

Chi-Chun Lee (Jeremy)

National Tsing Hua University

Department of Electrical Engineering

No. 101, Sec. 2, Kuang Fu Road, Hsinchu 30013, Taiwan

Email: cclee@ee.nthu.edu.tw

Webpage: <http://biic.ee.nthu.edu.tw/cclee.php>

Tel: +886-3-5162439; Fax: +886-3-5715971

Professional Interests

Speech and Language, Affective Multimedia, Health Analytics, Machine Learning, Behavior Computing

Education

University of Southern California (USC), Signal Interpretation Analysis Laboratory (SAIL)

Ph.D. in Electrical Engineering (Dec. 2012)

Thesis Advisor: Professor Shrikanth S. Narayanan

BSP: Computational Approaches for Modeling and Quantifying Interaction Dynamics in Dyadic Human Interactions

University of Southern California (USC), California, USA

B.S. in Electrical Engineering, emphasis in digital signal processing (May 2007)

Minor in **Business Administration** (May 2007)

Professional Experiences

Aug. 2018 – Present: Associate Professor

National Tsing Hua University, Department of Electrical Engineering (Joint Appointment: Institute of Communication Engineering), Hsinchu, Taiwan

Feb. 2014 – Jul. 2018: Assistant Professor

National Tsing Hua University, Department of Electrical Engineering, Hsinchu, Taiwan

Feb. 2013 – Dec. 2013: Data Scientist

id:a Lab, ID Analytics Inc., San Diego, USA

Sept. 2007 – Dec. 2012: Graduate Research Assistant

Signal Analysis and Interpretation Laboratory (SAIL Lab), USC, Los Angeles, USA

Sept. 2006 – May 2007: Undergraduate Research Assistant

Information Laboratory (INFO Lab), USC, Los Angeles, USA

June 2006 – Sept. 2006: NSF Undergraduate Summer Research Program

Undergraduate Summer Research at Institute for Pure and Applied Mathematics, UCLA, Los Angeles, USA

Awards/Honors

IEEE Senior Member (2020)

Foundation of Outstanding Scholar: Young Innovator Award (2020)

CIEE: Outstanding Young Electrical Engineer Award (2020)

Merry Electroacoustics Thesis Award (2019 Bronze Award)

MOST Futuretek Breakthrough Award (2018, 2019)

MediaTek Geniusforhome Special Prize Award (Top 10)

Taiwan Tech Star @ CES 2019 Eureka Park

Most Cited Journal published in 2014 up to 2016 (Journal of Speech Communication)

Magna Cum Laude (2007)

Annenberg Fellowship, University of Southern California (2007-2009)

Undergraduate Dean's List (2003 – 2007)

2019 Interspeech ComparE Challenge First Place Winner (Styrian Dialect, Baby Sound)

2020 IEEE EMBC Best Paper (Top 15)

2019 APSIPA ASC Best Regular Paper Award

2019 IEEE EMBC Best Paper (Asia Pacific Region)

2018 Interspeech Best Paper Award Candidate (Top 12)

2018 IEEE EMBC Best Paper (Top 15)

2010 Interspeech Best Paper Award (Top 3)

2009 Interspeech Emotion Challenge First Place Winner (Classifier Sub-Challenge)

2008 Interspeech Student Best Paper Award Candidate (Top 12)

2017 ROCLING Student Best Paper Award Candidate

Honors Societies: Phi Kappa Phi, Tau Beta Pi, Eta Kappa Nu

Publications

Google Scholar Profile <http://scholar.google.com/citations?user=MGqWqOAAAAAJ&hl=en>

Book

[1] **Chi-Chun Lee***, "Modeling Human Behaviors in Psychology Using Engineering Methods", River Publishers' Series in Information Science and Technology, May 2014, ISBN: 9788793102606

Book Chapter

[1] **Chi-Chun Lee***, Jangwon Kim, Angeliki Metallinou, Carlos Busso, Sungbok Lee, and Shrikanth S. Narayanan, "Speech in Affective Computing", in: R.A. Calvo, S.K. D'Mello, J. Gratch and A. Kappas (Eds), Handbook of Affective Computing, Oxford University Press, 2014, ISBN: 9780199942237

Journal

- [1] Chun-Min Chang, **Chi-Chun Lee**, "Learning Enhanced Acoustic Latent Representation for Small Scale Affective Corpus with Adversarial Cross Corpora Integration", in IEEE Transactions on Affective Computing, 2021 (accepted for publication)
- [2] Sara A Monaghan, Jeng-Lin Li, Yen-Chun Liu, Ming-Ya Ko, Michael Boyiadzis, Ting-Yu Chang, Yu-Fen Wang, **Chi-Chun Lee**, Steven H Swerdlow, Bor-Sheng Ko, "A Machine Learning Approach to the Classification of Acute Leukemias and Distinction From Nonneoplastic Cytopenias Using Flow Cytometry Data", in *American Journal of Clinical Pathology*, 2021
- [3] **Chi-Chun Lee**, Kusha Sridhar, Jeng-Lin Li, Wei-Cheng Lin, Bo-Hao Su, Carlos Busso, "Deep Representation Learning for Affective Speech Signal Analysis and Processing", in IEEE Signal Processing Magazine, 2021 (accepted for publication)
- [4] Fu-Sheng Tsai, Wei-Wen Chang, **Chi-Chun Lee**, "A Social Condition-Enhanced Network for Recognizing Power Distance using Expressive Prosody and Intrinsic Brain Connectivity", in IEEE Transactions on Multimedia, 2021
- [5] Hao-Chun Yang, **Chi-Chun Lee**, "A Media-Guided Attentive Graphical Network for Personality Recognition Using Physiology", in IEEE Transactions on Affective Computing, 2021 (accepted for publication)
- [6] Su-Fen Cheng, Chien-Lin Lee, **Chi-Chun Lee**, Serene Hsin-Min Wei, Chu-Yu Huang, "Empowering the Public during the COVID Pandemic through Interactive Social Media Platform", in Nursing Outlook, 2021
- [7] Huang-Cheng Chou, Yi-Wen Liu, **Chi-Chun Lee**, "Automatic Deception Detection using Multiple Speech and Language Communicative Descriptors in Dialogs", in APSIPA Transactions on Signal and Information Processing, 2021

- [8] Jeng-Lin Li, Tzu-Yun Huang, Chun-Min Chang, **Chi-Chun Lee***, "A Waveform-Feature Dual Branch Acoustic Embedding Network for Emotion Recognition" in *Frontiers in Computer Science*, section Human-Media Interaction, <https://doi.org/10.3389/fcomp.2020.00013>
- [9] Yun-Shao Lin, Susan Shur-Fen Gau, **Chi-Chun Lee***, "A Multimodal Interlocutor-Modulated Attentional BLSTM for Classifying Autism Subgroups during Clinical Interviews", in *IEEE Journal of Selected Topics in Signal Processing* (to appear), 2020, DOI: 10.1109/JSTSP.2020.2970578
- [10] Shih-Yen Lin, **Chi-Chun Lee**, Yong-Sheng Chen, Li-Wei Kuo, "Investigation of functional brain network reconfiguration during vocal emotional processing using graph-theoretical analysis", in *Social Cognitive and Affective Neuroscience*, Vol. 14, Issue 5, May 2019, pp 529–538
- [11] Min-Hsuan Lin, Huang-Cheng Chou, Yu-Fu Chen, Wangta Liu, **Chi-Chun Lee**, Lawrence Yu-Min Liu, Yung-Jen Chuang, "Development of a rapid and economic in vivo electrocardiogram platform for cardiovascular drug assay and electrophysiology research in adult zebrafish", *Sci Rep* 8, 15986 (2018)
- [12] Chen-Ying Hung, Ching-Heng Lin, Tsuo-Hung Lan, Giia-Sheun Peng, **Chi-Chun Lee***, "Development of an Intelligent Decision Support System for Ischemic Stroke Risk Assessment in a Population-based Electronic Health Record Database", in *PLOS ONE*, 2019
- [13] Chin-Po Chen, Susan Shur-Fen Gau, **Chi-Chun Lee***, "Toward Differential Diagnosis of Autism Spectrum Disorder using Multimodal Behavior Descriptors and Executive Functions", in *Journal of Computer Speech and Language (CSL)*
- [14] Bor-Sheng Ko, Yu-Fen Wang, Jeng-Lin Li, Chi-Cheng Li, Pei-Fang Weng, Szu-Chun Hsu, Hsin-An Hou, Huai-Hsuan Huang, Ming Yao, Chien-Ting Lin, Jia-Hau Liu, Cheng-Hong Tsai, Tai-Chung Huang, Shang-Ju Wu, Shang-Yi Huang, Wen-Chien Chou, Hwei-Fang Tien, **Chi-Chun Lee***, Jih-Luh Tang*, "Clinically validated machine learning algorithm for detecting residual diseases with multicolor flow cytometry analysis in acute myeloid leukemia and myelodysplastic syndrome", in *EBioMedicine* (2018), DOI: 10.1016/j.ebiom.2018.10.042 (in press)
- [15] Wei-Cheng Lin, **Chi-Chun Lee***, "Computational Analyses of Thin-sliced Behavior Segments in Session-level Affect Perception" *IEEE Transactions on Affective Computing* (2018) DOI: 10.1109/TAFFC.2018.2816654
- [16] Shan-Wen Hsiao, Hung-Ching Sun, Ming-Chuan Hsieh, Ming-Hsueh Tsai, Yu Tsao, **Chi-Chun Lee***, "*Toward Automating Oral Presentation Scoring during Principal Certification Program using Audio-video Low-level Behavior Profiles*", in *IEEE Transactions on Affective Computing* (2017) DOI: 10.1109/TAFFC.2017.2749569
- [17] Tassadaq Hussain, Sabato Marco Siniscalchi, **Chi-Chun Lee**, Syu-Siang Wang, Yu Tsao and Wen-Hung Liao, "*Experimental Study on Extreme Learning Machine Applications for Speech Enhancement*", in *IEEE Access* (2017) DOI: 10.1109/ACCESS.2017.276667
- [18] Daniel Bone, **Chi-Chun Lee**, Theodora Chaspari, James Gibson, Shrikanth Narayanan, "*Signal Processing and Machine Learning for Mental Health Research and Clinical Applications*", in *IEEE Signal Processing Magazine* 34(5), 196 – 195, 2017
- [19] Stephenson J. Beck, Annika L. Meinecke, Yoichi Matsuyama, **Chi-Chun Lee**, "*Initiating and Maintaining Collaborations and Facilitating Understanding in Interdisciplinary Group Research*", in *Small Group Research* 48(5), 532-543, 2017
- [20] Daniel Bone, Matthew Goodwin, Matthew Black, **Chi-Chun Lee**, Kartik Audhkhasi, and Shrikanth Narayanan, "*Applying Machine Learning to Facilitate Autism Diagnostics: Pitfalls and Promises*" in: *Journal of autism and developmental disorders* 45(5) 1121-1136, 2015

