Ting Dang

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Research Interests

My research interests focus on human-centered AI for sensing and computing in health monitoring. Specifically, they include:

- **Machine Learning in Mobile Health:** Pioneering the development of machine learning algorithms tailored for diverse health applications, aimed at enhancing the reliability and effectiveness of ML in screening, diagnosis, and monitoring.
- **Speech and Audio Processing:** Investigating advanced signal processing and machine learning techniques for speech and related applications.
- **Time Series Modelling:** Enhancing representation learning for physiological time series in real-world challenges.
- **Trustworthy Deep Learning (DL):** Improving the interpretability and generalization of DL models for more reliable health outcome predictions.
- **Wearable Sensing:** Examining novel sensing opportunities for health monitoring using new forms of resource-constrained IoT wearable devices.

Experience

Senior Lecturer *Mar 2024 – Present*
University of Melbourne (UoM), Australia

Senior Research Scientist *Oct 2022 – Dec 2023*
Nokia Bell Labs, UK

Senior Research Associate *Jan 2021 – Oct 2022*
University of Cambridge, UK

Research Associate *May 2018 – Dec 2020*
University of New South Wales (UNSW), Australia

Education

Ph.D. *Aug 2014 – Jun 2018*
University of New South Wales (UNSW), Australia

M.Eng. *Sep 2012 – Mar 2015*
Northwestern Polytechnical University, China

B.Eng. *Sep 2008 – Mar 2012*
Northwestern Polytechnical University, China

Selected Honors

- Finalist, Rising Star (Academics), STEM Women in Color Award 2025.
- Best Poster Award (PhD Forum) at AJCAI 2024.
- Best Paper Award at ACII 2023.
- Top 3% of accepted papers at ICASSP 2023.
- Shortlisted candidate for Asian Dean's Forum 2022 The Rising Stars - Women in Engineering Grant, 2022.
- IEEE Early Career Writing Retreat Grant, 2019.
- Distinguished Reviewer Award for IEEE Transactions on Affective Computing, 2019.
- Outstanding Reviewer Award for Expert Systems With Applications (Elsevier), 2018.
- ISCA (International Speech Communication Association) Grant, Interspeech, Stockholm 2017.

- Highly Commended Presentation (6 finalists) at Postgraduate Research Symposium, UNSW, 2017.
- 2nd place in Audio/Video Emotion Challenge (AVEC) Workshop, ACM Multimedia, 2015.
- Tuition Fee Scholarship (TFS) plus Research Stipend from UNSW, 2014-2018.
- Top-up Scholarship from Data61, CSIRO, Australia, 2014-2018.
- First-Class Prize, Underwater Signal Technology Competition, NWPU, 2013.
- Excellent Bachelor Graduation Thesis Award, NWPU, 2012.

Grants and Contracts

- **Benchmarking Auditory Cognitive Reasoning in Audio-Language Models**
  Lead PI, Google Research Fund, $85,000 (2025-2026)
- **AI Centre for the Empowerment of Human Learning**
  Co-PI, Norway National Centre for AI and Learning, $300,000 (2026-2028)
- **Emotional Speech Generation for Intelligent Dialogue Systems**
  Lead PI, Wuhan University Collaborative Seed Grant, ¥50,000 (2025-2026)
- **Multimodal LLMs for Mobile Health**
  Lead PI, OpenAI Researcher Access Grant, $16,000 (2024)
- **Speech LLMs for Health**
  Lead PI, Google Cloud Research Credits, $5,000 (2024)

Publications and Patents

Journals

[70] Wu, J., Dang, T., Sethu, V., Ambikairajah, E. (2025). How many raters do we need? Analyses of uncertainty in estimating ambiguity-aware emotion labels. *IEEE Transactions on Affective Computing*. **[Best of ACII 2023]**

[69] Liu, M., Zhu, M., Dong, Q., Dang, T.*, Ma, J., Ren, J., Xia, F. (2025). Data-Efficient Psychiatric Disorder Detection via Self-supervised Learning on Frequency-enhanced Brain Networks. *ACM Transactions on Computing for Healthcare*.

