20th ACM
International Conference on Multimodal Interaction

October 16-20, 2018
Boulder, Colorado

POCKET GUIDE
# Program-at-a-Glance

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*Note: The schedule is subject to change.*
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EVA – Enablement

Dev Studio
  - Content
    * Data, Apps
  - Interaction
    * Voice, Touch, Type, AI
  - Context
    * Device, Location, App
  - Engagement
    * Personalization, Suggestions
  - Insights
    * Usage, Analytics, Outage, Devices, Location
  - Learning
    * Semantic Abstraction, Adaptive, Reinforcement

Core Container Services

- Connectivity
- Security
- Authentication
- Management
- Diagnostics
- More...

EVAstars

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- Healthcare
- Retail
- Banking and Finance Services
- Government
- Utility services and more...

Face of the Digital Workspace™

- Simplified Development
- Conversational Interaction
- Omni-channel Distribution
- Deep Learning & Analytics
- Smart App Management (SAM)
- Robust Security & Multifactor Authentication

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Job ID: ICM138-RD1

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USC Institute for Creative Technologies
08:00-17:00   Registration

**Doctoral Consortium (Juniper)**

09:00-09:10   Welcome and Doctoral Consortium overview.

09:10-09:30   Presentation 1: Using Data-Driven Approach for Modeling Timing Parameters of American Sign Language  *Sedeeq Al-khazraji*

09:30-09:50   Presentation 2: Multimodal and Context-Aware Interaction in Augmented Reality for Active Assistance  *Damien Brun*

09:50-10:10   Presentation 3: Interpretable Multimodal Deception Detection in Videos  *Hamid Karimi*

10:10-10:30   Presentation 4: Strike A Pose: Capturing Non-Verbal Behaviour with Textile Sensors  *Sophie Skach*

10:30-11:00   Coffee Break  *(Foyer)*

11:00-11:20   Presentation 5: Multimodal Teaching and Learning Analytics for Classroom and Online Educational Settings  *Chinchu Thomas*

11:20-11:40   Presentation 6: Data Driven Non-Verbal Behavior Generation for Humanoid Robots  *Taras Kucherenko*

11:40-12:00   Presentation 7: Interaction between Humans and Heterogeneous Multi-Robot Systems  *S M Al Mahi*

12:00-12:20   Presentation 8: Attention Network for Engagement Prediction in the Wild  *Amanjot Kaur*


Doctoral Consortium (cont.)

13:40-14:00     Presentation 10: Responding with Sentiment Appropriate for the User’s Current Sentiment in Dialog as Inferred from Prosody and Gaze Patterns
Anindita Nath

14:00-14:20     Presentation 11: Large Vocabulary Continuous Audio-Visual Speech Recognition
George Sterpu

14:20-14:40     Presentation 12: Modeling Empathy in Embodied Conversational Agents
Özge Yalçın

14:40-15:30     Mentoring Session for Consortium Participants

15:30-          Wrap-up and Coffee Break (Foyer)

3rd International Workshop on Multi-sensorial Approaches to Human-Food Interaction (MHFI 2018) Workshop (Balsam)

09:00-09:20     Opening
Anton Nijholt & Carlos Velasco

09:20-09:55     TasteBud: Bring Taste Back into the Game
Chi Thanh Vi, Daniel Arthur & Marianna Obrist

09:55-10:20     Towards Multisensory Storytelling with Taste and Flavor
Carlos Velasco, Yunwen Tu & Marianna Obrist

10:20-10:45     Drink-O-Mender: An Adaptive Robotic Drink Adviser
Hannes Ritschel, Andreas Seiderer, Kathrin Janowski, Ilhan Aslan & Elisabeth André

10:45-11:15     Coffee Break & Demonstrations (Foyer)

ICMI 2018 Program
Tuesday, October 16, Day 1 (cont.)

MHFI 2018 Workshop (cont.)

12:15-12:40  “Eat What You Want and Be Healthy!” Comfort Food Effects: Human-Food Interaction in View of Celebratory Technology Youjin Hwang, Siyoung Lee, Hyeong Seok Jeon, Jung Han Park, Ki Won Lee & Joonhwan Lee

12:40-14:00  Lunch on your own, discussion & Demonstrations.

14:00-14:25  The Virtual Cafeteria: An Immersive Environment for Interactive Food Portion-Size Education Ufuk Celikcan, Ahmed Samil Bülbül, Cem Aslan, Zehra Büyüktuncer, Kübra Isgin, Gözde Efe & Nuray Kanbur

14:25-14:50  Invited Talk: Audiovisual Eating Analysis and Tracking – A Challenge Björn Schuller, University of Augsburg & Imperial College London

14:50-15:15  Eliciting User Food Preferences in terms of Taste and Texture in Spoken Dialogue Systems Jie Zeng, Yukiko I. Nakano, Takeshi Morita, Ichiro Kobayashi & Takahira Yamaguchi

15:15-15:45  Coffee Break & Demonstrations (Foyer)

15:45-16:10  Introducing Flavorlens: A Social Media Platform for Sharing Dish Observations Alexandra Fritzen, Frederick Andres & Maria Leite

