

Workshop proposal in the 16th IEEE International Conference on Advanced Video and Signal-based Surveillance (AVSS) 2019

1. Workshop title:

1st Workshop on Content-Aware Video Analysis (CAVA)

2. List of organizers including affiliation and email address:

Organizer: Prof. Huang-Chia Shih, Yuan Ze University, Taiwan.

Email: hcshih@saturn.yzu.tw

Co-organizer: Kuan-Hui Lee, Toyota Research Institute, USA.

kuan.lee@tri.global

Co-organizer: Prof. Chih-Yang Lin, Yuan Ze University, Taiwan. Email:

andrewlin@saturn.yzu.edu.tw

3. Workshop motivation:

This workshop is dedicated to recent technical advances in content-aware video data analysis. The workshop targets the research community for industry professionals and academic researches to discuss the increasing role of analytics in the global data science industry and research. This workshop aims at fostering growth and innovation in this arena, and enriches opportunities for promoting about the visual understanding in business world. Topics of interest include, but are not limited to:

- Object detection/modeling/recognition in video content analysis with advanced learning algorithms
- Dynamic movement data acquisition
- Activities recognition from visual information
- Tracking trajectories analysis
- Semantic and contextual data analysis
- Advanced learning algorithms for content understanding
- Tactics analysis for sports video
- Decision-making with visual data for surveillance application
- Supervised/unsupervised/reinforcement learning
- Video content analysis in the media cloud

- Performance assessment in sports
- AR/VR/MR interact user experience application
- UX/UI interaction design with human factors for sports
- Emerging applications of deep learning in video content search, retrieval, recommendation, understanding, and summarization
- Future trends and challenges for video data analytics
- Other learning techniques from examples such as imitation learning and emerging cognition system in video content

Keynote Speaker (Inviting): Dr. Yap-Peng Tan, Nanyang Technological University, Singapore.

4. Estimated participation (industry/academia)

The academic researcher will be the major participators, but also welcome to industry attendees.

5. Anticipated number of talks/posters and length of workshop (half-day or full-day)

Half-day workshop. One invited keynote speaker and three oral papers and four poster/demo papers

6. Paper submission procedure

All submissions will be submitted to the organizers directly by email.

7. Paper review procedure (single-blind/double-blind, solicited/invited-only, pool of reviewers)

Will be single-blind review. The pool of reviewers as follows:

- (1) Jia-Bin Huang, ECE, Virginia Tech, USA
- (2) Hsu-Yung Cheng, CSIE, National Central University, Taiwan
- (3) Ming-Hsuan Yang, EECS, University of California at Merced, USA
- (4) Shih-Chia Huang, Electrical Electronics, National Taipei University of Technology, Taiwan
- (5) Tao Mei, JD AI Research, China; previously Microsoft Research, USA
- (6) Josef Kittler, University of Surrey, UK

- (7) Shu-Yen Lin, EE, Yuan Ze University, Taiwan
- (8) Percy Liang, CS, Stanford University, USA
- (9) Pei-Yu Lin, Dept. of Information Communication, Yuan Ze University, Taiwan
- (10) Mohan Trivedi, ECE, University of California, San Diego, USA
- (11) Wei-Yu Chiu, EE, National Tsing Hua University, Taiwan
- (12) Alina Bialkowski, The University of Queensland, Australia
- (13) Wei-Ta Chu, CSIE, National Chung Cheng University, Taiwan
- (14) Yisong Yue, California Institute of Technology, USA
- (15) Karen Simonyan, Google DeepMind, USA
- (16) Wen-Huang Cheng, Electronics Engineering, Institute of Electronics, National Chiao Tung University, Taiwan
- (17) Jenq-Neng Hwang, EE, University of Washington, USA
- (18) Nien-Che Yang, EE, National Taiwan University of Science and Technology
- (19) Peter Carr, Disney Research, Pittsburgh, USA
- (20) Cheng-Hung Lin, DEE, Yuan Ze University, Taiwan
- (21) Chih-Yang Lin, EE, Yuan Ze University, Taiwan
- (22) Kai-Lung Hua, CS, National Taiwan University of Science and Technology, Taiwan

8. Paper submission and acceptance deadlines (camera-ready and early registration deadlines for a workshop/contest must coincide with the corresponding deadlines of AVSS-2019 – see Important Dates on Call for Papers)

Submission of Full Papers: **Sunday June 16, 2019**

Notification of Acceptance: **Monday July 1, 2019**

Submission of Camera Ready Papers: **July 15, 2019**