- [21] Angeliki Metallinou, Zhaojun Yang, **Chi-Chun Lee**, Carlos Busso, Sharon Carnicke, and Shrikanth Narayanan, "The USC CreativeIT Database of Multimodal Dyadic Interactions: From Speech and Full Body Motion Capture to Continuous Emotional Annotations" in: Journal of Language Resources and Evaluation 50(3) 497-512, 2015
- [22] Daniel Bone, **Chi-Chun Lee**, and Shrikanth S. Narayanan, "Robust Unsupervised Arousal Rating: A rule-based framework with knowledge-inspired vocal features", in IEEE Transaction of Affective Computing, 5(2): 201-213, May 2014
- [23] Daniel Bone, **Chi-Chun Lee**, Matthew Black, Marian Williams, Sungbok Lee, Pat Levitt, and Shrikanth S. Narayanan, "The Psychologist as an Interlocutor in ASD Assessment: Insights from a Study of Spontaneous Prosody", in: Journal of Speech, Language, and Hearing Research, 57(1):1162-1177, August 2014, doi: 10.1044/2014_JSLHR-S-13-0062
- [24] **Chi-Chun Lee***, Athanasios Katsamanis, Matthew Black, Brian Baucom, Andrew Christensen, Panayiotis G. Georgiou, and Shrikanth S. Narayanan, "Compute Vocal Entrainment: A Signal-Derived PCA-based Quantification Scheme with Application for Affect Analysis in Married Couple Interactions", in: Journal of Computer Speech and Language, 28(2): 518-539 doi:10.1016/j.csl.2012.06.006
- [25] Matthew Black, Athanasios Katsamanis, Brian Baucom, **Chi-Chun Lee**, Adam Lammert, Andrew Christensen, Panayiotis G. Georgiou, and Shrikanth S. Narayanan, "Toward Automating a Human Behavioral Coding System for Married Couples' Interactions using Speech Acoustic Features", in: Journal of Speech Communication Speech Communication, 55:1 (1-21)
- [26] **Chi-Chun Lee***, Emily Mower, Carlos Busso, Sungbok Lee, and Shrikanth S. Narayanan, "Emotion Recognition Using a Hierarchical Binary Decision Tree Approach", in: Journal of Speech Communication, 53:9-10(1162-1171)
- [27] Carlos Busso, Murtaza Bulut, **Chi-Chun Lee**, Abe Kazemzadeh, Emily Mower, Samuel Kim, Jeannette Chang, Sungbok Lee, and Shrikanth S. Narayanan, "IEMOCAP: Interactive emotional dyadic motion capture database (2008)", in: Journal of Language Resources and Evaluation, 42:4 (335-359)

Conference Proceedings

- [1] Woan-Shiuan Chien, Huang-Cheng Chou, Chi-Chun Lee "Self-assessed Emotion Classification from Acoustic and Physiological Features within Small-group Conversation" in Companion Publication of the 23rd ACM International Conference on Multimodal Interaction (ICMI), 2021
- [2] Woan-Shiuan Chien, Huang-Cheng Chou, Chi-Chun Lee "Belongingness and Satisfaction Recognition from Physiological Synchrony with A Group-Modulated Attentive BLSTM under Small-group Conversation" in Companion Publication of the 23rd ACM International Conference on Multimodal Interaction (ICMI), 2021
- [3] Ya-Lin Huang, Hao-Chun Yang, **Chi-Chun Lee**, "Federated Learning via Conditioned Mutual Learning for Alzheimer's Disease Classification on T1w MRI", in Proceedings of the International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2021
- [4] Yu-Lin Huang, Bo-Hao Su, Peter Y.-W. Hong, **Chi-Chun Lee**, "An Attribute-Aligned Strategy for Learning Speech Representation", in Proceedings of International Speech Communication Association (Interspeech), 2021
- [5] Huang-Cheng Chou, Woan-Shiuan Chien, Da-Cheng Juan, **Chi-Chun Lee**: "Does it Matter When I Think You Are Lying?" Improving Deception Detection by Integrating Interlocutor's Judgements in Conversations." in Findings of the Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP), 2021: 1846-1860

- [6] Huan-Yu Chen, Yun-Shao Lin, **Chi-Chun Lee**, "Through the Words of Viewers: Using Comment-Content Entangled Network for Humor Impression Recognition", in proceedings of IEEE Spoken Language Technology Workshop (SLT) 2021
- [7] Bo-Hao Su, **Chi-Chun Lee***, "A Conditional Cycle Emotion GAN for Cross Corpus Speech Emotion Recognition" in proceedings of IEEE Spoken Language Technology Workshop (SLT) 2021
- [8] Huan-Yu Chen, Yun-Shao Lin, **Chi-Chun Lee***, "Through the Words of Viewers: Using Comment-Content Entangled Network for Humor Impression Recognition", in proceedings of IEEE Spoken Language Technology Workshop (SLT) 2021
- [9] Chun-Min Chang, Huan-Yu Chen, Hsiang-Chun Chen, **Chi-Chun Lee***, "Sensing With Contexts: Crying Reason Classification For Infant Care Center With Environmental Fusion", in proceedings of Asia-Pacific Signal and Information Processing Association (APSIPA), 2020
- [10] Hao-Chun Yang, **Chi-Chun Lee***, "From Intended to Subjective: A Conditional Tensor Fusion Network for Recognizing Self-Reported Emotion Using Physiology", in proceedings of Asia-Pacific Signal and Information Processing Association (APSIPA), 2020
- [11] Huang-Cheng Chou, **Chi-Chun Lee***, "Your Behavior Makes Me Think It Is A Lie": Recognizing Perceived Deception Using Multimodal Data In Dialog Games", in proceedings of Asia-Pacific Signal and Information Processing Association (APSIPA), 2020
- [12] Woan-Shiuan Chien, Hao-Chun Yang, **Chi-Chun Lee***, "Cross Corpus Physiological-based Emotion Recognition Using a Learnable Visual Semantic Graph Convolutional Network", in Proceedings of ACM Multimedia (ACMMM), 2020
- [13] Shreya G. Upadhyay, Bo-Hao Su, **Chi-Chun Lee***, "Attentive Convolutional Recurrent Neural Network Using Phoneme-Guided Acoustic Representation for Rare Sound Event Detection" in Proceedings of the International Speech Communication Association (Interspeech), 2020
- [14] Sung-Lin Yeh, Yun-Shao Lin, **Chi-Chun Lee***, "Speech Representation Learning for Emotion Recognition Using End-to-End ASR with Factorized Adaptation", in Proceedings of the International Speech Communication Association (Interspeech), 2020
- [15] Bo-Hao Su, Chun-Min Chang, Yun-Shao Lin, **Chi-Chun Lee***, "Improving Speech Emotion Recognition Using Graph Attentive Bi-directional Gated Recurrent Unit Network", in Proceedings of the International Speech Communication Association (Interspeech), 2020
- [16] Huang-Cheng Chou and **Chi-Chun Lee***, "Learning to Recognize Per-rater's Emotion Perception Using Co-rater Training Strategy with Soft and Hard Labels", in Proceedings of the International Speech Communication Association (Interspeech), 2020
- [17] Shun-Chang Zhong, Bo-Hao Su, Wei Huang, Yi-Ching Liu, **Chi-Chun Lee***, "Predicting Collaborative Task Performance using Graph Interlocutor Acoustic Network in Small Group Interaction", in Proceedings of the International Speech Communication Association (Interspeech), 2020
- [18] Jeng-Lin Li and **Chi-Chun Lee***, "Using Speaker-Aligned Graph Memory Block in Multimodally Attentive Emotion Recognition Network ", in Proceedings of the International Speech Communication Association (Interspeech), 2020
- [19] Wan-Ting Hsieh, Lefort-Besnard Jeremy, Hao-Chun Yang, Li-Wei Kuo, **Chi-Chun Lee***, "Behavior Score-Embedded Brain Encoder Network for Improved Classification of Alzheimer Disease Using Resting State fMRI", in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2020

