Human Research Program Investigators' Workshop (IWS), Galveston, TX, 2023.

6. Mazza, N., Schulte, B., Feng, K.*, *Chaspari, T.*, and Arthur, Jr., W., "*E*xamining the Validity of Physiological Measures of Anxiety," Society for Industrial Organizational Psychology (SIOP), Boston, MA, 2023.

7. Begerowski, S. R., Khader, A. M., Paromita, P.*, *Chaspari, T.*, and Bell, S. T., "*W*hat's that supposed to mean? Capturing Micro-Behaviors in Teams," Society for Industrial Organizational Psychology (SIOP), Boston, MA, 2023.

8. Avramidis, K., Duong, J.B. Carta, K., Walters, S., Benamu, D., Jumonville, G., Freitag, G., Tutul, A.A., Cabrera, A., Comer, J.S., *Chaspari, T.*, Narayanan, S., and Timmons, A.C., "*Psychophysiology Sensing via Wearables to model Family Well-being,*", Symposium on Advancing Affective Science with Wearables, Society for Affective Science (SAS) Annual Conference, Long Beach, CA, 2023.

9. Feng, K.*, Duong, J. B., Carta, K. E., Walters, S., Benamu, D., Margolin, G., Timmons, and *Chaspari, T.*, "*P*ersonalized machine learning methods for ambulatory stress detection of couples using wearable devices," Society for Affective Science (SAS) Annual Conference, Long Beach, CA, 2023.

10. Walters, S. N., Carta, K. E., Duong, J. B., Benamu, D. N, Jumonville, G. A., Freitag, G. F., Avramidis, K., Tutul, Abdullah A., Narayanan, S., Chaspari, T., Comer, J. S., Ahle, M. W., Timmons, A. C., "*T*he use of ecological momentary assessment and at-home audio data to develop family conflict profiles," American Psychological Society (APS) Annual Convention, Washington, D.C., 2023.

11. Hagen, E., Sakib, M.N.**, Rani, N., Nirjhar, E.H.*, Nenkova, A.N., Chaspari, T. Chu, S.L., Behzadan, A., and Arthur, Jr., W., "*I*nterviewer Perceptions of Veterans in Civilian Employment

Interviews and Suggested Interventions," International Military Testing Association, 2022.

12. Li, W., Lee, C., Bian, J., *Chaspari, T.*, Masterson, J., Bologan, A., and Calvesbert, T., "*I*nterdisci- plinary Service-Learning Projects that Turn Small, Underserved Communities into Smart Cities," Association of Collegiate Schools of Planning (ACSP) Annual Conference, 2021.

13. Woltering, S., Nam, B., Paromita, P., *Chaspari, T.,* and Chu, S.L, "The AHA in the body," 29th Annual Meeting of the Southwest Cognition and Cognitive Neuroscience Society (AR-MADILLO), 2021.

14. Kim, J., Ahn, C.R., and *C*haspari, T., "*M*ulti-modal bio-sensing of physical and psychological distress of pedestrians: An interdisciplinary approach," Associated Schools of Construction 57th Annual International Conference, Chico, CA, 2021. **(Best Poster Award)**

15. Schacter, H., Pettit, C., Kim, Y., Sichko, S., Timmons, A., *C*haspari, T., Han, S, and Margolin, G., "*Teens in Vivo: Leveraging Novel Experience Sampling Methods to Study Adolescent Development in Everyday Life*," 2020 Society for Research in Adolescence (SRA) Biennial Meeting, San Diego, CA, 2020.

16. B. Lee, C.R. Ahn, P. Mohan**, *T*. Chaspari, and H.S. Lee, "*Capturing Regularity of ADL Routines Using Hierarchical Clustering Models*," ACM International Conference on Systems for Energy-Efficient Built Environments, Cities, and Transportation (BuildSys), New York, NY, 2019. **(Best Poster Runner-Up Award)**

17. P. Mohan**, B. Lee, *T*. Chaspari, and C.R. Ahn, "*Capturing Regularity of ADL Routines Using Hierarchical Clustering Models*," ACM International Conference on Systems for Energy-Efficient Built Environments, Cities, and Transportation (BuildSys), New York, NY, 2019.