16:10-16:35  Tasty-Art: ‘The Scream’ as a Burger… Hector Michael Fried, Helen Pain & Michaela Turner

16:35-17:00  Discussion, Future Plans, Publications & Conclusions
(Columbine)

09:00-09:10 Introduction

09:10-10:10 **Keynote I: Opening the Black Box: Unpacking Emergent Phenomena and Team Process Dynamics**  
Steve Kozlowski, Michigan State University

10:10-10:30 Affective Dynamics and Control in Group Processes  
Jesse Hoey, Tobias Schroeder, Jonathan Morgan, Kimberly Rogers & Meiyappan Nagappan

10:30-11:00 Coffee Break (Foyer)

11:00-12:00 **Keynote II: Exploring Team Interaction Patterns and Trajectories in Dynamic Contexts**  
Mary J. Waller, Texas Christian University

12:00-12:20 The Group Affect and Performance (GAP) Corpus  
Mckenzie Braley & Gabriel Murray


13:50-14:50 **Keynote III: Distributed Cognition in Multimodal Collaborative Environments**  
Sidney D’Mello, University of Colorado Boulder

14:50-15:50 **Poster Session and Coffee Break**

Kid Space: Interactive Learning in a Smart Environment  
Glen Anderson, Selvakumar Paneer, Meng Shi, Carl Marshall, Ankur Agrawal, Rebecca Chierichetti, Giuseppe Raffa, John Sherry, Daria Loi & Lenitra Durham

Interpreting Models of Social Group Interactions in Meetings with Probabilistic Model Checking, Oana Andrei & Gabriel Murray

Predicting Student Performance Based on Eye Gaze During Collaborative Problem Solving, Mehmet Celepkolu & Kristy Elizabeth Boyer
GIFT 2018 Workshop (cont.)

Adopting Functional Roles for Improving Participants’ Communication Skill in Group Discussion Conversation
*Hung-Hsuan Huang, Qi Zhang, Shogo Okada, Kazuhiro Kuwabara & Toyoaki Nishida*

Improving Temporal Interpolation of Head and Body Pose using Gaussian Process Regression in a Matrix Completion Setting
*Stephanie Tan & Hayley Hung*

Multimodal Analysis of Group Attitudes Towards Meeting Management
*Gabriel Murray & Catherine Lai*

15:50-16:10 Fusing Verbal and Nonverbal Information for Extractive Meeting Summarization
*Fumio Nihei, Yukiko Nakano & Yutaka Takase*

16:10-16:30 Using Parallel Episodes of Speech to Represent and Identify Interaction Dynamics for Group Meetings
*Chreston Miller*

16:10-17:00 **Plenary Session & Closing**

Modeling Cognitive Processes from Multimodal Data (MCPMD) Workshop (Evergreen)
09:00-09:15 Welcome

**Session 1: Cognition in Interaction**
Chair: Felix Putze

09:15-09:35 Predicting Group Satisfaction in Meeting Discussions
*Catherine Lai & Gabriel Murray*

09:35-09:55 Multimodal Approach to Engagement and Disengagement Detection with Highly Imbalanced In-the-Wild Data
*Dmitrii Fedotov, Olga Perepelkina, Eva Kazimirova, Maria Konstantinova & Wolfgang Minker*
ICMI 2018 Program
Tuesday, October 16, Day 1 (cont.)

MCPMD 2018 Workshop (cont.)

09:55-10:15 Workload-Driven Modulation of Mixed-Reality Robot-Human Communication
Leanne Hirshfield, Thomas E Williams, Natalie Sommer, Trevor Grant & Senem Velipasalar

10:15-10:35 Symptoms of Cognitive Load in Interactions with a Dialogue System
José David Lopes, Helen Hastie & Katrin Lohan

10:35-11:00 Coffee Break (Foyer)

Session 2: Attention
Chair: Jutta Hild

11:00-11:20 Histogram of oriented velocities for eye movement detection
Wolfgang Fuhl, Nora J Castner & Enkelejda Kasneci

11:20-11:40 Estimating Cognitive Load in Passive and Active Tasks from Pupil Width and Eye Gaze Changes using Bayesian Surprise
Elena Wolf, Manel Martinez, Alina Roitberg, Rainer Stiefelhagen & Barbara Deml

11:40-12:00 Investigating Static and Sequential Models for Intervention-Free Selection Using Multimodal Data of EEG and Eye Tracking
Mazen Salous, Felix Putze, Tanja Schultz, Jutta Hild & Jürgen Beyerer

12:00-13:00 Lunch on your own.

13:00-12:20 Overlooking: The nature of gaze behavior and anomaly detection in expert dentists
Nora J Castner & Enkelejda Kasneci

13:20-13:40 Rule based learning for eye movement type detection
Wolfgang Fuhl, Nora J Castner & Enkelejda Kasneci
MCPMD 2018 Workshop (cont.)