[68] Vavaroutas, S., Dang, T., Rocheteau, E., Mascolo, C. (2025). SQUIREDL: Sparse Sequence-to-Sequence Uncertainty Estimation in Evidential Deep Learning. *ACM Transactions on Computing for Healthcare*.

[67] Tang, X., Huang, J., Lin, Y., Dang, T., Cheng, J. (2025). Speech Emotion Recognition via CNN-Transformer and Multidimensional Attention Mechanism. *Speech Communication*.

[66] Dang, T., Jia, H. (2024). Multimodal Large Language Models in Human-centered Health: Practical Insights. *IEEE Pervasive Computing*.

[65] Butkow, K. J., Dang, T., Ferlini, A., Ma, D., Liu, Y., & Mascolo, C. (2024). An evaluation of heart rate monitoring with in-ear microphones under motion. *Pervasive and Mobile Computing*.

[64] Xia, T., Dang, T., Han, J., Qendro, L., & Mascolo, C. (2024). Uncertainty-aware Health Diagnostics via Class-balanced Evidential Deep Learning. *IEEE Journal of Biomedical and Health Informatics*.

[63] Ma, D., Dang, T., Ding, M., & Balan, R. (2024). ClearSpeech: Improving Voice Quality of Earbuds Using Both In-Ear and Out-Ear Microphones. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 7(4), 1-25.

[62] Demirel, B. U., Dang, T., Al-Naimi, K., Kawsar, F., & Montanari, A. (2024). Unobtrusive Air Leakage Estimation for Earables with In-ear Microphones. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 7(4), 1-29.

[61] Dang, T., Spathis, D., Ghosh, A., Mascolo, C. (2023). Human-centered AI for mobile health sensing: challenges and opportunities. *Royal Society Open Science*. **[Featured in Special Collection]**

[60] Han, J., Montagna, M., Grammenos, A., Xia, T., Bondareva, E., Brown, C., Chauhan, J., Dang, T., Spathis, D., Floto, A., Cicuta, P., Mascolo, C. (2023). Comparing Listening Performance for COVID-19 Detection between Clinicians and Machine Learning: A Comparative Study. *Journal of Medical Internet Research*.

[59] Wickramasinghe, B., Ambikairajah, E., Sethu, V., Epps, J., Li, H., & Dang, T. (2023). DNN controlled adaptive front-end for replay attack detection systems. *Speech Communication*, 154, 102973.

[58] Dang, T., Han, J.*, Xia, T.*, Spathis, D., Bondareva, E., Brown, C., Chauhan, J., Grammenos, A., Hasthanasombat, A., Floto, A., Cicuta, P., Mascolo, C. (2022). Exploring Longitudinal Cough, Breath, and Voice Data for COVID-19 Disease Progression Prediction via Sequential Deep Learning. *Journal of Medical Internet Research*. **[Media Coverage]**

[57] Wu, J., Dang, T., Sethu, V., Ambikairajah, E. (2022). A Novel Markovian Framework for Integrating Absolute and Relative Ordinal Emotion Information. *IEEE Transactions on Affective Computing*.

[56] Han, J.*, Xia, T.*, Spathis, D., Bondareva, E., Brown, C., Chauhan, J., Dang, T., Grammenos, A., Hasthanasombat, A., Floto, A., Cicuta, P., Mascolo, C. (2021). Sounds of COVID-19: Exploring Realistic Performance of Audio-based Digital Testing. *NPJ Digital Medicine* (Nature Portfolio). **[Media Coverage]**

[55] Wu, J., Dang, T., Sethu, V., Ambikairajah, E. (2021). Multimodal Affect Models: An Investigation of Relative Salience of Audio and Visual Cues for Emotion Prediction. *Frontiers in Computer Science*.

[54] Dang, T., Sethu, V., Ambikairajah, E. (2018). Compensation Techniques for Speaker Variability in Continuous Emotion Prediction. *IEEE Transactions on Affective Computing*.

