

Yelin Kim

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EDUCATION

University of Michigan , Ann Arbor, MI, USA Ph.D. in Electrical Engineering-Systems	08/2016
University of Michigan , Ann Arbor, MI, USA M.S. in Electrical Engineering-Systems	05/2013
Seoul National University , Seoul, South Korea B.S. in Electrical and Computer Engineering	08/2011

RESEARCH EXPERIENCE

University at Albany, State University of New York , NY Assistant Professor, Department of Electrical and Computer Engineering Director, INSPIRE (Interaction Sensing and Perception in Real Environment) Lab	2016–Present
University of Michigan , Ann Arbor, MI Computational Human-Centered Analysis and Integration Lab Graduate Student Research Assistant Title of Dissertation: “Automatic Emotion Recognition: Quantifying Dynamics and Structure in Human Behavior”	2012–2016
GE Global Research Center , Niskayuna, NY Computer Vision Lab, Software, Sciences & Analytics Laboratory R&D Intern	Summer 2014

HONORS & AWARDS

Awards

Google Faculty Research Award Support Research on “Towards Emotionally Intelligent AI Systems: Robust and Adaptive Multimodal Emotion Recognition” Press Release by UAlbany	2018
SUNY-A Faculty Research Award Support Research for Automatic Emotion Recognition Using Multimodal Signal Processing and Temporal Analysis Methods	2017–2019
Best Student Paper Award (lead author) ACM International Conference on Multimedia, MM 2014	2014

Selected among total 679 submissions

[Press Release](#) by UMichigan

[Press Release](#) by IEEE Computer Society

Best Technical Poster Award 2014
The 10th Korean-American Scientists and Engineers Association (KSEA) Young Generation Technical and Leadership Conference, 1st place in Engineering

Best Poster Award 2013
Engineering Graduate Symposium, University of Michigan, 1st place in CSE

Conference Travel Awards from
National Science Foundation (NSF, 2015)
Computing Research Association's Committee on the Status of Women in Computing Research (CRA-W; 2014, 2015)
Rackham Graduate School at the University of Michigan (2013, 2014)
Department of Computer Science and Engineering at the University of Michigan (2013)

Fellowships

KETEP Korean Government Scholarship for Study Abroad 2011–2013

Qualcomm Scholarship 2011

Korea National Science Scholarship 2007–2011

Seoul National University Engineering Women Fellowship 2010

Temasek Foundation-Singapore Management University Leadership Enrichment and Regional NetworkIng Scholarship 2010

The National Academy of Engineering of Korea: Honors 2009

JOURNAL PUBLICATIONS **Yelin Kim**, Tolga Soyata, and Reza Feyzi Behnagh. “Towards Emotionally-Aware AI Smart Classroom: Current Issues and Directions for Engineering and Education.” *IEEE Access*, 2018. Accepted, preprint, Impact Factor: 3.244

Yelin Kim and Emily Mower Provost. “ISLA: Temporal Segmentation and Labeling for Audio-Visual Emotion Recognition.” *IEEE Transactions on Affective Computing (IEEE TAC)*. 2017; PP(99). Accepted, preprint, Impact Factor: 3.149

Yelin Kim and Emily Mower Provost. “Emotion Recognition During Speech Using Dynamics of Multiple Regions of the Face.” *ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMM), Special Issue on ACM Multimedia Best Papers*. 2015; 12(1). pp.25:1–25:23. Impact Factor: 2.250

CONFERENCE PUBLICATIONS **Yelin Kim** and Jeesun Kim. “Human-Like Emotion Recognition: Multi-Label Learning from Noisy Labeled Audio-Visual Expressive Speech.” *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*. April, 2018. Accepted.

Jesse Parent and **Yelin Kim**. “Towards Emotion Recognition with Automatic Social and Relational Context Discovery in HRI Systems.” *The AAAI Fall Symposium Series: Artificial Intelligence for Human-Robot Interaction (AI-HRI)*, November, 2017.