18. G. Hadjiantonis* and *T. Chaspari*, "*Quantifying cognitive ability, general well being and work performance in everyday life using wearable devices*," Texas A&M LAUNCH Undergraduate Research Poster Presentation, Texas A&M University, College Station, TX, 2019.

19. A.C. Timmons, S.C. Han, Y. Kim, O. Shin, L. Perrone, *T. Chaspari*, S.S. Narayanan, and G. Margolin, "*Family-of-Origin Aggression, Physiological Stress Reactivity in Daily Life, and the Perpetration of Aggression in Young Adulthood*," Society for Research and Child Development (SRCD) Biennial Meeting, Austin, TX, 2017.

20. R. Arbel, M.E. Daspe, *T. Chaspari*, L. Perrone, C. Pettit, M. Friendly, M. Estafanous, and G. Margolin, "*Let's talk about loss: Adverse Childhood Experiences and Electrodermal Activity During Dating Couples' Loss Discussions*," Society for Research and Child Development (SRCD) Biennial Meeting, Austin, TX, 2017.

21. S.C. Han, A.C. Timmons, Y. Kim, H. Rasmussen, *T. Chaspari*, P. Bisla, M. Estafanous, P. Rajeev, K. Salehani, O. Shin, L. Perrone, and G. Margolin, "*Parent-to-child aggression and anger words in daily life among young adults*," Society for Research and Child Development (SRCD) Biennial Meeting, Austin, TX, 2017.

22. K. Leo, A.O. Crenshaw, J. Hogan, S. Bourne, *T. Chaspari*, K.J.W. Baucom, and B.R. Baucom, "*Demand/withdraw behavior, emotional expression, and physiological reactivity during marital conflict*," Association for Behavioral and Cognitive Therapies (ABCT) Annual Convention, Chicago, IL, 2015.

23. A.C. Timmons, *T. Chaspari*, L. Perrone, T. Feng, S.S. Narayanan, and G. Margolin, "*Dating Aggression and Physiological Connectedness in Everyday Life*," Biennial Conference of the Society for Ambulatory Assessment, State College, PA, 2015.

24. A.C. Timmons, T. Feng, *T. Chaspari*, S.S. Narayanan, and G. Margolin, "*An Evaluation of Novel Methodologies for Capturing Couple Dynamics in the Home Environment*," International Convention of Psychological Science (ICPS), Amsterdam, The Netherlands, 2015.

25. A.C. Timmons, *T. Chaspari*, S.S. Narayanan, and G. Margolin, "*The Association between Family Aggression History and Physiological Coregulation in Dating Relationships*," Society for Research and Child Development (SRCD) Biennial Meeting, Philadelphia, PA, 2015.

26. L. Stein, *T. Chaspari*, S.A. Cermak, S.S. Narayanan, A. Schell, and M.E. Dawson, "*Using a Wireless Measure of Electrodermal Activity: Comparisons to Traditional Wired Equipment*," International Meeting for Autism Research (IMFAR), Salt Lake City, UT, 2015.

27. L. Stein, *T. Chaspari*, S.A. Cermak, S.S. Narayanan, A. Schell, and M.E. Dawson, "*Preliminary*

validation of the Q-Sensor: An innovative measure of real world electrodermal activity," Society of Pediatric Psychology Annual Conference (SPPAC), San Diego, CA, 2015.

28. *T. Chaspari*, C.C. Lee, M.P. Black, and S.S. Narayanan, "*Analyzing the Physiological Synchrony of Children with Autism and their Parents with Signal Processing Techniques*," International Meeting for Autism Research (IMFAR), Toronto, Canada, 2012.