Conferences

[53] Hu, C., Pham, H., Dang, T., Li, J., Balan, R., Ma, D. (2026). From Cheap to Chic: Enhancing Music Playback Quality of Budget Earphones via Hardware-Aware Learning. In *Proceedings of the ACM Conference on Embedded Networked Sensor Systems* (SenSys), 2026.

[52] Dong, J., Jia, H., Chatterjee, S., Ghosh, A., Bailey, J., Dang, T. (2025). E-BATS: Efficient Backpropagation-Free Test-Time Adaptation for Speech Foundation Models. In *Advances in Neural Information Processing Systems* (NeurIPS), 2025.

[51] Gao, Y., Scamarcia, M., Fernandez-Marques, J., Naseri, M., Ng, C., Stripelis, D., Li, Z., Shen, T., Bai, J., Chen, D., Zhang, Z., Hu, R., Song, I., KangYoon, L., Jia, H., Dang, T., Wang, J., Liu, Z., Beutel, D., Lyu, L., Lane, N. (2025). FlowerTune: A Cross-Domain Benchmark for Federated Fine-Tuning of Large Language Models. In *Advances in Neural Information Processing Systems, Datasets and Benchmarks Track* (NeurIPS), 2025.

[50] Wang, X., Dang, T., Zhang, X., Kostakos, V., Witbrock, M. J., Jia, H. (2025). HealthSLM-Bench: Benchmarking Small Language Models for Mobile and Wearable Healthcare Monitoring. In *Advances in Neural Information Processing Systems, GenAI4Health Workshop* (NeurIPS), 2025.

[49] Zhang, S., Jia, H., Li, S., Dang, T., Hu, Y., Yi, X., Li, H. (2025). Position: Human-Robot Interaction in Embodied Intelligence Demands a Shift From Static Privacy Controls to Dynamic Learning. In *Advances in Neural Information Processing Systems, LAW Workshop* (NeurIPS), 2025.

[48] Liu, M., Wang, C., Chen, L., Le, N., Tewari, N., Dang, T., Ma, J., Xia, F. (2025). Structure Matters: Brain Graph Augmentation via Learnable Edge Masking for Data-efficient Psychiatric Diagnosis. In *Proceedings of the Australasian Joint Conference on Artificial Intelligence* (AJCAI), 2025.

[47] Dang, T., Jeyaseelan, T., Ambikairajah, E., Sethu, V. (2025). Characterization of Speech Similarity Between Australian Aboriginal and High-Resource Languages: A Case Study on Dharawal. In *Proceedings of the Asia-Pacific Signal and Information Processing Association Annual Summit and Conference* (APSIPA ASC), 2025.

[46] Xiao, Y., Dang, T., Das, R. (2025). RawTFNet: A Lightweight CNN Architecture for Speech Anti-spoofing. In *Proceedings of the Asia-Pacific Signal and Information Processing Association Annual Summit and Conference* (APSIPA ASC), 2025.

[45] Jia, H., Fu, S., Xia, F., Kostakos, V., Dang, T. (2025). Beyond Scale: Small Language Models are Comparable to GPT-4 in Mental Health Understanding. In *Proceedings of the International Conference on Affective Computing and Intelligent Interaction, Late Breaking Results* (ACII), 2025.

[44] Wei, X., Dang, T.*, Al-Naimi, K., Liu, Y., Kawsar, F., Montanari, A. (2025). Listening to the Mind: Earable Acoustic Sensing of Cognitive Load. In *Companion of the ACM International Joint Conference on Pervasive and Ubiquitous Computing and the ACM International Symposium on Wearable Computers* (UbiComp/ISWC), 2025.

[43] Zhang, S., Ma, Y., Hu, Y., Dang, T., Jia, H., Yi, X., Li, H. (2025). From Patient Burdens to User Agency: Designing for Real-Time Protection Support in Online Health Consultations. In *Companion of the ACM International Joint Conference on Pervasive and Ubiquitous Computing and the ACM International Symposium on Wearable Computers* (UbiComp/ISWC), 2025.