Session 3: Neural & Cognitive Modeling
Chair: Felix Putze

13:40-14:00 Integrating Non-Invasive Neuroimaging and Computer Log Data to Improve Understanding of Cognitive Processes
*Nora J Castner & Enkelejda Kasneci*

14:00-14:20 Multimer: Validating Multimodal, Cognitive Data in the City
*Arlene B Ducao, Ilias Koen & Zhiqi Guo*

14:20-14:45 Coffee Break (Foyer)

14:45-15:05 The Role of Emotion in Problem Solving: First Results from Observing Chess
*Thomas Guntz, James L. Crowley, Dominique Vaufreydaz, Raffaella Balzarini & Philippe Dessus*

15:05-15:25 Discovering Digital Representations for Remembered Episodes from Lifelog Data
*Bernd Dudzik, Joost Broekens, Mark Neerincx, Jeffrey Olenick, Chu-Hsiang Chang, Steve W. J. Kozlowski & Hayley Hung*

*Ashwin Ramesh Babu, Akilesh Rajavenkatanarayanan, James Robert Brady & Fillia Makedon*

15:45-16:30 Closing Discussion
Human-Habitat for Health (H3): Human-habitat multimodal interaction for promoting health and well-being in the Internet of Things era Workshop (Alpine)

09:00-09:10 Opening Remarks

09:10-10:00 Keynote I: Personal Health Informatics at a Crossroads: Addressing the Pathology Bipolar Disorder and Supporting the Social Ecologies of Long-Term Mental Health Management in mHealth Design
Stephen Voida, University of Colorado Boulder

10:10-11:10 Session 1: Chair: Amir Behzadan

10:10-10:30 Assistive Technologies Megatrends to Support Persons with Alzheimer’s Disease and Related Dementias in Urban and Rural Habitats: Usability, Engineering & Policy Considerations
Preeti Zanwar, Patricia Heyn, Greg McGrew & Mukaila Raji

10:30-10:50 A Multimodal Human Robot Interaction Framework based on Cognitive Behavior Therapy Model
Fazel Keshtkar, Neelesh Rastogi & Suruz Miah

10:50-11:10 CRADLE: An IoMT Psychophysiological Analytics Platform
Nikhil Yadav & Fazel Keshtkar

11:10-12:10 Keynote II: Innovations in Aging: Technology-based Solutions Promoting Wellness and Independence
Davis Park, Front Porch Center for Innovation and Wellbeing

12:10-13:30 Lunch on your own.

13:30-14:30 Session 2: Chair: Theodora Chaspari
H3 Workshop (cont.)

13:30-13:50  Towards an Effective Arousal Detection System for Virtual Reality   
Ifigeneia Mavridou, Ellen Seiss, Theodoros Kostoulas, Charles Nduka & Emili Balaguer Ballester

13:50-14:10  Traeddy: A Stress Sensitive Traffic Jam Companion for Car Commuters   
Michelle Martin, Franziska Geiger, Manuel Götz, Tobias Beeh, Markus Sosnowski, Martin Keppner, Ilhan Aslan, Björn Bittner & Elisabeth André

14:10-14:30  Pen-Pen: A Wellbeing Design to Help Commuters Rest and Relax   
Monika Pichlmair, Carolin Brandt, Marcel Henrich, Alexander Biederer, Ilhan Aslan, Björn Bittner & Elisabeth André

14:30-14:50  Coffee Break (Foyer)

14:50-15:50  Session 3: Chair: Theodora Chaspari

14:50-15:10  Utilizing Building Information Models as Operating Systems for Smart Homes   
Joseph Louis

15:10-15:30  EVAQ: Person-Specific Large Crowd Evacuation Modeling   
Songjukta Datta & Amir Behzadan

15:30-15:50  Capturing and quantifying emotional distress in the built environment   
Megha Yadav, Theodora Chaspari, Jinwoo Kim & Changbum Ahn

15:50-16:30  Discussion & Closing Remarks
Multimodal Analyses enabling Artificial Agents in Human-Machine Interaction (MA3HMI) Workshop (Executive Boardroom)

09:00-09:10 Welcome

**Session: Gaze & Face**

09:10-09:40 Analysis of the Effect of Agent’s Embodiment and Gaze Amount on Personality Perception
*Tomoko Koda & Takuto Ishioh*

09:40-10:10 User Affect and No-Match Dialogue Scenarios: An Analysis of Facial Expression
*Joseph Wiggins, Mayank Kulkarni, Wookhee Min, Kristy Elizabeth Boyer, Bradford Mott, Eric Wiebe & James Lester*

10:10-10:30 Coffee Break (Foyer)

**Session: Emotion & Personality**

10:30-11:00 Exploring Siamese Neural Network Architectures for Preserving Speaker Identity in Speech Emotion Classification
*Priya Arora & Theodora Chaspari*

11:00-11:30 Extracting Interpersonal Stance from Vocal Signals
*Daniel Formolo & Tibor Bosse*

**Session: Gesture & Movement**

11:30-12:00 A Pilot Study on Adaptive Gesture Use in Interaction with Non-native Listeners
*Kirsten Bergmann, Maria Del Mar Cordero & Birgit Lugrin*

12:00-12:30 Recognition of Human Movement Patterns during a Human-Agent Interaction
*Ronald Böck*
ICMI 2018 Program
Tuesday, October 16, Day 1 (cont.)

MA3HMI 2018 Workshop (cont.)

12:30-14:00 Lunch on your own.