- [20] Ming-Shan Gao, Fu-Sheng Tsai, **Chi-Chun Lee***, "Learning a Phenotypic-Attribute Attentional Brain Connectivity Embedding for ADHD Classification using rs-fMRI", in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2020 **[Best Student Paper Finalist]**
- [21] Jeng-Lin Li, Ting-Yu Chang, Yu-Fen Wang, Bor-Sheng Ko, Jih-Luh Tang, **Chi-Chun Lee***, "A Knowledge-Reserved Distillation with Complementary Transfer for Automated FC-based Classification Across Hematological Malignancies", in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2020
- [22] Chen-Ying Hung, Huan-Yu Chen, Lawrence JK Wee, Ching-Heng Lin, **Chi-Chun Lee***, "Deriving A Novel Health Index Using A Large-Scale Population Based Electronic Health Record With Deep Networks", in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2020
- [23] Chin-Po Chen, Susan Shur-Fen Gau, **Chi-Chun Lee***, "Learning Converse-Level Multimodal Embedding to Assess Social Deficit Severity for Autism Spectrum Disorder" in Proceedings of the IEEE International Conference on Multimedia & Expo (ICME), 2020
- [24] Hao-Chun Yang, **Chi-Chun Lee***, "A Siamese Content- Attentive Graph Convolutional Network For Personality Recognition Using Physiology", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020
- [25] Yun-Shao Lin, **Chi-Chun Lee***, "Predicting Performance Outcome With A Conversational Graph Convolutional Network For Small Group Interactions", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020
- [26] Sung-Lin Yeh, Yun-Shao Lin, **Chi-Chun Lee***, "A Dialogical Emotion Decoder For Speech Emotion Recognition in Spoken Dialog", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020
- [27] Ya-Lin Huang, Wan-Ting Hsieh, Hao-Chun Yang, **Chi-Chun Lee***, "Conditional Domain Adversarial Transfer For Robust Cross-Site ADHD Classification Using Functional MRI", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020
- [28] Hui-Ting Hong, Jeng-Lin Li, Chun-Min Chang and **Chi-Chun Lee***, "Improving Automatic Pain Level Recognition using Pain Site as an Auxiliary Task", in Proceedings of Affective Computing and Intelligent Interaction (ACII), 2019
- [29] Huan-Yu Chen, Yun-Shao Lin and **Chi-Chun Lee***, "Through the Eyes of Viewers: A Comment-Enhanced Media Content Representation for TED Talks Impression Recognition", in proceedings of Asia-Pacific Signal and Information Processing Association(APSIPA), 2019
- [30] Huang-Cheng Chou, Yi-Wen Liu and **Chi-Chun Lee***, "Joint Learning of Conversational Temporal Dynamics and Acoustic Features for Speech Deception Detection in Dialog Games", in proceedings of Asia-Pacific Signal and Information Processing Association(APSIPA), 2019 **[Best Regular Paper Award]**
- [31] Fu-Sheng Tsai, Yi-Ming Weng, Chip-Jin Ng and **Chi-Chun Lee***, "Pain versus Affect? An Investigation in the Relationship between Observed Emotional States and Self-Reported Pain", in proceedings of Asia-Pacific Signal and Information Processing Association(APSIPA), 2019
- [32] Hao-Chun Yang, **Chi-Chun Lee***, "Annotation Matters: A Comprehensive Study on Recognizing Intended, Self-reported, and Observed Emotion Labels using Physiology" in Proceedings of Affective Computing Intelligent Interaction (ACII), 2019

- [33] Tzu-Yun Huang, Jeng-Lin Li, Chun-Min Chang, **Chi-Chun Lee***, "A Dual-Complementary Acoustic Embedding Network Learned from Raw Waveform for Speech Emotion Recognition" in Proceedings of Affective Computing and Intelligent Interaction (ACII), 2019
- [34] Jeng-Lin Li, **Chi-Chun Lee***, "Attention Learning with Retrievable Acoustic Embedding of Personality for Emotion Recognition", in Proceedings of Affective Computing and Intelligent Interaction (ACII), 2019
- [35] Chih-Hsiang Huang, Huang-Cheng Chou, Yi-Tong Wu, **Chi-Chun Lee**, Yi-Wen Liu, "Acoustic Indicators of Deception in Mandarin Daily Conversations Recorded from an Interactive Game", in Proceedings of the International Speech Communication Association (Interspeech), 2019
- [36] Sung-Lin Yeh, Gao-Yi Chao, Bo-Hao Su, Yu-Lin Huang, Meng-Han Lin, Yin-Chun Tsai, Yu-Wen Tai, Zheng-Chi Lu, Chieh-Yu Chen, Tsung-Ming Tai, Chiu-Wang Tseng, Cheng-Kuang Lee and **Chi-Chun Lee***, "Using Attention Networks and Adversarial Augmentation for Styrian Dialect Continuous Sleepiness and Baby Sound Recognition", in Proceedings of the International Speech Communication Association (Interspeech), 2019
- [37] Hui-Ting Hong, Jeng-Lin Li, Yi-Ming Weng, Chip-Jin Ng and **Chi-Chun Lee***, "Investigating the Variability of Voice Quality and Pain Levels as a Function of Multiple Clinical Parameters" in Proceedings of the International Speech Communication Association (Interspeech), 2019
- [38] Shun-Chang Zhong, Yun-Shao Lin, Chun-Min Chang, Yi-Ching Liu and **Chi-Chun Lee***, "Predicting Group Performances using a Personality Composite-Network Architecture during Collaborative Task", in Proceedings of the International Speech Communication Association (Interspeech), 2019
- [39] Gao-Yi Chao, Yun-Shao Lin, Chun-Min Chang, **Chi-Chun Lee***, "Enforcing Semantic Consistency for Cross Corpus Valence Regression from Speech using Adversarial Discrepancy Learning" in Proceedings of the International Speech Communication Association (Interspeech), 2019
- [40] Jeng-Lin Li, **Chi-Chun Lee***, "Attentive to Individual: A Multimodal Emotion Recognition Network with Personalized Attention Profile", in Proceedings of the International Speech Communication Association (Interspeech), 2019
- [41] Chen-Ying Hung, Ching-Heng Lin, Chi-Sen Chang, Jeng-Lin Li, **Chi-Chun Lee***, "Predicting Gastrointestinal Bleeding Events from Multimodal In-Hospital Electronic Health Records Using Deep Fusion Networks", in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2019 **[Best Student Paper – Asia Pacific]**
- [42] Jeng-Lin Li, Yu-Fen Wang, Bor-Sheng Ko, Chi-Cheng Li, Jih-Luh Tang, **Chi-Chun Lee***, "Learning a Cytometric Deep Phenotype Embedding for Automatic Hematological Malignancies Classification", in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2019
- [43] Chih-Chuan Lu, Jeng-Lin Li, Yu-Fen Wang, Bor-Sheng Ko, Jih-Luh Tang and **Chi-Chun Lee***, "A BLSTM with Attention Network for Predicting Acute Myeloid Leukemia Patient's Prognosis using Comprehensive Clinical Parameters", in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2019
- [44] Chun-Min Chang, Yu-Lin Huang, Jui-Cheng Chen, **Chi-Chun Lee***, "Improving Automatic Tremor and Movement Motor Disorder Severity Assessment for Parkinson's Disease with Deep Joint Training" in Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2019
- [45] Ming-Ya Ko, Jeng-Lin Li, **Chi-Chun Lee***, "Learning Minimal Intra-Genre Multimodal Embedding from Trailer Content and Reactor Expressions for Box Office Prediction", in Proceedings of the IEEE International Conference on Multimedia & Expo (ICME), 2019