[42] Jia, H., Chatterjee, S., Keikhosrokiani, P., Dang, T. (2025). WellComp 2025: Eighth International Workshop on Computing and Software Systems for Well-Being. In *Companion of the ACM International Joint Conference on Pervasive and Ubiquitous Computing and the ACM International Symposium on Wearable Computers* (UbiComp/ISWC), 2025.

[41] Chen, J., You, L., Dang, T., Liu, X., Zhang, H. (2025). Self-Supervised rU-net With Spectrum Branch: A Novel Framework for Subject-independent Emotion Recognition based on Peripheral Physiological Signals. In *Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics* (SMC), 2025.

[40] Halim, J., Wang, S., Jia, H., Dang, T. (2025). Token-Level Logits Matter: A Closer Look at Speech Foundation Models for Ambiguous Emotion Recognition. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2025.

[39] Ambikairajah, E., Wu, J., Dang, T., Sethu, V. (2025). A Study of Speech Embedding Similarities Between Australian Aboriginal and High-Resource Languages. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2025.

[38] Izhar, A., Japar, N., Idris, N., Dang, T. (2025). MicarVLMoE: A Modern Gated Cross-Aligned Vision-Language Mixture of Experts Model for Medical Image Captioning and Report Generation. In *Proceedings of the International Joint Conference on Neural Networks, TAIM Workshop* (IJCNN), 2025.

[37] Hong, X., Gong, Y., Sethu, V., Dang, T. (2025). AER-LLM: Ambiguity-aware Emotion Recognition Leveraging Large Language Models. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2025.

[36] Quan, J., Al-Naimi, K., Wei, X., Liu, Y., Montanari, A., Dang, T. (2025). Cognitive Load Monitoring via Earable Acoustic Sensing. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2025.

[35] Jia, H., Kwon, Y., Orsino, A., Dang, T., Talia, D., Mascolo, C. (2024). TinyTTA: Efficient Test-time Adaptation via Early-exit Ensembles on Edge Devices. In *Advances in Neural Information Processing Systems* (NeurIPS), 2024.

[34] Wang, X., Dang, T., Kostakos, V., Jia, H. (2024). Efficient and Personalized Mobile Health Event Prediction via Small Language Models. In *Proceedings of the ACM International Conference on Mobile Computing and Networking, Workshop ELFCom* (MobiCom), 2024.

[33] Dang, T., Gashi, S., Spathis, D., Hoelzemann, A. (2024). WellComp 2024: Seventh International Workshop on Computing for Well-Being. In *Companion of the ACM International Joint Conference on Pervasive and Ubiquitous Computing* (UbiComp), 2024.

[32] Wu, Y., Dang, T., Spathis, D., Jia, H., Mascolo, C. (2024). StatioCL: Contrastive Learning for Time Series via Non-Stationary and Temporal Contrast. In *Proceedings of the ACM International Conference on Information and Knowledge Management* (CIKM), 2024.

[31] Wu, J., Dang, T., Sethu, V., Ambikairajah, E. (2024). Emotion Recognition Systems Must Embrace Ambiguity. In *Proceedings of the International Conference on Affective Computing and Intelligent Interaction, Workshop EASE* (ACII), 2024.

[30] Hu, Y., Zhang, S., Dang, T., Jia, H., Salim, F., Hu, W., Quigley, A. (2024). Exploring Large-Scale Language Models to Evaluate EEG-Based Multimodal Data for Mental Health. In *Companion of the ACM International Joint Conference on Pervasive and Ubiquitous Computing* (UbiComp), 2024.

[29] Wu, J., Dang, T., Sethu, V., Ambikairajah, E. (2024). Dual-Constrained Dynamical Neural ODEs for Ambiguity-aware Continuous Emotion Prediction. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2024.

[28] Shahid, I., Al-Naimi, K., Dang, T., Liu, Y., Kawsar, F., Montanari, A. (2024). Towards Enabling DPOAE Estimation on Single-speaker Earbuds. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2024.