Yelin Kim and Emily Mower Provost. “Emotion Spotting: Discovering Regions of Evidence in Audio-Visual Emotion Expressions.” *ACM International Conference on Multimodal Interaction (ACM ICMI)*, November, 2016. pp. 92–99

John Gideon, Biqiao Zhang, Zakaria Aldeneh, **Yelin Kim**, Soheil Khorram, Duc Le, and Emily Mower Provost. “Wild Wild Emotion: A Multimodal Ensemble Approach.” *ACM International Conference on Multimodal Interaction (ACM ICMI)*, November, 2016. pp. 501–505

Yelin Kim and Emily Mower Provost. “Leveraging Inter-rater Agreement for Audio-Visual Emotion Recognition.” *Proceedings of International Conference on Affective Computing and Intelligent Interaction (ACII)*, September, 2015. pp. 553–559

Yelin Kim. “Exploring Sources of Variation in Human Behavioral Data: Towards Automatic Audio-Visual Emotion Recognition.” *Proceedings of International Conference on Affective Computing and Intelligent Interaction (ACII) Doctoral Consortium*, September, 2015. pp. 748–753

Yelin Kim, Jixu Chen, Ming-Ching Chang, Emily Mower Provost, Xin Wang, and Siwei Lyu. “Modeling Transitional Patterns in-between Events for Temporal Human Action Segmentation and Classification.” *IEEE International Conference on Automatic Face and Gesture Recognition (FG 2015)*, May, 2015. pp. 1–8.
Acceptance rate: 12%

Yelin Kim and Emily Mower Provost. “Say Cheese vs. Smile: Reducing Speech-Related Variability for Facial Emotion Recognition.” *Proceedings of the ACM International Conference on Multimedia (ACM MM’14)*. November, 2014. pp. 27–36.
Acceptance rate: 19%.
[Note: Best Student Paper Award]

Yelin Kim, Honglak Lee, and Emily Mower Provost. “Deep Learning for Robust Feature Generation in Audio-visual Emotion Recognition.” *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*. 2013. pp.3677–3681.

Yelin Kim, Emily Mower Provost. “Emotion Classification via Utterance-level Dynamics: a Pattern-based Approach to Characterize Affective Expressions.” *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*. May, 2013. pp. 3687–3691.

PATENTS

“Systems and Methods For Analyzing Time Series Data Based on Event Transitions.” *U.S. Pub. No.: 2016/0321257 A1*, 2016.

Inventors: Jixu Chen, Peter Henry Tu, Ming-Ching Chang, **Yelin Kim**, Siwei Lyu
Assignee: Morpho Detection, LLC (Newark, CA, US)

Publication Date: November 3, 2016

Academic Publication: Y. Kim et al., FG 2015

TEACHING EXPERIENCE

Probability and Random Processes

Instructor, SUNY Albany

Fall 2017

Digital Signal Processing

Instructor, SUNY Albany

Spring 2017, Spring 2018

Graduate Student Instructor, UMichigan

Fall 2014

Introduction to Engineering Design

Instructor, SUNY Albany

Fall 2016

Probabilistic Methods in Engineering

Graduate Student Instructor, UMichigan

Winter 2015

Recognized Excellent performance in teaching (Overall Student Evaluation: 4.8/5.0)

Intelligent Interactive Systems

Guest Lecturer, UMichigan

February 2014

Human-Centered Computing

Guest Lecturer, UMichigan

March 2013

INVITED TALKS

“Multimodal Emotion Recognition: Quantifying Dynamics and Structure in Human Behavior.” Amazon Inc., Cambridge, MA, USA, Oct 2017.

“Audio-Visual Emotion Recognition: Quantifying Dynamics and Structure in Human Behavior.” Society for Affective Science (SAS) Pre-Conference on Affective Computing, Boston, MA, USA, Apr 2017.

