

Call for Papers



International Workshop on **Machines with Emotions: Affect Modeling, Evaluation, and Challenges in Intelligent Cars** In conjunction with 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems

Modeling the human behavior and integration of it into robots and intelligent systems lead to not only a better understanding and acceptance of those systems by users but also a considerable increase in adaptability and flexibility of the intelligent entity which is at service. Autonomous cars, by definition, are a unique type of service robots with a high level of complexity in their functions and services. Proactiveness and personalization, as the key aspects of comfort functions in the vehicle, along with the safety concerns in highly automated driving, require a good understanding of the current emotional status of the users and their intentions accordingly. Studying the human behavior in the cabin and its differences from other environments is the very first step in paving the road for further progress in this field and requires close coordination between the behavioral science, psychology, and computer science besides automotive engineering. Yet, developing generic models based on emotional behavior of the driver/passenger for emotion recogni-

tion systems is at its early stages. There is still a lack of proper fusion strategies for different modalities of data and sensory inputs in affect recognition which varies from use case to use case, altogether with the absence of the proper databases which are collected accordingly to study and train the AI-based functions. Meanwhile, defining the evaluation criteria for the systems which employ the emotional status of the user in the car seems to be a critical matter. This workshop aims to gather experts active in related scientific domains with the industry experts, dealing with the state-of-the-art technology in autonomous driving in order to shed a light on the currently existing challenges and their importance, with forming serious discussions. Our last but not least goal is to draw an outline for the close coordination of the research fields of robotics, humanoids, human-robot interaction, autonomous driving, emotion recognition, behavioral science, psychology, and affect recognition.

Paper and poster presentations are intended to stimulate discussions among workshop participants: reflections on the past, descriptions of current initiatives, visions of the future, and new results in affective computing research and practice are welcome. During the workshop, posters will be presented in poster sessions. We solicit short papers of 5-9 pages that must not have been published or be under review elsewhere. For each paper, a poster needs to be submitted as well.

Topics of interest include but are not limited to:

- (1) **affect modeling** (emotion representation and modeling of humans, modeling of humans, affective models in cars, machine learning in human behavior modeling, ...);
- (2) **multimodality** (in emotion recognition systems, multimodal databases for affect recognition, affective data acquisition technologies, sensory data fusion methods, ...);
- (3) **application and evaluation** (maintaining emotional awareness in autonomous cars, new benchmarks for measuring the accuracy of emotion recognition, ...).

Submissions must conform to the Springer LNCS formatting guideline. Accepted submissions will be published in the CEUR Workshop Proceedings (CEUR-WS.org). Submissions will be reviewed by at least three members of the program committee.

4 November 2019, Macau, China

Important Dates (AoE):

- Full paper submission:
30 July 2019
- Notification of acceptance:
1 September 2019
- Camera-ready submission:
10 September 2019

Workshop Organizers:

- Sina Shafaei (TUM, DE)
- Alois Knoll (TUM, DE)
- Stefan Kugele (TUM, DE)
- Radoslaw Niewiadomski
(CONTACT Unit, Istituto Italiano di Tecnologia, IT)
- Christoph Segler (BMW Group, DE)
- Morteza Hashemi Farzaneh (TUM, DE)
- Eda Cicek (TUM, DE)

Keynotes:

- Martin Arend (BMW Group, DE)
- Shiro Kumano (NTT Communication Science Laboratories, JP)
- Bao-Liang Lu (Shanghai Jiao tong University, CN)
- Daniel McDuff (Microsoft, USA)
- Ana Maria Paiva (INESC-ID and IST, U Lisbon, PT)
- Soujanya Poria (SUTD, SG)
- Stefan Scherer (University of South California, USA)
- Björn Schuller (U Augsburg, DE; Imperial College London, UK)
- Midori Sugaya (Shibaura Institute of Technology, JP)
- Dongrui Wu (Huazhong University of Science and Technology, CN)
- Michael Würtenberger (BMW Group, DE)
- Bo Xiao (Amazon, USA)
- Ziping Zhao (Tianjin Normal University, CN)