[27] Nan, Z., Dang, T., Sethu, V., Ambikairajah, E. (2024). Variational Connectionist Temporal Classification for Order-Preserving Sequence Modeling. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2024.

[26] Romero, J., Ferlini, A., Spathis, D., Dang, T., Farrahi, K., Kawsar, F., Montanari, A. (2024). OptiBreathe: An Earable-based PPG System for Continuous Respiration Rate, Breathing Phase, and Tidal Volume Monitoring. In *Proceedings of the Workshop on Mobile Computing Systems and Applications* (HotMobile), 2024.

[25] Dang, T., Han, J.*, Xia, T.*, Bondareva, E., Brown, C., Chauhan, J., Grammenos, A., Spathis, D., Cicuta, P., Mascolo, C. (2023). Conditional Neural ODE Processes for Individual Disease Progression Forecasting: A Case Study on COVID-19. In *Proceedings of the ACM SIGKDD Conference on Knowledge Discovery and Data Mining* (KDD), 2023.

[24] Wu, J., Dang, T., Sethu, V., Ambikairajah, E. (2023). Belief Mismatch Coefficient (BMC): A Novel Interpretable Measure of Prediction Accuracy for Ambiguous Emotion States. In *Proceedings of the International Conference on Affective Computing and Intelligent Interaction* (ACII), 2023. **[Best Paper Award]**

[23] Wu, J., Dang, T., Sethu, V., Ambikairajah, E. (2023). From Interval to Ordinal: A HMM-based Approach for Emotion Label Conversion. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2023.

[22] Dang, T., Dimitriadis, A., Wu, J., Sethu, V., Epps, J., Ambikairajah, E. (2023). Constrained Dynamic Neural ODE for Time Series Modelling: A Case Study on Continuous Emotion Prediction. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2023. **[Top 3% Paper Award]**

[21] Gashi, S., Spathis, D., Dang, T., Hoelzemann, A. (2023). WellComp 2023: Sixth International Workshop on Computing for Well-Being. In *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing, WellComp Workshop* (UbiComp), 2023.

[20] Butkow, K. J., Dang, T., Ferlini, A., Ma, D., & Mascolo, C. (2023). hEARt: Motion-resilient Heart Rate Monitoring with In-ear Microphones. In *Proceedings of the IEEE International Conference on Pervasive Computing and Communications* (PerCom), 2023.

[19] Vavaroutas, S., Dang, T., Rocheteau, E., Mascolo, C. (2023). Uncertainty Estimation for Sequence-to-Sequence Regression on Sparse Time Series. In *Proceedings of the ACM SIGMOBILE Workshop on Mobile Systems for Computational Social Science* (MobiUK), 2023.

[18] Hu, C., Ma, X., Ma, D., Dang, T. (2023). Lightweight and Non-invasive User Authentication on Earables. In *Proceedings of the Workshop on Mobile Computing Systems and Applications* (HotMobile), 2023.

[17] Xia, T., Han, J., Qendro, L., Dang, T., Mascolo, C. (2022). Hybrid-EDL: Improving Evidential Deep Learning for Uncertainty Quantification on Imbalanced Data. In *Advances in Neural Information Processing Systems, Workshop on Trustworthy and Socially Responsible Machine Learning* (NeurIPS), 2022.

[16] Dang, T.*, Quinnell, T.*, Mascolo, C. (2022). Exploring Semi-supervised Learning for Audio-based COVID-19 Detection using FixMatch. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2022.

[15] Wu, J., Dang, T., Sethu, V., Epps, J., Ambikairajah, E. (2022). A Novel Sequential Monte Carlo Framework for Predicting Ambiguous Emotion States. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2022.

[14] Xia, T., Spathis, D., Ch, J., Grammenos, A., Han, J., Hasthanasombat, A., Bondareva, E., Dang, T., Floto, A., Cicuta, P., Mascolo, C. (2021). COVID-19 Sounds: A Large-Scale Audio Dataset for Digital COVID-19 Detection. In *Advances in Neural Information Processing Systems, Datasets and Benchmarks Track* (NeurIPS), 2021.