- [46] Wei-Hao Chang, Jeng-Lin Li, **Chi-Chun Lee***, "Learning Semantic-Preserving Space Using User Profile and Multimodal Media Content From Political Social Network", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019
- [47] Chun-Min Chang, **Chi-Chun Lee***, "Adversarially-Enriched Acoustic Code Vector Learned from Out-Of-Context Affective Corpus for Robust Emotion Recognition", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019
- [48] Huang-Cheng Chou, **Chi-Chun Lee***, "Every Rating Matters: Joint Learning of Subjective Labels and Individual Annotators for Speech Emotion Classification", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019
- [49] Sung-Lin Yeh, Yun-Shao Lin, **Chi-Chun Lee***, "An Interaction-Aware Attention Network for Speech Emotion Recognition in Dialogs", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019
- [50] Wan-Ting Hsieh, Hao-Chun Yang, Fu-Sheng Tsai, Chon-Wen Shyi, **Chi-Chun Lee***, "An Event-Contrastive Connectome Network for Automatic Assessment of Individual Face Processing and Memory Ability", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019
- [51] Hao-Chun Yang, **Chi-Chun Lee***, "An Attribute-Invariant Variational Learning for Emotion Recognition Using Physiology", in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019
- [52] Chih-Chuan Lu, Jhen-Lin Li, and **Chi-Chun Lee***, "Learning an Arousal-Valence Speech Front-End Network using Media Data In-the-Wild for Emotion Recognition", in Proceedings of ACM on the Audio/Visual Emotion Challenge and Workshop (AVEC), 2018
- [53] Yi-Ying Kao, Hsiang-Ping Hsu, Chien-Feng Liao, Yu Tsao, Hao-Chun Yang, Jeng-Lin Li, **Chi-Chun Lee**, Hung-Shin Lee and Hsin-Min Wang, "Automatic Detection of Speech under Cold using Discriminative Autoencoder and Strength Modeling with Multiple Sub-dictionary Generation", in Proceedings of International Workshop on Acoustic Signal Enhancement (IWAENC), 2018
- [54] Gao-Yi Chao, Chun-Min Chang, Jeng-Lin Li, Ya-Tse Wu, **Chi-Chun Lee***, "Generating fMRI-Enriched Acoustic Vectors using a Cross-Modality Adversarial Network for Emotion Recognition" in Proceedings of ACM International Conference on Multimodal Interaction (ICMI), 2018
- [55] Yun-Shao Lin, **Chi-Chun Lee***, "Using Interlocutor-Modulated Attention BLSTM to Predict Personality Traits in Small Group Interactions", in Proceedings of ACM International Conference on Multimodal Interaction (ICMI), 2018
- [56] Yun-Shao Lin, Susan Shur-Fen Gau and **Chi-Chun Lee***, "An Interlocutor-Modulated Attentional LSTM for Differentiating between Subgroups of Autism Spectrum Disorder ", in Proceedings of the International Speech Communication Association (Interspeech), 2018 **[Best Student Paper Finalist]**
- [57] Jeng-Lin Li, Yi-Ming Weng, Chip-Jin Ng and **Chi-Chun Lee***, "Learning Conditional Acoustic Latent Representation with Gender and Age Attributes for Automatic Pain Level Recognition", in Proceedings of the International Speech Communication Association (Interspeech), 2018
- [58] Jeng-Lin Li and **Chi-Chun Lee***, "Encoding Individual Acoustic Features using Dyad-Augmented Deep Variational Representations for Dialog-level Emotion Recognition", in Proceedings of the International Speech Communication Association (Interspeech), 2018

- [59] Fu-Sheng Tsai, Hao-Chun Yang, Wei-Wen Chang and **Chi-Chun Lee***, "Automatic Assessment of Individual Culture Attribute of Power Distance using a Social Context-Enhanced Prosodic Network Representation ", in Proceedings of the International Speech Communication Association (Interspeech), 2018
- [60] Bo-Hao Su, Sung-Lin Yeh, Ming-Ya Ko, Huan-Yu Chen, Shun-Chang Zhong, Jeng-Lin Li and **Chi-Chun Lee***, "Self-Assessed Affect Recognition using Fusion of Attentional BLSTM and Static Acoustic Features ", in Proceedings of the International Speech Communication Association (Interspeech), 2018
- [61] Chen-Ying Hung, Ching-Heng Lin, **Chi-Chun Lee***, "Improving Young Stroke Prediction by Learning with Active Data Augmenter in a Large-Scale Electronic Medical Claims Database" in Proceeding of the IEEE Engineering in Medicine and Biology Society (EMBC), 2018 [**Best Student Paper Finalist**]
- [62] Wei-Hao Chang, Jeng-Lin Li, Yun-Shao Lin, **Chi-Chun Lee***, "A Genre-Affect Relationship Network with Task-Specific Uncertainty Weighting for Recognizing Induced Emotion in Music" in Proceedings of the IEEE International Conference on Multimedia & Expo (ICME), 2018 (Oral)
- [63] Yu-Shuo Liu, Chin-Po Chen, Susan Shur-Fen Gau, **Chi-Chun Lee***, "Learning Lexical Coherence Representation using LSTM forget gate for Children with Autism Spectrum Disorder during Story-telling" in Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2018
- [64] Wan-Ting Hsieh, Hao-Chun Yang, Ya-Tse Wu, Fu-Sheng Tsai, Li-Wei Kuo, **Chi-Chun Lee***, "Integrating Perceivers Neural-Perceptual Responses using a Deep Voting Fusion Network for Automatic Vocal Emotion Decoding" in Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2018
- [65] Hao-Chun Yang, Fu-Sheng Tsai, Yi-Ming Weng, Chip-Jin Ng, **Chi-Chun Lee***, "A Triplet-loss Embedded Deep Regressor Network for Estimating Blood Pressure Changes using Prosodic Features" in Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2018
- [66] Chun-Min Chang, Bo-Hao Su, Shih-Chen Lin, Jeng-Lin Li, **Chi-Chun Lee***, "A Bootstrapped Multi-View Weighted Kernel Fusion Framework for Cross-Corpus Integration of Multimodal Emotion Recognition" in Proceedings of ACII, pp. 377-382, 2017
- [67] Huang-Cheng Chou, Wei-Cheng Lin, Lien-Chiang Chang, Chyi-Chang Li, Hsi-Pin Ma, **Chi-Chun Lee***, "NNIME: The NTHU-NTUA Chinese Interactive Multimodal Emotion Corpus" in Proceedings of ACII, pp. 292-298, 2017
- [68] Fu-Sheng Tsai, Yi-Ming Weng, Chip-Jin Ng, **Chi-Chun Lee***, "Embedding Stacked Bottleneck Vocal Features within an LSTM Architecture for Automatic Pain Level Classification during Emergency Triage" in Proceedings of ACII, pp. 313-318, 2017
- [69] Chen-Ying Hung, Wei-Chen Chen, Po-Tsun Lai, Ching-Heng Lin, **Chi-Chun Lee***, "*Comparing Deep Neural Network and Other Machine Learning Algorithms for Stroke Prediction in a Large-Scale Population-Based Electronic Medical Claims Database*" in IEEE Engineering in Medicine and Biology Society (EMBC), pp. 3110-3113, 2017
- [70] Ya-Tse Wu, Hsuan-Yu Chen, Yu-Hsien Liao, Li-Wei Kuo, **Chi-Chun Lee***, "*Modeling Perceivers Neural-Responses using Lobe-dependent Convolutional Neural Network to Improve Speech Emotion Recognition*" in Proceedings of the International Speech Communication Association (Interspeech), pp. 3261-3265, 2017
- [71] Yun-Shao Lin, **Chi-Chun Lee***, "*Deriving Dyad-Level Interaction Representation using Interlocutors Structural and Expressive Multimodal Behavior Features*" in Proceedings of the International Speech Communication Association (Interspeech), pp. 2366-2370, 2017