29. M. P. Black, D. Bone, *T. Chaspari*, A. Tsiartas, P. Gorrindo, M. E. Williams, P. Levitt, and S.S. Narayanan, "*Signal Processing Tools for the Automatic Analysis of Child-Psychologist Interactions*," International Meeting for Autism Research (IMFAR), San Diego, CA, 2011.

* advised students ** co-advised students

INVITED TALKS AND LECTURES

1. "Challenges and opportunities in fostering trustworthy machine learning for multimodal data modeling in-the-wild", Keynote Speaker at The 5th Workshop on Modeling Socio-Emotional and Cognitive Processes from Multimodal Data In-the-Wild (MSECP-Wild), ACM International Conference on Multimodal Interaction (ICMI), Paris, France, 2023

2. "Human-Centered AI: Exploring Bias, Privacy, and Collaborative Decision-Making for Healthcare Advancements", AI In Health Conference, Rice University, Houston, TX, 2023. `https://www.youtube.com/watch?v=TJxUHYUytq0&list=PLcsG4X8Zn_UD0RemNKIfjqunT50S59n9C&index=8`

3. "Vocal and linguistic analysis of micro-behaviors in diverse team interactions," IEEE Women in Engineering, IEEE ABQ Section Talk, 2023

4. "Fundamentals and Applications of Voice-Based Affect Recognition," Affective Computing Course (Dr. Nadia Berthouze), University College London, 2023

5. "Emotion and Affective Speech Processing/Technology," Invited survey talk, Interspeech, 2022. `https://www.youtube.com/watch?v=_sUxrpch6bU`

6. "Personalized measures of invisible states for augmenting human cognition," 1st Intl. Symposium on Understanding Inner States of Humans using Measurements of "Invisibles" – "Empatho-Kinaesthetic" Sensing, IEEE-EMBS BHI/BSN, 2022

7. "Investigating dimensions of trust in human-AI collaboration for a speech-based data analytics task," Hybrid DoD 6.1 Basic Research Conference, 2022

8. "Toward trustworthy human-centered machine intelligence: Examining robustness, fairness, and privacy-preservation in multimodal models of human behavior," University of Glasgow, 2022 (virtual)

9. "Human-centered computing for well-being and workforce re-skilling: From reliable machine intelligence to trustworthy human-technology partnership," University of California Los Angeles, 2022 (virtual)

10. "Trustworthy machine intelligence for well-being and healthcare," Cornell Tech, 2022 (virtual)

11. "Trustworthy human-centered machine intelligence for well-being and healthcare," Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA, 2022

12. "Investigating Human Trust in AI: A Case Study of Human-AI Collaboration on a Speech-Based Data Analytics Task," Trusted AI Challenge Grant Award Presentations, AFRL/RI Rome, NY

13. "Human-centered machine intelligence: From robust signal analytics to trustworthy human-technology partnership," Center for Information & Systems Engineering, Boston University, Boston, MA, 2022

14. "Human-centered computing: From robust signal analytics to trustworthy human-AI partnership," Institute of Cognitive Science, University of Colorado Boulder, Boulder, CO, 2022

15. "Human-centered computing: From robust signal analytics to trustworthy human-AI partnership," Rehg Lab Meeting, School of Interactive Computing, Georgia Institute of Technology, 2022 (virtual)

16. "Human-centered machine intelligence: From robust signal analytics to trustworthy human-AI partnership," School of Electrical Engineering and Telecommunications, University of New South Wales, 2022 (virtual)

17. "Enabling trustworthy speech technologies for mental healthcare," NSF - Cleveland Clinic

Workshop, 2021. URL: `http://webcast1.ccf.org/viewerportal/ccfe/video.vp?programId=esc_program%3A134592` (virtual)