Session: Collaboration & Conversation
14:00-14:30 Multimodal Reference Resolution In Collaborative Assembly Tasks
Dimosthenis Kontogiorgos, Elena Sibirtseva, Andre Pereira, Gabriel Skantze, Joakim Gustafson

14:30-15:00 PauseCode: Computational Conversation Timing Analysis
Daniel Angus, Yeyang Yu, Paul Vrbik, Andrew Back, Janet Wiles

15:00-15:30 Coffee Break (Foyer)

15:30-16:30 Keynote: Generating data-driven human-like behaviors for conversational agents
Carlos Busso, University Texas, Dallas

16:30-17:00 Discussion & Closing

END OF DAY 1
ICMI 2018 Program
Wednesday, October 17, Day 2

08:00-17:00     Registration

09:00-09:15     Welcome and conference overview.  *(Ballroom)*

09:15-10:15     **Keynote:**  A multimodal approach to understanding human vocal expressions and beyond  
*Shrikanth (Shri) Narayanan, USC*  
Chair:  Mohammad Soleymani

10:15-10:45     Coffee Break *(Foyer)*

10:45-12:25     **Session 1: Multiparty Interaction**  
Chair:  Hayley Hung

10:45-11:10     Multimodal Dialogue Management for Multiparty Interaction with Infants  
*Setareh Nasihati Gilani, David Traum, Arcangelo Merla, Eugenia Hee, Zoey Walker, Barbara Manini, Grady Gallagher & Laura-Ann Petitto*

11:10-11:35     Predicting Group Performance in Task-Based Interaction  
*Gabriel Murray & Catherine Oertel*

11:35-12:00     Multimodal Modeling of Coordination and Coregulation Patterns in Speech Rate during Triadic Collaborative Problem Solving  
*Angela Stewart, Zachary Keirn & Sidney D’Mello*

12:00-12:25     Analyzing Gaze Behavior and Dialogue Act during Turn-taking for Estimating Empathy Skill Level  
*Ryo Ishii, Kazuhiro Otsuka, Shiro Kumano, Ryuichiro Higashinaka & Junji Tomita*

12:25-13:45     Lunch sponsored by **Microsoft Research.**  *(Mezzanine)*

13:45-15:30     **Session 2: Physiological Modeling**  
Chair:  Theodora Chaspari

13:45-14:00     Automated Affect Detection in Deep Brain Stimulation for Obsessive-Compulsive Disorder:  A Pilot Study  
*Jeff Cohn, Laszlo Jeni, Itir Onal Ertugrul, Donald Malone, Michael Okun, David Borton & Wayne Goodman*
14:00-14:25  Smell-O-Message: Integration of Olfactory Notifications into a Messaging Application to Improve Users’ Performance  
Emanuela Maggioni, Robert Cobden, Dmitrijs Dmitrenko & Marianna Obrist

14:25-14:50  Generating fMRI-Enriched Acoustic Vectors using a Cross-Modality Adversarial Network for Emotion Recognition  
Gao-Yi Chao, Chun-Min Chang, Jeng-Lin Li, Ya-Tse Wu & Chi-Chun Lee

14:50-15:15  Adaptive Review for Mobile MOOC Learning via Multimodal Physiological Signal Sensing - A Longitudinal Study  
Phuong Pham & Jingtao Wang

15:15-15:30  Olfactory display for presenting and sensing authentic and synthetic odors  
Katri Salminen, Jussi Rantala, Poika Isokoski, Marko Lehtonen, Philipp Muller, Jari Valiaho, Anton Kontunen, Ville Nieminen, Joni Leivo, Anca Telembeci, Jukka Lekkala, Pasi Kallio & Veikko Surakka

15:30-16:00  Coffee Break (Foyer)

16:00-17:00  Panel: Future Challenges for Multimodal Interaction Groups  
Moderator: Hayley Hung

17:00-18:00  Sustained Contribution Awardee Talk by James L. Crowley, University Grenoble Alpes  
Chair: Louis-Philippe Morency

18:00-20:00  Poster Session 1 (Mezzanine)  
Chair: Julie Gregg
Please see list of posters on pages 27-28.

18:00-20:00  Demo Session (Evergreen)  
Chair: Julie Gregg
Please see list of demos on page 29.
ICMI 2018 Program
Wednesday, October 17, Day 2 (cont.)

18:00-20:00 Doctoral Consortium Posters (Mezzanine)
Chair: Yelin Kim
Please see list of presentations on pages 8-9.

18:00-20:00 Late-Breaking Results Posters (Mezzanine)
Chair: Julie Gregg
Please see list of posters on pages 29-30.

18:00-20:00 Welcome Reception sponsored by the Institute of Cognitive Science. (Mezzanine)
Host: Sidney D’Mello

END OF DAY 2

ICMI 2018 Program
Thursday, October 18, Day 3

08:00-17:00 Registration

09:00-10:00 Keynote: Using Technology for Health and Wellbeing
Mary Czerwinski, Microsoft Research
Chair: Sharon Oviatt

10:00-10:30 Coffee Break (Foyer)

10:30-12:25 Session 3: Sound and Interaction
Chair: Carlos Busso

10:30-10:55 Evaluation of real-time deep learning turn-taking models for multiple dialogue scenarios
Divesh Lala, Koji Inoue & Tatsuya Kawahara

10:55-11:20 Ten Opportunities and Challenges for Advancing Student-Centered Multimodal Learning Analytics
Sharon Oviatt

11:20-11:45 If you ask nicely: A Digital Assistant Rebuking Impolite Voice Commands
Michael Bonfert, Maximilian Spliethover, Roman Arzaroli, Marvin Lange, Martin Hanci & Robert Porzel
ICMI 2018 Program
Thursday, October 18, Day 3 (cont.)