- [72] Chin-Po Chen, Xian-Hong Tseng, Susan Shur-Fen Gau, **Chi-Chun Lee***, "*Computing Multimodal Dyadic Behaviors during Spontaneous Diagnosis Interviews toward Automatic Categorization of Autism Spectrum Disorder*" in Proceedings of the International Speech Communication Association (Interspeech), pp. 2361-2365, 2017
- [73] Chun-Min Chang, **Chi-Chun Lee***, "*Fusion of Multiple Emotion Perspectives: Improving Affect Recognition Through Integrating Cross-Lingual Emotion Information*" in Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), pp.5820-5824, 2017
- [74] Hung-Shin Lee, Yu Tsao, **Chi-Chun Lee**, Hsin-Min Wang, Wei-Cheng Lin, Wei-Chen Chen, Shan-Wen Hsiao, Shyh-Kang Jeng, "*Minimization of Regression and Ranking Loss with Shallow Neural Network on Automatic Sincerity Evaluation*" in Proceedings of the International Speech Communication Association (Interspeech), pp. 2031-2035, 2016
- [75] Fu-Sheng Tsai, Ya-Ling Hsu, Wei-Chen Chen, Yi-Ming Weng, Chip-Jin Ng, **Chi-Chun Lee***, "*Toward Development and Evaluation of Pain Level-Rating Scale for Emergency Triage based on Vocal Characteristics and Facial Expressions*" in Proceedings of the International Speech Communication Association (Interspeech), pp. 92-96, 2016
- [76] Wen-Yu Huang, Shan-Wen Hsiao, Hung-Ching Sun, Ming-Chuan Hsieh, Ming-Hsueh Tsai, **Chi-Chun Lee***, "*Enhancement of Automatic Oral Presentation Assessment System using Latent N-Grams Word Representation and Part-of-Speech Information*" in Proceedings of the International Speech Communication Association (Interspeech), pp. 1432-1436, 2016
- [77] Wei-Cheng Lin, **Chi-Chun Lee***, "*A Thin-slice Perception of Emotion? An Information Theoretic-based Framework to Identify Locally Emotion-rich Behavior Segments for Global Affect Recognition*" in Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), pp. 5790-5794, 2016
- [78] Hsuan-Yu Chen, Yu-Hsien Liao, Heng-Tai Jan, Li-Wei Kuo, **Chi-Chun Lee***, "*A Gaussian Mixture Regression Approach toward Modeling the Affective Dynamics between Acoustically-derived Vocal Arousal Score (VC-AS) and Internal Brain fMRI BOLD Signal Response*" in Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), pp. 5775-5779, 2016
- [79] Shan-Wen Hsiao, Hung-Ching Sun, Ming-Chuan Hsieh, Ming-Hsueh Tsai, Hsin-Chih Lin, **Chi-Chun Lee***, "*A Multimodal Approach for Automatic Assessment of School Principals' Oral Presentation During Pre-service Training Program*" in Proceedings of the International Speech Communication Association (Interspeech), 2015
- [80] **Chi-Chun Lee***, Daniel Bone, Shrikanth S. Narayanan, "*An Analysis of the Relationship between Signal-derived Vocal Arousal Score and Human Emotion Production and Perception*" in Proceedings of the International Speech Communication Association (Interspeech), 2015
- [81] Wei-Chen Chen, Po-Tsun Lai, Yu Tsao, **Chi-Chun Lee***, "*Multimodal Arousal Rating using Unsupervised Fusion Technique*", in Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2015
- [82] How Jing, Ting-Yao Hu, Hung-Shin Lee, Wei-Chen Chen, **Chi-Chun Lee**, Yu Tsao and Hsin-Min Wang, "*Ensemble of Machine Learning Algorithms for Cognitive and Physical Speaker Load Detection*," in Proceedings of Conference of the International Speech Communication Association (Interspeech), 2014
- [83] Daniel Bone, **Chi-Chun Lee**, Alexandros Potamianos, and Shrikanth Narayanan, "*An Investigation of Vocal Arousal Dynamics in Child-Psychologist Interactions using Synchrony Measures and a Conversation-based Model*", in Proceedings of Conference of the International Speech Communication Association (Interspeech), 2014.
- [84] Bo Xiao, Panayiotis G. Georgiou, **Chi-Chun Lee**, Brian Baucom, Shrikanth Narayanan, "*Head Motion Mimicry and its Correlation to Affectivity in Dyadic Interactions*", in: Proceedings of IEEE International Conference on Multimedia and Expo (ICME), 2013

- [85] Daniel Bone, **Chi-Chun Lee**, Vikram Ramanarayanan, Shrikanth Narayanan, Renske S. Hoedemaker, Peter C. Gordon “*Modeling Eye-Voice Coordination in Rapid Automated Naming: Smooth Patterns of Fast Performance*”, in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2013
- [86] Daniel Bone, **Chi-Chun Lee**, Theodora Chaspari, Matthew P. Black, Marian Williams, Sungbok Lee, Pat Levitt and Shrikanth S. Narayanan, Acoustic-Prosodic, Turn-taking, and Language Cues in Child-Psychologist Interactions for Varying Social Demand, in: Proceedings of Conference of International Speech Communication Association (Interspeech), 2013
- [87] Theodora Chaspari, Daniel Bone, James Gibson, **Chi-Chun Lee**, Shrikanth Narayanan, “*Using Physiology and Language Cues for Modeling Verbal Response Latencies of Children with ASD*”, in: Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2013
- [88] Rahul Gupta, **Chi-Chun Lee**, Sungbok Lee, Shrikanth Narayanan, “*Assessment of a Child’s Engagement Using Sequence Model Based Features*”, in: Proceedings of Workshop on Affective and Social Speech Signals, 2013
- [89] **Chi-Chun Lee***, Athanasios Katsamanis, Brian Baucom, Panayiotis G. Georgiou, Shrikanth Narayanan, “*Using Measures of Vocal Entrainment to Inform Outcome-Related Behaviors in Marital Conflicts*”, in: APSIPA ASC Conference, 2012
- [90] Rahul Gupta, **Chi-Chun Lee**, Daniel Bone, Agata Rozga, Sungbok Lee, Shrikanth S. Narayanan, “*Acoustical analysis of engagement behavior in children*”, in: Proceedings of the Workshop on Child, Computer, and Interaction, 2012
- [91] **Chi-Chun Lee***, Athanasios Katsamanis, Panayiotis G. Georgiou, Shrikanth S. Narayanan, “*Based on Isolated Saliency or Causal Integration? Toward a Better Understanding of Human Annotation Process using Multiple Instance Learning and Sequential Probability Ratio Test*”, in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2012
- [92] Theodora Chaspari, **Chi-Chun Lee**, Shrikanth S. Narayanan, “*Interplay between Verbal Response Latency and Physiology of Children with Autism during ECA Interactions*”, in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2012
- [93] Daniel Bone, **Chi-Chun Lee**, Shrikanth S. Narayanan, “*A Robust Unsupervised Arousal Rating Framework using Prosody with Cross-Corpora Evaluation*”, in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2012
- [94] Daniel Bone, Matthew P. Black, **Chi-Chun Lee**, Marian E. William, Pat Levitt, Sungbok Lee, Shrikanth S. Narayanan, “*Spontaneous-Speech Acoustic-Prosodic Features of Children with Autism and the Interacting Psychologist*”, in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2012
- [95] Rahul Gupta, **Chi-Chun Lee**, and Shrikanth S. Narayanan, “*Classification of Emotional Content of Sighs in Dyadic Human Interactions*”, in: Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2012
- [96] **Chi-Chun Lee***, Athanasios Katsamanis, Matthew Black, Brian Baucom, Panayiotis G. Georgiou, and Shrikanth S. Narayanan, “*Affective State Recognition in Married Couples’ Interactions Using PCA-based Vocal Entrainment Measures*”, in: Proceedings of Affective Computing and Intelligent Interaction (ACII), Lecture Notes in Computer Science, Memphis, TN, 2011
- [97] **Chi-Chun Lee***, Athanasios Katsamanis, Matthew Black, Brian Baucom, Panayiotis G. Georgiou, and Shrikanth S. Narayanan, “*An Analysis of PCA-based Vocal Entrainment Measures in Married Couples’ Affective Spoken*”

Interactions", in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2011

- [98] Emily Mower, **Chi-Chun Lee**, James Gibson, Theodora Chaspari, Marian Williams, and Shrikanth S. Narayanan, "*Analyzing the Nature of ECA Interactions in Children with Autism*", in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2011
- [99] **Chi-Chun Lee***, Matthew Black, Athanasios Katsamanis, Adam Lammert, Brian Baucom, Andrew Christensen, Panayiotis G. Georgiou and Shrikanth S. Narayanan, "*Quantification of Prosodic Entrainment in Affective Spontaneous Spoken Interactions of Married Couples*", in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2010
- [100] Matthew Black, Athanasios Katsamanis, **Chi-Chun Lee**, Adam Lammert, Brian Baucom, Andrew Christensen, Panayiotis G. Georgiou and Shrikanth S. Narayanan, "*Automatic Classification of Married Couples' Behavior using Audio Features*", in: Conference of the International Speech Communication Association (Interspeech), 2010 [**Best Student Paper**]
- [101] **Chi-Chun Lee*** and Shrikanth S. Narayanan, "*Predicting interruptions in dyadic spoken interactions*", in: Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2010
- [102] Angeliki Metallinou, **Chi-Chun Lee**, Carlos Busso, Sharon Carnicke and Shrikanth S. Narayanan, "*The USC CreativeIT Database: A Multimodal Database of Theatrical Improvisation*", in: Multimodal Corpora: Advances in Capturing, Coding and Analyzing Multimodality (MMC), 2010
- [103] Emily Mower, Angeliki Metallinou, **Chi-Chun Lee**, Abe Kazemzadeh, Carlos Busso, Sungbok Lee and Shrikanth S. Narayanan, "*Interpreting ambiguous emotional expressions*", in: Proceedings of the International Conference on Affective Computing and Intelligent Interaction (ACII), 2009
- [104] **Chi-Chun Lee***, Emily Mower, Carlos Busso, Sungbok Lee and Shrikanth S. Narayanan, "*Emotion recognition using a hierarchical binary decision tree approach*", in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2009 [**Emotion Challenge Winning Paper**]
- [105] **Chi-Chun Lee***, Carlos Busso, Sungbok Lee and Shrikanth S. Narayanan, "*Modeling mutual influence of interlocutor emotion states in dyadic spoken interactions*", in: Proceedings of Conference of the International Speech Communication Association (Interspeech), 2009
- [106] **Chi-Chun Lee***, Sungbok Lee and Shrikanth S. Narayanan, "*An analysis of multimodal cues of interruption in dyadic spoken interactions*", in: Proceedings of Conference of the International Speech Communication Association (Interspeech), pages 1678-1681, 2008 [**Best Student Paper Award Finalist**]