18. "Exploring Fairness and Socio-demographic Bias in Machine Learning," Texas A&M Data Science Institute, 2021 (virtual)
19. "Human-centered computing for health and well-being: From reliable machine intelligence to trustworthy human-technology partnerships," University of Houston, 2021 (virtual)
20. "Human-centered computing for health and well-being: From reliable machine intelligence to trustworthy human-technology partnerships," National Technical University of Athens, 2021 (virtual)
21. "Investigating human trust in AI: A case-study of human-AI collaboration on a speech-based data analytics task," Trusted AI At Scale Workshop, AFOSR, 2021 (virtual)
22. "Investigating human trust in AI: A case-study of human-AI collaboration on a speech-based data analytics task," AFOSR PI Meeting, Trust & Influence Program, 2021 (virtual)
23. "How can emotion recognition and VR be used for interview training?," Texas A&M Institute for Engineering Education & Innovation, 2021 (virtual)
24. "Designing personalized and privacy-aware machine learning for promoting well-being, health, and education," North Carolina State University, Department of Electrical Engineering, 2020 (virtual)
25. "Designing personalized and privacy-aware machine learning for promoting well-being, health, and education," Texas A&M University, Department of Statistics, 2020 (virtual)
26. "Metric learning techniques to capture relativity in human behavior," TILES Summer School, 2020 (virtual)
27. "Designing machine learning for addressing individual variability, data scarcity, and privacy concerns in health and education," UT San Antonio, 2020 (virtual)
28. "Personalized, low-resource, and privacy-aware machine learning models of human behavior," Amazon Lab126, San Jose, CA, 2020
29. "Quantifying the effect of virtual reality interventions to public speaking anxiety," TAMIDS Workshop on Data Science/AI/ML in Education, Texas A&M Data Science Institute, College Station, TX, 2019
30. "Computational models of human behavior for education and well-being applications," Applied Mathematics Undergraduate SEminar (AMUSE), Department of Statistics, Texas A&M University, College Station, TX, 2019
31. "Population-specific models of human behavior for well-being and education," University of Texas Dallas, Dallas, TX, 2019
32. "Coupling individual characteristics, contextual factors, and environmental stimuli for augmenting human performance," Army Research Lab, Aberdeen, MD, 2019
33. "Exploring physiological signals for augmenting human well-being in the construction and built environment," Department of Construction Science, Texas A&M University, College Station, TX, 2019
34. "Human bio-behavioral signals for the development of novel real-life applications," Rice University, Houston, TX, 2018
35. "Bio-Behavioral Signals and Systems: From signal representations to novel health applications," CU Boulder, San Diego State University, SUNY Buffalo, Texas A&M, Washington University in St. Louis, 2017
36. "Knowledge-driven physiological representations for analyzing and interpreting wearable sensor signals," Big Data and Human Behavior Symposium, University of Southern California, 2016 **(Best presentation award)**
37. "Quantifying Physiological Synchrony in Romantic Relationships with Joint Sparse Representation," Computational Mental Health Workshop, Society for Personality and Social Psychology (SPSP) Annual Convention, 2016
38. "Knowledge-driven representations of physiological signals: Developing measurable indices of non-observable behavior," Flash talk, USC Ming Hsieh Institute Research Festival, University of Southern California, 2015
39. "Markov Chain Monte Carlo inference of parametric dictionaries for sparse Bayesian approxi-

mations," Flash talk, MBMC Workshop: Communications, Inference and Computing in Molecular and Biological Systems, University of Southern California, 2015

40. "Introduction to Biomedical Signal Processing," Wireless and Mobile Networks Design and Laboratory, University of Southern California, 2015

41. "Analyzing the structure of narratives from children with ASD," Annual Meeting of NSF Expedition Project in Computational Behavioral Science, Carnegie Mellon University, 2013

STUDENTS
ADVISED

Post-Doctoral Research Associates

1. Jinwoo Kim, 2022-2023 (Position after graduation: Gachon University)

Ph.D. Students

1. Jinwoo Kim (co-advised), Graduated 2022
2. Md Nazmus Sakib (co-advised), Graduated 2022
3. Projna Paromita, Graduated 2023
4. Md Ehsanul Haque Nirjhar, Estimated 2024
5. Kexin Feng, Estimated 2025
6. Abdullah Aman Tutul, Estimated 2025
7. Raquel Yupanqui, Estimated 2027