11:45-12:10 Detecting User’s Likes and Dislikes for a Virtual Negotiating Agent Caroline Langlet & Chloe Clavel

12:10-12:25 Attention-based Audio-Visual Fusion for Robust Automatic Speech Recognition George Sterpu, Christian Saam & Naomi Harte

12:25-13:40 Lunch (Mezzanine)

13:40-15:20 Session 4: Touch and Gesture
Chair: Dan Bohus

13:40-14:05 Smart Arse: Posture Classification with Textile Sensors in Trousers Sophie Skach, Rebecca Stewart & Patrick G.T. Healy

14:05-14:30 Articulation-Invariant Stroke-gesture Recognition with Controllable Position, Scale, and Rotation Invariance Jean Vanderdonckt, Paolo Roselli & Jorge Luis Perez-Medina

14:30-14:55 Pen + Mid-Air Gestures: Eliciting Contextual Gestures Ilhan Aslan, Tabea Schmidt, Jens Woehrle, Lukas Vogel & Elisabeth Andre

14:55-15:20 Hand, foot or voice: alternative input modalities for touch-less interaction in the medical domain Benjamin Hatscher & Christian Hansen

15:20-17:15 Coffee Break (Mezzanine)

15:20-17:15 Poster Session 2 (Mezzanine)
Chair: Julie Gregg
Please see list of posters on pages 30-32.

15:20-17:15 Grand Challenge Posters (Mezzanine)
Chair: Björn Schuller
Please see list of presentations on pages 33-35.
ICMI 2018 Program  
Thursday, October 18, Day 3 (cont.)

17:30-19:00  Happy Hour at Folsom Field  
Host: Sidney D'Mello

18:30-21:30  Banquet at Folsom Field sponsored by Openstream, Inc.  
Host: Sidney D'Mello

END OF DAY 3

ICMI 2018 Program  
Friday, October 19, Day 4

08:00-17:00  Registration

09:00-10:00  Keynote: Reinforcing, reassuring and roasting: The forms and functions of the human smile  
Paula M. Niedenthal, University of Wisconsin-Madison  
Chair: Emily Mower Provost

10:00-10:30  Coffee Break (Foyer)

10:30-12:25  Session 5: Human Behavior  
Chair: Björn Schuller

10:30-10:55  How to Shape the Humor of a Robot - Social Behavior Adaptation Based on Reinforcement Learning  
Klaus Weber, Hannes Ritschel, Ilhan Aslan, Florian Lingenfelser & Elisabeth Andre

10:55-11:20  Using Interlocutor-Modulated Attention BLSTM to Predict Personality Traits in Small Group Interactions  
Yun-Shao Lin & Chi-Chun Lee

11:20-11:45  Toward Objective, Multifaceted Characterization of Psychotic Disorders: Lexical, Structural, and Disfluency Markers of Spoken Language  
Alexandria K. Vail, Elizabeth Liebson, Justin T. Baker & Louis-Philippe Morency
ICMI 2018 Program
Friday, October 19, Day 4 (cont.)

11:45-12:10 Multimodal Interaction Modeling of Child Forensic Interviewing
Victor Ardulov, Madelyn Mendlen, Manoj Kumar, Neha Anand, Shanna Williams, Thomas Lyon & Shrikanth Narayanan

12:10-12:25 Multimodal Continuous Turn-Taking Prediction Using Multiscale RNNs
Matthew Roddy, Gabrial Skantze & Naomi Harte

12:25-13:40 Lunch (Mezzanine)

13:40-15:40 Session 6: Artificial Agents
Chair: Yukiko Nakano

13:40-14:05 Estimating Visual Focus of Attention in Multiparty Meetings using Deep Convolutional Neural Networks
Kazuhiro Otsuka, Keisuke Kasuga & Martina Kohler

14:05-14:30 Detecting Deception and Suspicion in Dyadic Game Interactions
Jan Ondras & Hatice Gunes

14:30-14:55 Looking Beyond a Clever Narrative: Visual Context and Attention are Primary Drivers of Affect in Video Advertisements
Abhinav Shukla, Harish Katti, Mohan Kankanhalli & Ramanathan Subramanian

14:55-15:20 Automatic Recognition of Affective Laughter in Spontaneous Dyadic Interactions from Audiovisual Signals
Reshmashree B. Kantharaju, Fabien Ringeval & Laurent Besacier

15:20-15:35 Population-specific detection of couples’ interpersonal conflict using multi-task learning
Aditya Gujral, Theodora Chaspari, Adela C. Timmons, Yehsong Kim, & Gayla Margolin

15:35-16:00 Coffee Break (Foyer)
ICMI 2018 Program
Friday, October 19, Day 4 (cont.)