Abstract

- [1] Gary C.-W. Shyi, Wan-Ting Hsieh, Felix F.-S. Tsai, **Jeremy C.-C. Lee**, Shih-Tseng Tina Huang, Joshua O. S. Goh, Ya-Yun Chen, Chi-Chuan Chen, Yu Song Haw, "Neural Encoding and Decoding with Convolutional Autoencoder for Predicting Emotional Judgment of Facial Expressions" in the Nineteenth Annual Meeting of the Vision Sciences Society (VSS 2019)
- [2] Bor-Sheng Ko, Yu-Fen Wang, Chih-Chuan Lu, Jeng-Lin Li, **Chi-Chun Lee**, Jih-Luh Tang, and Hwei-Fang Tien, "Relapse and Mortality Prediction of Acute Myeloid Leukemia Patients Using Deep Bidirectional Long Short-Term Memory-Deep Neural Network Architecture" in Annual Meeting of American Society of Hematology (ASH), 2018
- [3] Yu-Fen Wang, Bor-Sheng Ko, Chi-Cheng Li, Jeng-Lin Li, Pei-Fang Weng, Huai-Hsuan Huang, Hsin-An Hou, Hwei-Fang Tien, **Chi-Chun Lee**, and Jih-Luh Tang, "An Artificial Intelligence Approach for B Lymphoblastic Leukemia Minimal Residual Disease Detection and Clinical Prognosis Prediction Using Flow Cytometry Data" in Annual Meeting of American Society of Hematology, 2017

- [4] Bor-Sheng Ko, Chi-Cheng Li, Yu-Fen Wang, Jeng-Lin Li, Hsin-An Hou, Pei-Fang Weng, Hwei-Fang Tien, **Chi-Chun Lee**, and Jih-Luh Tang, "An Artificial Intelligence Approach in Classifying Acute Myeloid Leukemia and Myelodysplastic Syndrome for Minimal Residual Disease Detection with Post Induction Prognosis Analysis Using Flow Cytometry" in Annual Meeting of American Society of Hematology, 2017
- [5] Chi-Cheng Li, Bor-Sheng Ko, Yu-Fen Wang, Jeng-Lin Li, Pei-Fang Weng, Hsin-An Hou, Xiu-Wen Liao, Chien-Ting Lin, Jia-Hou Liu, Hsun-I Sun, Hwei-Fang Tien, **Chi-Chun Lee**, and Jih-Luh Tang, "An Artificial Intelligence Approach for Predicting Allogeneic Hematopoietic Stem Cell Transplantation Outcome By Detecting Pre-Transplant Minimal Residual Disease in Acute Myeloid Leukemia Using Flow Cytometry Data" in Annual Meeting of American Society of Hematology, 2017
- [6] Shih-Yen Lin, Ya-Tse Wu, Chen-Pei Lin, Li-Wei Kuo, **Chi-Chun Lee***, "Investigating Vocal Emotion by Graph Theoretical Analysis and Lobe-dependent Convolutional Neural Network on Functional Mri" in International Conference on Cognitive Scienc", in International Conference on Cognitive Science, 2017
- [7] Hengtai Jan, Shih-Yen Lin, Shiu-an-Yeu Chen, Yu-Hisen Liao, Yi-Ping Chao, **Chi-Chun Lee**, Li-Wei Kuo, "Voxel-based Graph-theoretical Analysis (VGA) of Brain Networks Modulated by External Vocal Emotion", in: Human Brain Mapping, Hawaii, 2015
- [8] **Chi-Chun Lee***, Brian Baucom, Athanasios Katsamanis, Panayiotis G. Georgiou and Shrikanth Narayanan, "Modeling Vocal Interdependence during Marital Interaction: A Vector-based Approach", In S. Weusthoff (Chair), Applied speech signal processing methods in couple and family research. Paper (oral) presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, National Harbor, MD, November 2012
- [9] Brian Baucom, Esti Iturradle, **Chi-Chun Lee**, Panayiotis G. Georgiou, Shrikanth Narayanan and Gayla Margolin, "Multisystemic family aggression and dynamic emotional processes during triadic family interaction". In S. Weusthoff (Chair), Applied speech signal processing methods in couple and family research. Paper (oral) presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, National Harbor, MD, November 2012.
- [10]Theodora Chaspari, **Chi-Chun Lee**, Matthew P. Black, and Shrikanth S. Narayanan, "Analyzing the Physiological Synchrony of Children with Autism and Their Parents with Signal Processing Techniques", in: Proceedings of the International Meeting for Autism Research, Toronto, 2012
- [11]**Chi-Chun Lee***, Brian Baucom, Athanasios Katsamanis, Andrew Christensen, Panayiotis G. Georgiou and Shrikanth Narayanan, "Analyzing Vocal Entrainment in Married Couples' Interactions: a Signal-derived PCA-based Quantification Scheme and Affect Recognition using Factorial Hidden Markov Model", in: Conference of Association for Behavioral and Cognitive Therapies (ABCT): Clinical Research Methods and Statistics SIG (poster), Toronto, Nov. 2011

Selected Funded Projects

Ministry of Science and Technology (MOST)

Project Title	Role	Duration	Agency
Crowd-AI Users Representation Learning, Affect Computing, and Behavior Shaping	PI	2018/01/01-2021/12/31	MOST
Crowd AI - Cooperative Positioning, Geographical Knowledge and Edge Profile Learning, and Cognitive Interaction	CO-PI	2018/01/01-2021/12/31	MOST
Crowd AI - Crowdsourced Machine Learning from Cyber-Physical Crowds	CO-PI	2018/01/01-2021/12/31	MOST
Crowd AI - Distributed Learning, Aggregation, and Privacy	CO-PI	2018/01/01-2021/12/31	MOST
Open DJ Project: AI for Automatic and Personalized DJing (107-2221-E-001-013-MY2)	CO-PI	2018/08/01-2020/07/31	MOST

A Study of the unbiased disease status and prognosis assessment of Acute Leukemia or Myelodysplastic Syndrome patients by machine learning of their clinical data (107-2314-B-002 -281 -	CO-PI	2018/08/01-2019/07/31	MOST
A Neural-Computational Approach to Investigate Multi-modal Processing and Integration of Emotional Expressions: In Search of Cultural Specificity (107-2420-H-194 -006 -)	CO-PI	2018/01/01-2018/12/31	MOST
Robust Automatic Oral Presentation Assessment (106-2221-E-001-017-MY2)	CO-PI	2017/08/01~2019/07/31	MOST
Development of Automated and Objective Pain Level Assessment by Modeling Multimodal Human Behaviors during Emergency Triage (106-2221-E-007-027-)	PI	2017/08/01~2018/07/31	MOST
Large-Scale Cyber-Physical Data Analysis for Human-Centric Learning, Recommendation, and Behavior Shaping (1/3)(106-3114-E-007-005-)	CO-PI	2017/06/01~2018/05/31	MOST
Exploring the Neural Representation Associated with Cognitive Adaptation in Multiple Cultural Domains using MRI(106-2420-H-003-001-MY2)	CO-PI	2017/01/01~2018/12/31	MOST
Development of Objective Computational Algorithms for Modeling Atypical Socio-Communicative Multimodal Behaviors during Autism Diagnostic Observation Schedule (ADOS) Interview Sessions (105-2221-E-007-107-MY2)	PI	2016/08/01~2018/07/31	MOST
Decoding Neuroperceptual Mechanisms of Vocal Emotion Expressions using Brain MR Neuroimaging and Speech Affective Computing (104-2420-H-400-001-MY2)	CO-PI	2015/01/01~2016/12/31	MOST
Robust Multimodal Emotion Modeling for Cross-domain Applications (103-2218-E-007-012-MY3)	PI	2014/08/01~2017/07/31	MOST

Other Agencies

Big Data Analytics and Informatics Algorithm Development	Sub-project PI	2015/01/01~2015/12/31	VGHUST
NZXT Cam: Intelligent DIY-Computer Hardware Recommendation System for Gaming	PI	2014/11/01~2015/10/30	NZXT Inc.
Sentri Smart Home Monitoring System – Intelligent Module’s Research and Development	PI	2014/09/01~2015/08/31	Kronosight Inc.
A Study of Automatic Oral Evaluation Systems	CO-PI	2015/01/01~2016/12/31	NAER
Correlation of Facial Expression Analysis and Pain Scale at Triage	CO-PI	2015/09/01~2017/07/31	CGM Hospital
Developing Stroke Predictive Index using Deep Learning Neural Network from Massive Electronic Health Records	Sub-project PI	2016/01/01~2016/12/31	VGHUST
Developing Hemorrhage Predictive Index of Anticoagulant and Antiplatelet Agent using Deep Learning Neural Network from Massive Electronic Health Records	Sub-project PI	2018/01/01~2018/12/31	VGHUST
運用機器學習建構心血管疾病預測模行之研究	PI	2018/08/01~2018/12/31	VHCT
使用者節能行為分析技術	PI	2018/08/01~2018/12/31	ITRI
以深度學習建構智慧多模式臨床治療成效預測系統	Sub-project PI	2019/01/01~2019/12/31	VGHUST
以深度學習建構多模式過敏性疾病急性發作預測系統	Sub-project PI	2020/01/01~2020/12/31	VGHUST
失智症早篩 App 開發	PI	2019/03/01~2019/08/31	Hannstar