[13] Xia, T., Han, J., Qendro, L., Dang, T., & Mascolo, C. (2021). Uncertainty-Aware COVID-19 Detection from Imbalanced Sound Data. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2021.

[12] B., Deboshree, Dang, T., Sethu, V., Ambikairajah, E., Fernando, S. (2019). A Novel Bag-of-Optimised-Clusters Front-End for Speech-based Continuous Emotion Prediction. In *Proceedings of the International Conference on Affective Computing and Intelligent Interaction* (ACII), 2019.

[11] Ouyang, A., Dang, T., Sethu, V., Ambikairajah, E. (2019). Speech-Based Emotion Prediction: Can a Linear Model Work? In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2019.

[10] Gamage, K., Dang, T., Sethu, V., Epps, J., Ambikairajah, E. (2018). Speech-based Continuous Emotion Prediction by Learning Perception Responses Related to Salient Events: A Study based on Vocal Affect Bursts and Cross-Cultural Affect in AVEC 2018. In *Proceedings of the 8th International Workshop on Audio/Visual Emotion Challenge, in conjunction with ACM Multimedia* (AVEC), 2018.

[9] Dang, T., Sethu, V., Ambikairajah, E. (2018). Dynamic Multi-rater Gaussian Mixture Regression Incorporating Temporal Dependencies of Emotion Uncertainty Using Kalman Filters. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2018.

[8] Dang, T., Sethu, V., Epps, J., Ambikairajah, E. (2017). An Investigation of Emotion Prediction Uncertainty Using Gaussian Mixture Regression. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2017.

[7] Dang, T., Stasak, B., Huang, Z., Jayawardena, S., Atcheson, M., Hayat, M., Le, P., Sethu, V., Goecke, R., Epps, J. (2017). Investigating Word Affect Features and Fusion of Probabilistic Predictions Incorporating Uncertainty in AVEC 2017. In *Proceedings of the 7th International Workshop on Audio/Visual Emotion Challenge, in conjunction with ACM Multimedia* (AVEC), 2017.

[6] Dang, T., Sethu, V., Ambikairajah, E. (2016). Factor Analysis Based Speaker Normalisation for Continuous Emotion Prediction. In *Proceedings of the Annual Conference of the International Speech Communication Association* (INTERSPEECH), 2016.

[5] Huang, Z., Stasak, B., Dang, T., Wataraka Gamage, K., Le, P., Sethu, V., Epps, J. (2016). Staircase Regression in OA RVM, Data Selection and Gender Dependency in AVEC 2016. In *Proceedings of the 6th International Workshop on Audio/Visual Emotion Challenge, in conjunction with ACM Multimedia* (AVEC), 2016.

[4] Huang, Z., Dang, T., Cummins, N., Stasak, B., Le, P., Sethu, V., Epps, J. (2015). An Investigation of Annotation Delay Compensation and Output-Associative Fusion for Multi-modal Continuous Emotion Prediction. In *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, in conjunction with ACM Multimedia* (AVEC), 2015.

Patents

[3] Thangarajan, A., Al-Naimi, K., Dang, T., Ferlini, A., Liu, Y., Montanari, A. (2025). Power Saving. U.S. Patent and Trademark Office.

[2] Dang, T., Al-Naimi, K., Thangarajan, A., Liu, Y., Ferlini, A., Montanari, A. (2024). Selecting Candidate Devices. U.S. Patent and Trademark Office.

[1] Al-Naimi, K., Montanari, A., Ferlini, A., Dang, T., Demirel, B. U. (2024). Cancellation of Ultrasonic Signals. U.S. Patent and Trademark Office.

Professional Activities

Talks and Seminars

- Invited seminar on 'The Future of Voice: Building Empathetic, Adaptive, and Efficient Generative AI for Speech' at Wuhan University, 2025.