M.S. Students

1. Jason Raether, Thesis title: "*Investigating the effects of physiology-driven vibro-tactile biofeedback for mitigating state anxiety during public speaking*" (2022, Position after graduation: Google)
2. Ravikiran Ramesh, Thesis title: "*Emotion Detection with Privacy Preservation Using Adversarial Learning*" (2021)
3. Shravani Sridhar, Thesis title: "*Quantifying the Impact of Speech Intelligibility in Task Performance via Physiological Signals*" (2021)
4. Varsha Venkataramu, Thesis title: "*Personalized estimation of daily emotions and interpersonal conflict between romantic partners via metric learning*" (2021)
5. Akansha Agarwal, Thesis title: "*Exploring real-time bio-behaviorally aware feedback interventions for mitigating public speaking anxiety*" (2021, Position after graduation: Cisco)
6. Manseerat Batra, Thesis title: "*Toward sensor-based early diagnosis of cognitive impairment of elderly adults in smart-home environments using Poisson process models*" (2021)
7. Prakhar Mohan, Thesis title: "*Quantifying elderly routine behaviors in a smart home environment*" (2020, Position after graduation: Amazon)
8. Vansh Narula, Thesis title: "*Privacy-Preserving Image-Based Emotion Recognition*" (2020, Position after graduation: Wallmart Research)
9. Megha Yadav, Thesis title: "*Detecting Public Speaking Anxiety in Real-Life*" (2019, Position after graduation: Cisco)
10. Alyssa Pena (2018)
11. Krit Gupta (2019, Position after graduation: Amazon)
12. Niraj Goel (2018, Position after graduation: Amazon)
13. Aditya Gujral (2018, Position after graduation: Uber)

B.S. Students

1. Alexandria Curtis
2. Albin "Kyle" Myscich, Thesis title: "*A linguistic analysis to quantify over-explanation and under-explanation in job interviews*" (2022)
3. Vinesh Ravuri
4. Anjali Segu
5. Huong "Penny" Vo

6. Michael Yang
7. Jasmine Leu, Thesis title: "*Exploring psycholinguistic features related to public speaking anxiety*" (2021)
8. Shreya Nakkala, Thesis title: "*Analyzing and Understanding the Impact of COVID-19 Era Vlogs*" (2021)
9. Sacheth Swaminathan, Thesis title: "*Using linguistic and auditory analysis to diagnose anxiety in public speaking*" (2021)
10. Venkata Subbu Lakshmi Aparna Dubagunta (2020)
11. Minji Choi (2020)
12. Kexin Feng (2020)
13. Cameron Lopez, Thesis title: "*Exploring transfer learning focused on physiological signals for emotion recognition*" (2020)
14. Siman Shrestha (2020)
15. Maggie von Ebers (2020)

B.S. Interns

1. Abd-Allah El Attar (2021)
2. George Hadjiantonis (2019)
3. Yi Shen (2018)

Ph.D. Thesis Examiner

1. Jian Sun, The University of Sydney Graduation: 2023

SERVICE AND PROFESSIONAL ACTIVITIES

Professional Societies

Institute of Electrical and Electronics Engineers (IEEE), Member
Engineering in Medicine and Biology Society (EMBS), Member
Association for Computing and Machinery (ACM), Member

Review Services

ACM Health • Annals of Biomedical Engineering • Behavioral Brain Research • Behavior Research Methods • Clinical Psychology and Pharmacology • Frontiers in Digital Health • IEEE Journal of Biomedical and Health Informatics • IEEE Sensors Journal • IEEE Transactions on Affective Computing • IEEE Signal Processing Letters • IEEE Transactions on Applied Perception • IEEE Transactions on Biomedical Engineering • IEEE Transactions on Human-Machine Systems • International Journal of Human-Computer Studies • Journal of Electrical and Computer Engineering • Journal of Optimization Theory and Applications • MDPI Journal of Sustainability • MDPI Sensors • Nature Scientific Reports • PlosOne