嬰兒哭聲分析辨識系統建置開發	PI	2019/03/01~2021/02/28	生群
金融智慧技術	PI	2019/04/01~2022/03/30	E-Sun
AI-dereverb	PI	2020/07/01~2021/06/30	Cmedia
AI-based Health Index, Disease Prediction	PI	2019/08/01~	Allianz
情緒激動程度與辨識開發	PI	2020/07/01~2021/06/30	Gamania
多人遊戲互動情境行為分析技術開發研究案		2020/09/01~2021/08/31	Gamania
Machine Learning on Edge Computing Platforms	PI	2020/06/01~2022/05/31	Qualcom m
新聞影片畫面方法技術研究與技術概念驗證	PI	2020/03/31~2020/11/30	III

Professional Membership

Senior Member: IEEE

Member: International Speech Communication Association (ISCA), Association for Computing Machinery (ACM)

Director: The Association for Computational Linguistics and Chinese Language Processing (ACLCLP)

Academic Services

Associate Editor

IEEE Transaction on Affective Computing (2020-)

IEEE Transaction on Multimedia (2019-2020)

TPC Members

APSIPA (Image, Video, Multimedia), (Machine Learning) 2019-2020

Journal Special Issue Editor

Journal of Computer Speech Language (CSL): Special issue, Speech and Language Processing for Behavioral and Mental Health Applications

Conference Organizer: International

Annual Conference of International Speech Communication (Interspeech) 2016, 2018, 2019 Area Chair

Annual Conference of Affective Computing and Intelligent Interaction (ACII) 2017, 2019 Senior Technical Committee

ACM International Conference on Multimodal Interaction (ICMI) 2018 Publicity Chair, Area Chair

International Symposium on Chinese Spoken Language Processing (ISCSLP) 2018 Sponsor Chair, 2020 Special session chair

Conference Organizer: Domestic

Annual Conference on Computational Linguistics and Speech Processing (ROCLING) 2018 General Chair

Annual Conference on Computational Linguistics and Speech Processing (ROCLING) 2017 Technical Chair

Annual Conference on Computational Linguistics and Speech Processing (ROCLING) 2016 Local Chair

Speech Processing Workshop (SWS) 2017 General Chair

Review Services

Journals

IEEE Transactions on Audio, Speech, and Language, IEEE Transaction on Affective Computing, IEEE Signal Processing Magazine, Journal of Computer Speech and Language, Journal of Speech Communication, IEEE Transaction on Biomedical Engineering, IEEE Transaction on Information Forensic and Security, IEEE Wireless Communication Magazine, IEEE Journal on Emerging and Selected Topics, Elsevier Digital Signal Processing, Communications of the ACM, Transactions on Multimedia Computing Communications and Applications, Journal of Language Resource and Evaluation, Journal of the Chinese Institute of Engineers

Conferences

The IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Annual Conference of International Speech Communication (Interspeech), The IEEE International Conference on Multimedia Expo (ICME),

Annual Conference of Affective Computing and Intelligent Interaction (ACII), ACM International Conference on Multimodal Interaction (ICMI), European Signal Processing Conference (EUSIPCO), The International Conference on Pattern Recognition (ICPR), The IEEE International Symposium on Circuits and Systems (ISCS), APSIPA Annual Summit

Project Proposals

2018 Ministry of Justice Taiwan Proposal Review

European Research Council (ERC) Consolidator Grant 2019 – External Reviewer

European Science Foundation (ESF): Research Foundation Flanders (FWO) Post-doctoral projects – Evaluation

Teaching Experiences

National Tsing Hua University, Taiwan

EE 6640: Speech Signal Processing

EE 3660: Probability

EE 3662: Digital Signal Processing Laboratory

IMS 5031: Artificial Intelligence Innovation and Entrepreneurship

University of Southern California: Teaching Assistant

EE 619: Advanced Topics in Automatic Speech Recognition

EE 519: Speech Recognition and Processing for Multimedia

Invited Talks

Lecture & Keynote Talks

Organization	Topic	Place	Date
APSIPA ASC (Overview Talk)	Enabling in-to-life Emotion-AI technology: robustness, scalability, and trustworthiness	Virtual	2020/12/02
Mackay Hospital	Human-enabled AI: Mechanistically Translating Human Experience into Scalable Decision Analytics	Mackay, Taipei	2020/11/22
人本智能科技論壇	建構深度模型感知情緒項度與個人特質	東吳大學, 台北	2020/11/07
國衛院(NHRI)	From variables to deep representations: the key in driving AI-assistive solution for healthcare	Miaoli	2020/10/17
NVIDIA GTC	Emotion sensing with multimodal behavior AI and its applications	Virtual	2020/10/06
調查局	人工智慧於人類行為與情緒之分析決策應用	Taipei	2020/09/14
台灣金融研訓院	HR-Tech 實驗專案-AI 視頻面試的應用	芬恩特創新聚落	2020/07/22
驊訊電子	Learning Intelligent Human-Centered Analytics From Multimodal Signals	Taipei	2020/02/06
AIRC, Japan	Multimodal learning for intelligent human-centered analytics	Tokyo, Japan	2020/01/14
NTHU-EE Tohoku Univ. GSIS Bilateral Workshop	Speech Analytics for Emotion, Interaction, and Mental Health	NTHU	2019/11/22
臺中榮民總醫院-108 年度健保資料研究四院聯合成果發表會 (Keynote)	Multimodal Health Analytics Learning for Clinical Applications	台中榮總	2019/11/05
Taiwan-Canada Bilateral Workshop	Multimodal Learning for Clinical Health Applications	Toronto, Canada	2019/10/30
中央研究院資訊科學所	Human-Centered AI: Enabling Machines to Sense and Interpret Us	中研院	2019/10/01

人工智慧輔助醫療與倫理、法律、社會:挑戰與因應	以人為本的人工智慧: 讓機器感知並解釋我們	臺大醫院	2019/09/21
AU Optics (友達光電)	AI 驅使下世代決策應用: 機器智能與人類行為	新竹	2019/08/15
United Chinese School Committees Association of Malaysia	Human-Centered AI: Enabling Machines to Sense and Interpret Us	Kuala Lumpur, Malaysia	2019/05/26
老年精神醫學會年會	AI for behavior computing	台大	2019/03/10
人工智慧學校	AI-enabled decision analytics in our daily life	新竹	2019/03/09
Nvidia deep learning community	Behavioral Informatics and Interaction Computation Lab	君品飯店	2019/01/17
人工智慧學校	深度學習應用於醫療行為、政治媒體與電影分析	中研院	2018/12/08
International Symposium on Affective Science and Application (Keynote)	Advancing emotion AI sensing technology by learning to integrate neuroperceptual information	NCCU	2018/12/10
社政資料治理論壇	深度學習應用於醫療行為、政治媒體與電影分析	台大	2018/11/27
Bilateral Workshop between NTHU and Tohoku University GSIS	Joint neuroperceptual and expressive acoustics modeling for deep vocal emotion decoding	Sendai, Japan	2018/11/16
AI 工作坊: 社科院人工智慧初探講座	Human-Centered AI: Learning Human-centered Analytics from Multimodal Data	中正大學	2018/11/10
台灣精神醫學會 (Keynote)	AI for Behavior Computing: Case Studies in Healthcare Applications	中國醫	2018/11/03
ACM AVEC 2018 (Keynote)	Interpersonal Behavior Modeling for Personality, Affect, and Mental States Recognition and Analysis	Seoul, Korea	2018/10/22
人工智慧學校	AI for Personality, Emotion and Mental States Recognition	新竹	2018/10/06
陽明醫工	AI for Human-Centered Behavior Analytics: Health Applications	陽明大學	2018/09/27
台大醫院精神部	AI for Human-Centered Behavior Analytics: Health Applications	臺大醫院	2018/09/17
台灣電通	Sensing and Interpreting Human with AI	台灣電通	2018/08/29
宏盟媒體集團 PHD AI 雲講堂	情緒運算於數位行銷之應用	三創中心	2018/08/20
人工智慧學校	Behavior Computing for Emotion and Personality	中研院	2018/08/10
AI MEETUP TAIPEI	AI for Personality, Emotion and Mental States Recognition	台大	2018/08/09
APPIER	Learning Human-Centered Analytics from Multimodal Data: Case Studies in Health Applications	Appier	2018/08/09
林口長庚胸腔內科暨清華大學電機系智慧醫療論壇	Advancing Clinical Decisions beyond Status-quo with Learnable Analytics	林口長庚	2018/08/04
瑞昱半導體	Learning Intelligent Human-centered Analytics from Multimodal Behavior Signals	瑞昱	2018/08/02
自強基金會	語音處理與情緒辨識	清大	2018/07/30