- Invited seminar on 'The Future of Voice: Building Empathetic, Adaptive, and Efficient Generative AI for Speech' at Commonwealth Bank, 2025.
- Invited seminar on 'Human-centered AI for Mobile Health' at Medical AI Symposium, Hokkaido University, 2025.
- Invited talk on 'Unlocking the Potential of Audio: From Acoustic Sensing to Adaptive Speech Intelligence' at RIKEN-AIP-Melbourne workshop, 2025.
- Invited talk on 'Advancing Mobile Health via Audio and Physiological Computing in the Era of Generative AI' at School of Mathematics and Statistics, Xi'an Jiaotong University, China, 2025.
- Invited talk on 'Advancing Mobile Health via Audio and Physiological Computing in the Era of Generative AI' at School of Computer Science, Northwestern Polytechnical University, China, 2025.
- Invited talk on 'Machine learning for mobile health' at School of Computer Science, UNSW, 2024.
- Invited talk on 'Machine learning for mobile health' at School of Biomedical Engineering, University of Sydney, 2024.
- Invited talk on 'Machine learning for mobile health via audio' at South China Normal University, China, 2023.
- Invited talk on 'COVID -19 Disease Progression Prediction and Forecasting via Audio: A Longitudinal Study' by Women@CL at the University of Cambridge, UK, 2022.
- Invited talk on 'Computational modeling of ambiguous emotion' in AFAR Lab at the University of Cambridge, 2022.
- Invited talk on 'Machine Learning in Mobile Health via Audio: bridging the gap between AI and healthcare' in UCLIC at the University College London, 2022.
- Invited talk on 'Speech-based Emotion Prediction' at Tsinghua University, China, 2020

Workshop and Tutorial Organizers

- Special Session Co-organizer, INTERSPEECH 2026
- Web Co-chair, Mobisys 2026
- Social Media Co-chair, INTERSPEECH 2026
- Challenge Co-organizer, Automatic Song Aesthetics Evaluation Challenge, ICASSP 2026
- Challenge Co-organizer, Environmental Sound Deepfake Detection (ESDD) Challenge, ICASSP 2026
- Special Session Co-organizer, Scalable and Efficient Signal Processing for Multimodal AI Systems (ESPRESSO), APSIPA ASC 2025
- Workshop Co-organizer, WellComp Workshop, UbiComp, 2025
- Workshop Co-chair, Multi-Biological Sensing Data for Speech and Language Deterioration Prediction, ACM MM Asia 2024
- Co-chair, Industry Perspectives, MobileHCI 2024
- Workshop Co-organizer, WellComp Workshop, UbiComp, 2024
- Tutorial Co-organizer, Wearable Eye and Audio for Affect Analysis, ACII 2023
- Tutorial Co-organizer, An Introduction to Wearable Eye and Speech for Affect Analysis, ICMI 2023
- Workshop Co-organizer, WellComp Workshop 2023, UbiComp

Editor, Technical Program Committee and Reviewers

- Editor of Computer Speech and Languages, 2025 - Present
- Editor of IEEE Pervasive Computing, 2024 - Present
- Guest Editor of Special Issue on State of the Art in Wearable Sensors for Health Monitoring @ Sensors, 2025
- Senior PC for AAAI, 2023 - Present
- Area Chair for ICASSP, 2025 - Present
- TPC for Flute workshop (ICASSP 2025), HumanSys workshop (ACM SenSys 2024, 2025)
- Reviewer for 20+ Journals: Nature Reviews Bioengineering, Scientific Reports, IEEE TAC, IEEE TASLP, IEEE TIFS, IEEE TETCI, JASA, IMWUT, Speech Communications, Computer Speech Language, ACM Health, etc.
- PC for 10+ Conferences: NeurIPS, IJCAI, ICASSP, INTERSPEECH, APSIPA, ACII, IEEE SLT, etc.