16:00-17:00  Panel:  Future roadmap to multimodal research
Moderator:  Louis-Philippe Morency

17:00-17:45  ICMI Town Hall Meeting
Moderator:  Louis-Philippe Morency

17:45-18:00  Presentation of ICMI 2019 & Closing Comments

18:00-20:00  Hiking Trip to Mt. Sanitas
Host:  Sidney D’Mello

END OF DAY 4

ICMI 2018 Program
Saturday, October 20, Day 5

09:00-10:30  Tutorial:  Multimodal-Multisensor Behavioral Analytics:
Going Deeper into Human-Centered Design
Sharon Oviatt, Monash University (Columbine/Balsam)

Grand Challenge:  The ICMI Eating Analysis & Tracking Challenge (ICMI 2018 EAT)
Please see detailed agenda on page 33.
(Executive Boardroom)

Grand Challenge:  6th Emotion Recognition in the Wild Challenge (EmotiW)
Please see detailed agenda on pages 34-35.
(Alpine)

10:30-11:00  Coffee Break (Foyer)

11:00-12:25  Tutorial:  Multimodal-Multisensor Behavioral Analytics:
Going Deeper into Human-Centered Design (cont.)
Sharon Oviatt, Monash University

Grand Challenge:  6th Emotion Recognition in the Wild Challenge (EmotiW) (cont.)

Grand Challenge:  The ICMI Eating Analysis & Tracking Challenge (ICMI 2018 EAT) (cont.)
12:30-13:30 Lunch on your own.

13:30-15:00 Tutorial: Deep Learning for Multimodal and Multisensorial Interaction
Björn Schuller, Imperial College (Columbine/Balsam)

Grand Challenge: 6th Emotion Recognition in the Wild Challenge (EmotiW) (cont.)

15:00-15:30 Coffee Break (Foyer)

15:30-17:00 Tutorial: Deep Learning for Multimodal and Multisensorial Interaction (cont.)
Björn Schuller, Imperial College

Grand Challenge: 6th Emotion Recognition in the Wild Challenge (EmotiW) (cont.)

END OF CONFERENCE

FOR EVERY P.H.D.
THERE IS AN EQUAL AND OPPOSITE P.H.D.
Poster Session 1
Wednesday, October 17, 18:00-20:00
Long & Short Paper Posters

PathWord: A Multimodal Password Entry Method for Ad-hoc Authentication Based on Digits’ Shape and Smooth Pursuit Eye Movements
Hassoumi Almoctar, Pourang Irani, Vsevolod Peysakhovich & Christophe Hurter

Gazeover - Exploring the UX of Gaze-triggered Affordance Communication for GUI Elements
Ilhan Aslan, Michael Dietz & Elisabeth Andre

Multimodal Analysis of Client Behavioral Change Coding in Motivational Interviewing
Chanuwas Aswamenakul, Lixing Liu, Kate Carey, Joshua Woolley, Stefan Scherer & Brian Borsari

EEG based Evaluation of Cognitive Workload Induced by Psychoacoustic Parameters for Data Sonification
Maneesh Bilalpur, Mohan Kankanhalli, Stefan Winkler & Ramanathan Subramanian

I Smell Trouble: Using Multiple Scents To Convey Driving-Relevant Information
Dmitrijs Dmitrenko, Emanuela Maggioni & Marianna Obrist

EyeLinks:A Gaze-Only Click Alternative for Heterogeneous Clickables
Pedro Figueiredo & Manuel Fonseca

Towards Attentive Speed Reading on Small Screen Wearable Devices
Wei Guo & Jingtao Wang

Understanding Mobile Reading via Camera Based Gaze Tracking and Kinematic Touch Modeling
Wei Guo & Jingtao Wang

Inferring User Intention using Gaze for Multimodal Interaction in Vehicles
Yu-Sian Jiang, Garrett Warnell & Peter Stone
Poster Session 1 (cont.)
Wednesday, October 17, 18:00-20:00

A Multimodal Approach For Predicting Changes in Mental Trauma Severity
Adria Mallol-Ragolta, Svati Dhamija & Terrance Boult
***

Sensing Arousal and Focal Attention During Visual Interaction
Oludamilare Matthews, Markel Vigo & Simon Harper
***

TapTag: Assistive Gestural Interactions in Social Media on Touchscreens for Older Adults
Shraddha Pandya & Yasmine El-Glaly
***

End-to-end Learning for 3D Facial Animation from Speech
Hai Pham, Yuting Wang & Vladimir Pavlovic
***

Dozing off or Thinking Hard? Classifying a Multi-dimensional Attentional State in the Classroom from Video
Felix Putze, Dennis Kuester, Sonja Annerer-Walcher & Mathias Benedek
***

Honey, I Learned to ...
Shao-en Tseng, Haoqi Li, Brian Baucom & Panayiotis Georgiou
***

Estimating Head Motion from Egocentric Vision
Satoshi Tsutsui, Sven Bambach, David Crandall & Chen Yu
***

Floor Apportionment and Mutual Gazes in Native and Second-Language Conversation
Ichiro Umata, Koki Ijuin, Tsuneo Kato, & Seiichi Yamamoto
***