IEEE ICME Workshop on Media Analytics for Societal Trend	A Pilot Study in Deriving Political Stance Representation with User's Profile and Social Media Posting	San Diego, USA	2018/07/23
Rework in Healthcare	人工智慧醫療診斷分析與應用	Hong Kong	2018/06/08
Artificial intelligence based assistive diagnose and treatment for Autism spectrum disorder	Behavioral Signal Processing: Multimodal Behavior Computing for Autism Spectrum Disorder	杜克昆山 (Duke Kunshan University)	2018/05/24
台大腦心所	Learning from Measurable Signals to Compute Human Emotion	臺大醫院	2018/05/01
工研院產業學院 (12小時課程)	人工智慧於人類行為與情緒之分析決策應用	新竹工研院	2018/04/23 2018/04/30
資策會數位教育研究所 (14小時課程)	人工智慧醫療診斷分析與應用	台北資策會	2018/03/17 2018/03/18
中國醫藥大學	機器智能與人類行為於醫療應用	中國醫	2018/04/10
林口長庚醫院巨量資料及統計中心	機器智能與人類行為於醫療應用	林口長庚	2018/03/27
台灣人智慧學校	機器智能與人類行為於醫療應用	中研院	2018/03/10
臺灣認知神經科學學會年會 (TSCN)	A Perspective on using Machine Learning in fMRI Data Modeling: Human face processing and beyond	中國醫	2018/01/20
圖書資訊學專題計畫成果發表暨研究發展趨勢研討會 keynote	大數據分析於資訊行為之研究趨勢	台北科技部院區	2017/12/08
台灣資料科學協會:一日課程	Emotion-AI: 運用人工智慧實現情緒辨識	中研院	2017/12/16
台灣人工智慧年會	機器智能與人類行為: 跨領域決策分析於醫療應用	中研院	2017/11/09
Affectiva inc.	Computational Exploration of Human Emotion Recognition	Boston, USA	2017/10/23
兩岸清華學術交流	機器智能決策分析於醫療應用	蘇州, 中國	2017/10/15
Bilateral Workshop between NTHU and Tohoku University GSIS	Computing Human Behavior Health Analytics from Speech, Video, and Language	新竹, 台灣	2017/10/13
大數據於資訊行為分析與應用研討會 keynote	大數據時代的人類資訊行為研究現況與趨勢	政大	2017/09/30
台灣生醫電子工程協會年會	Behavior Computing for Health Applications	新竹喜來登	2017/04/28
中華民國臨床心理年會	Deriving Human Behavior Analytics using Audio-Video Data: Recent work in Autism Spectrum Disorder (ASD)	台大	2017/04/23
廣達電腦	人類行為訊號處理: 新興跨學科(醫療、教育)研究應用實例分享	廣達	2017/03/30
台中榮總醫學研究部 Big Data 專題演講	Behavioral Signal Processing: Enabling behavior analytics for Applications in Health and Education	台中榮總	2017/02/22

經濟部 Mix Taiwan 創意 X 技術-知識分享沙龍	新興人工智慧跨領域研究實例分享	台北、經濟部 線上直播	2017/01/18
台灣資料科學協會:一日課程	人類行為大數據分析:資料科學如何應用在教育及醫療領域	中研院	2017/01/15
台大公衛健康與虛擬社群工作坊	人類行為訊號處理: 跨學科(教育、醫療)人類行為量化分析之決策工具	台大公衛	2016/12/16
中華民國精算學會年會	人類行為訊號處理:全新跨學科(教育、醫療)人類行為量化分析之決策工具	世貿會場	2016/11/30
Information Retrieval Workshop	Exploration in Human Affect Modeling: Engineering Advancements and Next Steps	中研院	2016/11/24
台灣資料科學協會:一日課程	人類行為大數據分析:資料科學如何應用在教育及醫療領域	中研院	2016/10/30
Bilateral Workshop between NTHU and Tohoku University GSIS	Deriving Human Behavior Analytics using Audio-Video Data: Challenges and Opportunities	仙台, 日本	2016/10/25
台灣資料科學年會	人類行為大數據分析:資料科學如何應用在教育及醫療領域	中研院	2017/07/14
Lorentz Workshop on Interdisciplinary Insights into Small Group and Team Dynamics	Behavioral Signal Processing	Lorentz Center, Leiden, Netherland	2016/06/29
Speech Processing Workshop (SWS)	A window into you: BSP effort for quantifying human behaviors across domains of health, education, and psychology	台大	2016/03/18
Bilateral Workshop between NTHU and Tohoku University GSIS	Cross-corpora Prosody-based Emotional Arousal Indicator and its Analysis in Affective Human Production-Perception Interplay	新竹, 台灣	2015/10/28
Taiwan-Japan Symposium on Psychological, Physiological, and Electro-Acoustics	Prosody-based Emotional Arousal Indicator and its Analysis in Affective Production-Perception Interplay	清大	2015/10/23
Bilateral Workshop between NTHU and Tohoku University GSIS	Behavioral Signal Processing: An interdisciplinary effort in modeling human behaviors with applications in domains of behavior science	仙台, 日本	2014/10/21
Speech Processing Workshop (SWS)	Understanding Dyadic Human Spoken Interactions Using Speech Processing Techniques: Case studies in Autism Spectrum Disorder (ASD) and behavioral Couple Therapy	台北大學	2014/08/01

Graduate Seminar Talks

NTHU-EE, NTU-EE, NCTU-EE, Academia Sinica-TIGP SNHCC, FJU-CSIE, NTNU-EE PU-FMath, Academia Sinica-Econ, NTUH-Psychiatry, CCU-CogPsy, NCCU-CS, National Academy of Educational Research (NAER), National Academy of Civil Service (NACS)

Media News

Speech and Language

Discovery Channel:

- 見證台灣金融科技的實力: 《從台灣看未來: 金融科技》:

<https://www.youtube.com/watch?v=7-p6eCxyeV4>

Behavior Computing

今周刊:

- 1153 期 (2019/01) 庶民 AI 大爆發 《火眼面試官讀心術 幫公司海選最佳員工》
https://event.businessstoday.com.tw/2019/2019AIProject/04_detect-AI.html
- AI 淺力新星 (2019/09) 《AI 實現行為量化建模與客觀辨識 更深入了解每一個人》
<https://www.businessstoday.com.tw/article/category/154685/post/201909020026/AI%E5%AF%A6%E7%8F%BE%E8%A1%8C%E7%82%BA%E9%87%8F%E5%8C%96%E5%BB%BA%E6%A8%A1%E8%88%87%E5%AE%A2%E8%A7%80%E8%BE%A8%E8%AD%98%20%E6%9B%B4%E6%B7%B1%E5%85%A5%E4%BA%86%E8%A7%A3%E6%AF%8F%E4%B8%80%E5%80%8B%E4%BA%BA>

能力雜誌:

- 760 期 (2019/06) 《眼神飄、挑眉個性全都露 人體履歷讓對的人上車》

三立新聞台(透視新聞):

- 《清大開發 AI 面試軟體!人工智慧"讀心術"拆解臉與聲音情緒!》
<https://www.youtube.com/watch?v=lggjU6S3aQY&list=PLd5zGth6CDdXMiHgWalAOknQ8hkNZ8j9J&index=7&t=12s>

Health Analytics

Allianz AI-based health index:

- 聯合新聞網:https://udn.com/news/story/7239/4707027?from=udn-ch1_breaknews-1-cate6-news
- 中時電子報:<https://www.chinatimes.com/realtimenews/20200716004262-260410?chdtv>
- 蘋果電子報:<https://tw.appledaily.com/property/20200716/R5XQVGMZRZLVMN5JHSD7T4X67DI/>

Parkinson's automatic severity assessment from video:

- 華視新聞 <https://news.cts.com.tw/cts/life/201908/201908191971718.html>
- 中時電子報 <https://www.chinatimes.com/realtimenews/20190819002024-260405...>
- 聯合新聞網 <https://udn.com/news/story/7324/3997103>
- 自由時報 <https://news.ltn.com.tw/news/life/breakingnews/2888803?>
- 今日新聞 <https://www.nownews.com/news/20190819/3575755/>
- 健康 2.0 <https://health.tvbs.com.tw/medical/318110>

AI-based hematological disorder diagnosis

- Technews 【CES 2019 台灣新創團隊】台大清大開發 AI 血液檢測工具，助血癌判讀精準度躍升：
https://technews.tw/2018/12/20/ntu-nthu-ai-blood-measure-equipment-ahead/?fbclid=IwAR1Mxp6Etw2nM-KcFqKkWoc-DxJRswgot_O4HnZKukJDWkUwFFxpdfMy3iI

Mango Quality Assessment (Tech-Mango)

- 看清大理工腦 如何把芒果推上「國際精品」的舞台!
<https://tw.news.yahoo.com/%E7%9C%8B%E6%B8%85%E5%A4%A7%E7%90%86%E5%B7%A5%E8%85%A6-%E5%A6%82%E4%BD%95%E6%8A%8A%E8%8A%92%E6%9E%9C%E6%8E%A8%E4%B8%8A-%E5%9C%8B%E9%9A%9B%E7%B2%BE%E5%93%81-%E7%9A%84%E8%88%9E%E5%8F%B0-055402262.html>

USC News

- Alumni News (Why ECE): <http://bit.ly/2KVp1MO>