Outreach and Public Engagement

- Panelist, "IEEE Women in Engineering Panel Discussion", 2025
- Mentor, "Students Meet Experts" session, INTERSPEECH, 2025
- Invited panelist, "AI for Healthcare" at BioGrid 20th Anniversary, 2024
- Guest, "Universities and the Rise of AI – Part 2: A Peek into Large Language Models" podcast, University of Melbourne, 2024
- Invited speaker, "Women in STEM" event, University of Cambridge, 2022

Supervisions and Teaching

Current Members

- **Ph.D.**
  - Hongyu Jin, UoM (2026-): co-supervised with Mike Conway.
  - Boyang Jia, UoM (2026-): co-supervised with Vassilis Kostakos.
  - Kirthika Senathiraja, UoM (2026-): co-supervised with Roisin McNaney.
  - Ye Bai, UoM (2025-): co-supervised with David O'Neal and Dale Morrison.
  - Jiaheng Dong, UoM (2025-): co-supervised with Abhirup Ghosh and Jean Honorio Carrillo.
  - Siyi Wang, UoM (2025-): co-supervised with James Bailey.
  - Yang Xiao, UoM (2025-): co-supervised with Eun-Jung Holden.
  - Jie Huang, UoM (2025-): co-supervised with Daniel Capurro Nario and Galit Almoznino.
  - Jian Xiang, UNSW (2025-): co-supervised with Vidhya Sethu.
  - Pravina Mylvaganam, UNSW (2025-): mentored with Eliathamby Ambikairajah.
  - Mujie Liu, Federation University (2024-): mentored with Feng Xia.
- **Postgraduate and Undergraduate**
  - Selina Lim, Benjamin Hong, Di Zhu, Sung Kyun Chung (UoM, 2025-2026)

Alumni

- **Ph.D.**
  - Yu Wu, University of Cambridge (2022-2025): mentored with Cecilia Mascolo.
    Current position: Postdoctoral Fellow at Dartmouth College.
  - Zheng Nan, UNSW (2021-2025): co-supervised with Vidhya Sethu and Beena Ahmed.
    Current position: Postdoctoral Researcher at UNSW.
  - Jingyao Wu, UNSW (2020-2024): co-supervised with Vidhya Sethu and Eliathamby Ambikairajah.
    Current position: Postdoctoral Fellow at MIT.
  - Kayla Butkow, University of Cambridge (2021-2023): project mentoring with Prof. Cecilia Mascolo.
    Current position: CTO & Co-founder at auryx.
  - Tong Xia, University of Cambridge (2021-2023): project mentoring with Prof. Cecilia Mascolo.
    Current position: Assisstant Professor at Tsinghua University.
  - Sotirios Vavaroutas, University of Cambridge (2022): Ph.D. project mentoring with Prof. Cecilia Mascolo.
  - Xijia Wei, University College London (2023): Internship mentoring at Nokia Bell Labs.
- **Postgraduate and Undergraduate**
  - Trevor Adelson, Qiuchi Hu, Jinuo Sun, Jiajun Lu, Jiasheng Xu, Haoguang Zhou, Hongyu Jin,Wenda Zhang, Shuaixin Xu, Xi Chen (UoM, 2025); Trini Manoj Jeyaseelan (UNSW, 2025)
  - Jule Valendo Halim, Xin Hong, Feixiang Zheng, Xuanang Li, Xin Wang (UoM, 2024)
  - Tom Quinnell (University of Cambridge, 2021)
  - Haobing Zhu, Yang Yu, Jinhao Gu, Anubhuti Gupta (UNSW, 2020)
  - Anda Ouyang, Mo Li (UNSW, 2018)

Teaching

- Machine Learning Applications for Health, 2024-2025 (∼250 students, postgraduate course)
- Introduction to Machine Learning, 2024-2025 (∼300 students, postgraduate course)
- Research Project, 2024-2025 (∼30, postgraduate course)
- Strategic Leadership & Ethics, 2018-2019 (∼20 students; postgraduate course)
- Speech Processing and Machine Learning, 2017-2019 (∼25 students, postgraduate course)
- Digital Signal Processing, 2016-2019 (∼15-40 students, undergraduate course)
- Electrical Circuits, 2016-2019 (∼80 students, undergraduate course)
- Design Proficiency, 2016-2019 (∼60 students, undergraduate course)