“Audio-Visual Emotion Recognition: Quantifying Dynamics and Structure in Human Behavior.” Advanced Data Analytics Talk Series, University at Albany, State University of New York, Albany, NY, USA, Feb 2017.

[Video Recording](#)

“Automatic Emotion Recognition: Developing Machines That Identify Human Emotion.” Cognitive Science Community, University of Michigan, Ann Arbor, MI, USA, Oct 2015.

“Exploring Sources of Variation in Human Behavioral Data: Towards Automatic Audio-Visual Emotion Recognition.” International Conference on Affective Computing and Intelligent Interaction (ACII) Doctoral Consortium, Xi’an, China, Sep

2015.

“Audio-Visual Emotion Recognition: Quantification of Dynamics and Structure in Affective Behavior.” Ford Research and Innovation Center, Palo Alto, CA, USA, Aug 2015.

“Exploring Affective and Social Cues in Multimedia Content.” IEEE International Conference on Automatic Face and Gesture Recognition (FG) Doctoral Consortium, Ljubljana, Slovenia, May 2015.

“Say Cheese vs. Smile: Reducing Speech-Related Variability for Facial Emotion Recognition.” Signal Processing Systems Lab, Seoul National University (SNU), Seoul, South Korea, Jan 2015.

CONFERENCE PRESENTATION “Human-Like Emotion Recognition: Multi-Label Learning from Noisy Labeled Audio-Visual Expressive Speech.” IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP). Calgary, Alberta, Canada. April 2018.

“Towards Socially Intelligent HRI Systems: Quantifying Emotional, Social, and Relational Context in Real-World Human Interactions.” The AAAI Fall Symposium Series: Artificial Intelligence for Human-Robot Interaction (AI-HRI). Arlington, VA, November, 2017.

“Emotion Spotting: Discovering Regions of Evidence in Audio-Visual Emotion Expressions.” ACM International Conference on Multimodal Interaction (ACM ICMI). Tokyo, Japan, November, 2016.

“Leveraging Inter-rater Agreement for Audio-Visual Emotion Recognition.” International Conference on Affective Computing and Intelligent Interaction (ACII), Xian, China, Sep 2015.

“Modeling Transition Patterns Between Events for Temporal Human Action Segmentation and Classification.” IEEE International Conference on Automatic Face and Gesture Recognition (FG), Ljubljana, Slovenia, May 2015.

“Say Cheese vs. Smile: Reducing Speech-Related Variability for Facial Emotion Recognition.” The 22nd ACM International Conference on Multimedia (ACM MM), Orlando, Nov 2014. [Note: *Best Student Paper Award*]

“Deep Learning for Robust Feature Generation in Audio-Visual Emotion Recognition.” Engineering Graduate Symposium, University of Michigan, Nov 2013. [Note: *Best Poster Presentation Award*]

“Deep Learning for Robust Feature Generation in Audio-Visual Emotion Recognition.” IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP). Vancouver, British Columbia, Canada. May 2013.

“Emotion Classification via Utterance-Level Dynamics: A Pattern-Based Approach to Characterizing Affective Expressions.” The 10th Korean-American Scientists and Engineers Association (KSEA) Young Generation Technical and Leadership Conference, Houston, Texas, Jan 2014. [Note: *Best Technical Poster Award*]

“Emotion Classification via Utterance-Level Dynamics: A Pattern-Based Approach to Characterizing Affective Expressions.” IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP). Vancouver, British Columbia, Canada. May 2013.

“Emotion Classification via Utterance-Level Dynamics: A Pattern-Based Approach to Characterizing Affective Expressions.” Engineering Graduate Symposium, University of Michigan, Nov 2012.