Doctoral Consortium Posters
Wednesday, October 17, 18:00-20:00

Please see list of posters on pages 8-9.
Demo Session
Wednesday, October 17, 18:00-20:00

MIRIAM: A Multimodal Interface for Explaining the Reasoning Behind Actions of Remote Autonomous Systems
Helen Hastie, Francisco J. Chiyah Garcia, David A. Robb, Atanas Laskov & Pedro Patron

Multimodal Control of Lighter-Than-Air Agents
Daniel Lofaro & Donald Sofge

EVA: A Multimodal Argumentative Dialogue System
Niklas Rach, Klaus Weber, Louisa Pragst, Elisabeth André, Wolfgang Minker & Stefan Ultes

Online Privacy-Safe Engagement Tracking System
Cheng Zhang, Cheng Chang, Lei Chen & Yang Liu

Late-Breaking Results Posters
Wednesday, October 17, 18:00-20:00

Multimodal Prediction of Audience’s Impression in Political Debates
Pedro Bispo Santos & Iryna Gurevych

Constructionist Steps Towards an Autonomously Empathetic System
Trevor Buteau & Damian Lyons

Investigating the dimensions of conversational agents’ social competence using objective neurophysiological measurements
Thierry Chaminade

Real-Time Stress Assessment Through PPG Sensor for VR Biofeedback
Utkarsh Chauhan, Norbert Reithinger & John R. Mackey

Sarcasm Detection on Facebook: A Supervised Learning Approach
Dipto Das & Anthony J J. Clark

Estimating an Interviewee’s Willingness in a Multimodal Human–Robot Interview Interaction
Takuya Ishihara, Fuminori Nagasawa, Katsumi Nitta & Shogo Okada
Detecting head movements in video-recorded dyadic conversations
*Patrizia Paggio, Manex Agirrezabal, Bart Jongejan & Costanza Navarretta*
***
Investigating the Generalizability of EEG-based Cognitive Load Estimation Across Visualizations
*Viral Parekh, Maneesh Bilalpur, Shravan Kumar, C.V. Jawahar, Stefan Winkler & Ramanathan Subramanian*
***
Effects of Face and Voice Deformation to Participant’s Emotion in Video Mediated Communication
*Wakana Taguchi, Fumio Nihei, Shinichi Fukasawa, Hiroko Akatsu Yutaka Takase & Yukiko Nakano*
***
Distinction of Stress and Non-Stress Tasks using Facial Action Units
*Carla Viegas, Shing-Hon Lau, Roy Maxion & Alexander Hauptmann*
***
Using Virtual Reality to Control Swarms of Autonomous Agents
*Troy Weingart, Paul R Graham, Delbert Christman & Austin Weingart*
***

**Poster Session 2**
**Thursday, October 18, 15:20-17:15**
Long & Short Paper Posters

Joint Discrete and Continuous Emotion Prediction Using Ensemble and End-To-End Approaches
*Ehab Albadawy & Yelin Kim*
***
A Multimodal-Sensor-Enabled Room for Unobtrusive Group Meeting Analysis
*Indrani Bhattacharya, Michael Foley, Ni Zhang, Tongtao Zhang, Christine Ku, Cameron Mine, Heng Ji, Christoph Riedl, Brooke Welles & Richard Radke*
***
Enhancing Multiparty Corporative Movements: Robotic Wheelchair that Assists Predicting Next Actions
*Hisato Fukuda, Keiichi Yamazaki, Akiko Yamazaki, Yosuke Saito, Emi Iiyama, Seiji Yamazaki, Yoshinori Kobayashi, Yoshinori Kuno & Keiko Ikeda*
***
A Generative Approach for Dynamically Varying Photorealistic Facial Expressions in Human-Agent Interactions
Yuchi Huang & Saad Khan

The Multimodal Dataset of Negative Affect and Aggression: a Validation Study
Iulia Lefter & Siska Fitrianie

Multimodal Local-Global Ranking Fusion for Emotion Recognition
Paul Liang, Amir Zadeh & Louis-Philippe Morency

Predicting ADHD Risk from Touch Interaction Data
Philipp Mock, Maike Tibus, Ann-Christine Ehlis, Harald Baayen & Peter Gerjets

Exploring the Design of Audio-Kinetic Graphics for Education
Annika Muehlbradt, Madhur Atreya, Darren Guinness & Shaun Kane

Improving Object Disambiguation from Natural Language using Empirical Models
Daniel Prendergast & Daniel Szafir

Keep Me in the Loop: Increasing Operator Situation Awareness through a Conversational Multimodal Interface
David Robb, Francisco Chiyah Garcia, Atanas Laskov, Xingkun Liu, Pedro Patron & Helen Hastie

Simultaneous Multimodal Access to Wheelchair and Computer for People with Tetraplegia
Nazmus Sahadat, Nordine Sebkhi & Maysam Ghovanloo

Introducing WESAD, a multimodal dataset for WEarable Stress and Affect Detection
Philip Schmidt, Attila Reiss, Robert Duerichen, Claus Marberger & Kristof Van Laerhoven

Multimodal Representation of Advertisements using Segment-level Autoencoders
Krishna Somandepalli, Victor Martinez, Naveen Kumar & Shrikanth Narayanan
Poster Session 2 (cont.)
Thursday, October 18, 15:20-17:15