ACM International Conference on Multimodal Interaction • ACM International Conference on Pervasive and Ubiquitous Computing • IEEE International Joint Conference on Neural Networks • IEEE Control Systems Society Conference Management System • IEEE Body Sensor Networks • IEEE/ACM Conference on Connected Health • IEEE Visualization

Journal Editorials

- Editor, Elsevier Computer Speech & Language, 2021-Present
- Guest Editor, Special Issue on Multimodal Interaction Technologies for Mental Well-Being, Frontiers in Computer Science, 2022
- Guest Editor, Special Issue on Unobtrusive Physiological Measurements, IEEE Transactions on Affective Computing, 2022
- Guest Editor, Deep Image/Video Feature Engineering for Human-Computer Interaction, Elsevier Signal Processing Image Communication (SPIC), 2020
- Guest Editor, Sensors for Behavioral Science - Social, Affective, and Cognitive Science Perspec-

tives, MDPI Sensors, 2020

Professional Society Committees

- Organizing Committee Member, PROmotinG DiveRsity in Signal ProcESSing (PROGRESS), IEEE Signal Processing Society, 2023-Present

Conference Organization Committees

- Program Co-Chair, ACM International Conference on Multimodal Interaction (ICMI) 2024
- Associate Editor, IEEE Engineering in Medicine and Biology Conference (EMBC) 2023
- Doctoral Consortium Co-Chair, IEEE Affective Computing and Intelligent Interaction (ACII) 2023
- Workshop Co-Chair, ACM International Conference on Multimodal Interaction (ICMI) 2023
- PROmotinG DiveRsity in Signal ProcESSing (PROGRESS) Workshop Local Chair, IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2023
- Student and Young Professional Activities Co-Chair, IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2023
- Session Organizer, Data Science for Behavioral and Mental Health, Workshop on Advances in Data Science: Theory, Methods, and Computation, Institute for Applied Mathematics and Computational Science, TAMU 2022
- Publicity Co-Chair, IEEE/ACM Connected Health: Applications, Systems and Engineering Technologies (CHASE) 2022
- Doctoral Consortium Co-Chair, ACM International Conference on Multimodal Interaction (ICMI) 2022
- Sponsorship Co-Chair, International Conference on Affective Computing & Intelligent Interaction (ACII) 2022
- Co-Chair, Health Day, ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2022
- Reviewer, Association for the Advancement of Affective Computing (AAAC) Dissertation Award
- Publicity Co-Chair, IEEE Affective Computing and Intelligent Interaction (ACII) 2021
- Senior Program Committee Member, Socially-Informed AI for Healthcare: Understanding and Generating Multimodal Nonverbal Cues, ACM International Conference on Multimodal Interaction (ICMI) 2021
- Associate Editor, IEEE Engineering in Medicine and Biology Conference (EMBC) 2021
- Sponsorship Co-Chair, International Conference on Affective Computing & Intelligent Interaction (ACII) 2021
- Local Organizing Co-Chair, ACM Intelligent User Interfaces (IUI) 2021
- Workshop Co-Chair, Transdisciplinary AI (TransAI) 2021
- Conference Program Committee, PErvasive Technologies Related to Assistive Environments (PETRA) 2021
- Workshop Co-Chair, Transdisciplinary AI (TransAI) 2020
- Publication Co-Chair, ACM International Conference on Multimodal Interaction (ICMI) 2020
- Associate Editor, IEEE Engineering in Medicine and Biology Conference (EMBC) 2020
- Technical Program Committee Member, Audio Visual Emotion Challenge (AVEC) 2019
- Program Committee Member, Transdisciplinary AI 2019
- Senior Program Committee Member, Interspeech 2019
- Associate Editor, IEEE Engineering in Medicine and Biology Conference (EMBC) 2019
- Senior Program Committee Member, IEEE Body Sensor Networks (BSN) 2019
- Doctoral Consortium Co-Chair, International Conference on Affective Computing & Intelligent Interaction (ACII) 2019
- Senior Program Committee Member, ACM International Conference on Multimodal Interaction (ICMI) 2018
- Workshop Chair, IEEE Body Sensor Networks (BSN) 2018
- Local Organizing Co-Chair, IEEE Affective Computing and Intelligent Interaction (ACII) 2017