PROFESSIONAL Conference Organizer ACTIVITIES

ACM International Conference on Multimodal Interaction (ICMI), 2018: Doctoral Consortium Co-Chair

IEEE International Conference on Automatic Face and Gesture Recognition (FG), 2018: Publicity Co-Chair

International Conference on Affective Computing and Intelligent Interaction (ACII), 2017: Doctoral Consortium Co-Chair

NSF Award IIS:1743034 (PI, 2017-2018), “Doctoral Consortium at the IEEE ACII 2017 Conference; October 23-26, 2017; San Antonio, Texas”

Workshop Organizer

Large-scale Emotion Recognition and Analysis (LERA) at IEEE FG, 2018; Co-organized with Qiang Ji (RPI) and Abhinav Dhall (IIT Ropar)

Program Committee

Senior TPC Member, ACM International Conference on Multimodal Interaction, 2018
TPC Member, Pervasive Technologies Related to Assistive Environments, 2017

NSF Proposal Review Panelist, 2017, 2018

Review Services

IEEE Transactions on Affective Computing (TAC)

IEEE Transactions on Multimedia

Journal of Artificial Intelligence Research (JAIR)

Speech Communication - Elsevier

Pattern Recognition - Elsevier

IEEE Robotics and Automation Letters (RA-L)

Computer Speech and Language (CSL)

ACM International Conference on Multimedia (MM)

ACM International Conference on Multimodal Interaction (ICMI)

International Conference on Affective Computing and Intelligent Interaction (ACII)

Doctoral Consortium

Interspeech

UNIVERSITY SERVICE

ABET Accreditation and Steering Committee Member 2016–Present
Department of Electrical and Computer Engineering, University at Albany, SUNY.

Chair Search Committee Member 2016–2017
College of Engineering and Applied Sciences (CEAS), University at Albany, SUNY.

Managed the tenured and tenure track faculty recruiting process and screened applications, collecting advice from the faculty at large as necessary; identified and invited promising candidates; coordinated and hosted candidate visits; made hiring recommendations.

Curriculum Development Committee Member 2016–2017
Department of Electrical and Computer Engineering, University at Albany, SUNY.
Developed M.S. and Ph.D. curriculum, particularly courses in signal processing, machine learning, human-centered computing, and probability.

Vice President 2013–2014
Korean Student Association Graduate (KSAG), University of Michigan

Advisory Committee Member 2013–2014
College of Engineering (CoE) Graduate Student Advisory Committee (GSAC), University of Michigan

OUTREACH

Mentoring Women and Minority Students in STEM

Actively involved as a workshop organizer and faculty mentor at SUNY Albany Science and Technology Entry Program (STEP) since 2016. Organized K–12 outreach programs to prepare historically underrepresented and economically disadvantaged elementary and secondary students in the Albany City School District to acquire the aptitude and skills necessary to pursue careers in scientific and technical fields.

Mentored minority and female students to help them to transfer from MS to PhD and excel in their academic life at the University of Michigan, 2013–2016. This mentoring activity was through the Beyond the Master’s Mentoring Program and ECSEL (Ensemble of Computer Science and Engineering Ladies) at the University of Michigan.

Lightning Talk, the Society of Women Engineers First Annual Leaders in Engineering Summit, University of Michigan, Mar 2014. Presentation to women engineers at the University of Michigan, encouraging research in human-centered and affective computing.

Panelist, College of Engineering New Graduate Student Welcome, University of Michigan, Aug 2013. Presentation to new graduate students in the College of Engineering.

Panelist, EECS Faculty/Grad/Alum Panel Event, hosted by student groups IEEE/ACM and gEECS (Girls in EECS), University of Michigan, Mar 2013. Presentation to undergraduate students encouraging research and graduate studies in EECS.

Panelist, CSE tour for Tech Day, University of Michigan, Sep 2012. Presentation to high school students encouraging research in human-centered and affective computing.

MEMBERSHIP

Institute of Electrical and Electronics Engineer (IEEE)

Association for Computing Machinery (ACM)

Association for the Advancement of Artificial Intelligence (AAAI)