Tactile Sensitivity to Distributed Patterns in a Palm
Bukun Son & Jaeyoung Park
***

Automated Listening Skills Assessment through
Interaction with Computer Agents
Hiroki Tanaka, Hideki Negoro, Hidemi Iwasaka
& Satoshi Nakamura
***

Survival at the museum: A cooperation experiment
with emotionally expressive avatars
Ilaria Torre, Emma Carrigan, Killian McCabe,
Rachel McDonnell & Naomi Harte
***

RainCheck: Overcoming Capacitive Interference
Caused by Rainwater on Smartphones
Ying-Chao Tung, Mayank Goel, Isaac Zinda & Jacob Wobbrock
***

Human, Chameleon or Nodding Dog?
Virtual Experiments with Non-Verbal Persuasion
Leshao Zhang & Patrick Healey
***

Grand Challenge Posters
Thursday, October 18, 15:20-17:15
Please see list of posters on pages 33-35.
ICMI 2018 Program
Saturday, October 20

The ICMI Eating Analysis & Tracking Challenge (ICMI 2018 EAT)

09:00-09:30 EAT – The ICMI 2018 Eating Analysis and Tracking Challenge
Simone Hantke, Maximilian Schmitt, Panagiotis Tzirakis & Björn Schuller

09:30-10:00 SAAMEAT: Active Feature Transformation and Selection Methods for the Recognition of User Eating Conditions
Fasih Haider, Senja Pollak, Eleni Zarogianni, & Saturnino Luz

10:00-10:30 Exploring a New Method for Food Likability Rating Based on DT-CWT Theory
Ya’Nan Guo, Jing Han, Zixing Zhang, Björn Schuller & Yide Ma

10:30-11:00 Coffee Break (Foyer)

11:00-11:30 Deep End-to-End Representation Learning for Food Type Recognition from Speech
Benjamin Sertolli, Nicholas Cummins, Abdulkadir Sengur & Björn Schuller

11:30-12:00 Functional-Based Acoustic Group Feature Selection for Automatic Recognition of Eating Condition Dara Pir

12:00-12:30 Summary & Results
Simone Hantke, Maximilian Schmitt, Panagiotis Tzirakis & Björn Schuller
6th Emotion Recognition in the Wild Challenge (EmotiW)

09:00-09:15 EmotiW 2018: Audio-Video, Student Engagement and Group-Level Affect Prediction.
Abhinav Dhall, Amanjot Kaur, Roland Goecke & Tom Gedeon

09:15-10:15 Keynote
Aleix Martinez, Ohio State University

10:15-10:30 An Occam’s Razor View on Learning Audiovisual Emotion Recognition with Small Training Sets
Valentin Vielzeuf, Corentin Kervadec, Alexis Lechervy, Stephane Pateux & Frederic Jurie

10:30-11:00 Coffee Break (Foyer)

11:00-11:15 Deep Recurrent Multi-instance Learning with Spatio-temporal Features for Engagement Intensity Prediction
Jianfei Yang, Kai Wang, Xiaojiang Peng & Yu Qiao

11:15-11:30 Automatic Engagement Prediction with GAP Feature
Xuesong Niu, Hu Han, Jiabei Zeng, Xuran Sun, Shiguang Shan & Xilin Chen

11:30-11:45 An Ensemble Model Using Face and Body Tracking for Engagement Detection
Cheng Chang, Chen Zhang, Lei Chen & Yang Liu

11:45-12:00 Group-Level Emotion Recognition using Deep Models with A Four-stream Hybrid Network
Ahmed-Shehab Khan, Zhiyuan Li, Jie Cai, Zibo Meng, James O’Reilly & Yan Tong

12:00-12:15 Multi-Feature Based Emotion Recognition for Video Clips Chuanhe Liu

12:15-12:30 Group-Level Emotion Recognition using Hybrid Deep Models based on Faces, Scenes, Skeletons and Visual Attentions Xin Guo
6th Emotion Recognition in the Wild Challenge (EmotiW) (cont.)

12:30-13:30  Lunch on your own.

13:30-13:45  Cascade Attention Networks For Group Emotion Recognition with Face, Body and Image Cues
             Kai Wang, Yu Qiao, Jianfei Yang, Xiaojiang Peng, Xiaoxing Zeng, Debin Meng & Kaipeng Zhang

13:45-14:00  Multiple Spatio-temporal Feature Learning for Video-based Emotion Recognition in the Wild
             Cheng Lu & Wenming Zheng

14:00-14:15  Deep Recurrent Multi-instance Learning with Spatio-temporal Features for Engagement Intensity Prediction
             Aarush Gupta, Dakshit Agrawal, Hardik Chauhan, Jose Dolz & Marco Pedersoli

14:15-14:30  Predicting Engagement Intensity in the Wild Using Temporal Convolutional Network
             Chinchu Thomas, Nitin Nair & Dinesh Babu J

14:30-14:45  Video-based Emotion Recognition Using Deeply-Supervised Neural Networks
             Yingruo Fan

14:45-14:55  Result Announcement and Conclusion

15:00-15:30  Coffee Break  (Foyer)
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