Workshop Committees

- Organizing Committee Member, Trustworthy Speech Processing (TSP), IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2024
- Organizing Committee Member, Trustworthy and responsible data analytics for mental health, IEEE Conference on Biomedical Health Informatics (BHI), 2023
- Organizing Committee Member, 4th International Workshop on Multimodal Affect and Aesthetic Experience (MAAE), ACM International Conference on Multimodal Interaction (ICMI), 2023
- Organizing Committee Member, 3rd International Workshop on Multimodal Affect and Aesthetic Experience (MAAE), ACM International Conference on Multimodal Interaction (ICMI), 2022
- Organizing Committee Member, 2nd International Workshop on Multimodal Affect and Aesthetic Experience (MAAE), ACM International Conference on Multimodal Interaction (ICMI), 2021
- Organizing Committee Member, 1st International Workshop on Multimodal Affect and Aesthetic Experience (MAAE), ACM International Conference on Multimodal Interaction (ICMI), 2020
- Organizing Committee Member, Workshop for Young Female Researchers in Speech Science & Technology, ISCA Interspeech 2019
- Organizing Committee Member (with Daphney Stavroula Zois, Charalampos Chelmis, Reihaneh Rabbany, Yasin Yilmaz), Signal Processing and Machine Learning for Social Good, IEEE Global Conference on Signal and Information Processing (GlobalSIP) 2019
- Organizing Committee Chair (with Angeliki Metallinou, Leah Stein, Amir Behzadan), Human-Habitat for Health (H3): Human-habitat multimodal interaction for promoting health and well-being in the Internet of Things era, ACM International Conference on Multimodal Interaction (ICMI) 2018

Conference Session Chair/Co-Chair

- Session Chair, Conversation, Dialogue Systems and Language Analytics, ACM International Conference on Multimodal Interaction (ICMI) 2021
- Session Chair, Signal Processing and Machine Learning for Social Good I, IEEE Global Conference on Signal and Information Processing (GlobalSIP) 2019
- Session Chair, Physiological Modeling, ACM International Conference on Multimodal Interaction (ICMI) 2018
- Session Chair, Energy Efficient Design and Sensing, IEEE Body Sensor Networks (BSN) 2018

Proposal Review Panelist

- National Science Foundation, Directorate for Computer & Information Science & Engineering (CISE), 2024
- National Science Foundation, Directorate for Computer & Information Science & Engineering (CISE), 2023
- National Science Foundation, Directorate for Computer & Information Science & Engineering (CISE), 2022
- National Science Foundation, Directorate for Engineering (ENG), 2022
- Swiss National Science Foundation (SNSF), 2022
- Dutch Research Council (NWO), Domain Applied and Engineering Sciences (AES), 2022
- National Science Foundation, Directorate for Engineering, 2021
- National Science Foundation, Directorate for Education and Human Resources, 2021
- National Science Foundation, Directorate for Computer & Information Science & Engineering (CISE), 2021
- Canada Research Coordinating Committee, New Frontiers in Research Fund – Exploration, 2020
- National Science Foundation, Directorate for Computer & Information Science & Engineering (CISE), 2020
- Dutch Research Council (NWO), Domain Applied and Engineering Sciences (AES), 2020
- National Science Foundation, Directorate for Education & Human Resources (EHR), 2019
- National Science Foundation, Directorate for Computer & Information Science & Engineering (CISE), 2019

- National Science Foundation, Directorate for Computer & Information Science & Engineering (CISE), 2017

University Service

- Member, University of Colorado Boulder CS Faculty Hiring Committee, 2024
- Member, University of Colorado Boulder Graduate Committee, 2024
- Member, Texas A&M Council of Principal Investigators, 2021-2023
- Member, Texas A&M CSCE Faculty Hiring Committee, 2022-2023
- Member, Texas A&M Qatar Faculty Hiring Committee, 2022
- Member, Texas A&M CSCE Advisory Committee, 2019-2020, 2020-2021, 2021-2022, 2022-2023
- Member, Texas A&M CSCE PhD Admissions Committee, Texas A&M University, 2017-2019, 2020-2021, 2021-2022
- Member, Texas A&M CSCE MS in AI Committee, Texas A&M University, 2021-2022

Community Outreach & Education

- Co-Lead, Google Summer REU on Data Science, Co-organized with Risa Meyer, Rice University (Lead) and Noushin Gaffari, PVAMU (Co-Lead) 2023
- Panel speaker, AI in Health Conference, Rice Ken Kennedy Institute, 2022
- Panel moderator, AI/OR Workshop, Computing Community Consortium (CCC), 2022
- Invited speaker, TAMU Data Science Club, 2022
- Invited speaker, K12 GenCyber Summer Camp, Texas A&M Cybersecurity Center, 2021
- Faculty mentor, Summer Research Internship, Halliburton Engineering Global Programs, 2018-2019, 2021
- Invited speaker, CLC Educational Institute, 2021
- Invited speaker, TAMU Institute for Engineering Education & Innovation, Gender and racial bias in tech industry hiring, "How Emotion Recognition & VR can be used for job interview training?," 2021
- Panel speaker, Roundtable on Human-Centered AI, Dot Dot Dot Media, 2020
- Faculty judge, TAMU Hack, Texas A&M University, 2018
- Panel speaker, 9th Aggie Women in Computer Science Leadership Workshop, Texas A&M University, 2018
- Panel speaker, Texas A&M Graduate Society of Women Engineers, Texas A&M University, 2018
- Faculty mentor, Research Experience for Teachers and Young Scholars program, NSF Engineering Research Center at Texas A&M (PATHS-UP), 2018

MEDIA COVERAGE

- **Responsible AI (2022-2024)**
  The work focuses on designing trustworthy human-centered AI algorithms has been featured in *Texas A&M Today*, *KAGS (NBC)*, and *WWL* (appeared four times)
  https://www.kagstv.com/article/news/local/texas-a-m-u/experts-from-texas-am-share-their-t499-88545380-8501-469d-93bc-76bcc1e93285
  https://www.audacy.com/podcast/wwl-first-news-with-tommy-tucker-34f17/episodes/what-is-ar
  https://www.audacy.com/podcast/wwl-first-news-with-tommy-tucker-34f17/episodes/just-how-g
- **Fairness and Bias in AI (2021)**
  The work focuses on identifying sources of social bias in AI and has been featured in *Texas A&M* and local news websites (*KBTX*)
  https://www.kbtx.com/2021/08/19/treat-day-am-professor-wins-prestigious-award/
- **Privacy-preserving speech emotion recognition (2019)**
  The work focused on learning privacy-preserving speech patterns for emotion recognition has been featured in *Texas A&M* websites.
- **Public speaking bio-feedback interventions (2018)**
  The work on modeling public speaking anxiety through wearable devices and developing automated real-life interventions has been reported in *Communications of the ACM*, *Future Science News*, *Texas A&M Spirit Magazine*, and *Texas A&M* websites.

- **Romantic couples' automatic conflict detection in real-life (2017-2018)**
  The interdisciplinary work on modeling and quantifying romantic couples' relationships has been reported in *Wall Street Journal*, *NBC*, *BBC Future*, *Daily Mail*, *TechCrunch*, *IEEE Spectrum*, *Digital Trends*, *CNET*, *Yahoo News*, *Science Newsline*, etc.