



AVSS 2019 Taipei

September 18-21
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Workshops Schedules

| | Classroom 1 | Classroom 2 | Computer Room 1 | Conference Room 1 | Conference Room 2 |
|-----------|----------------------------|-------------|-----------------|-------------------|-------------------|
| Morning | Biometric for Smart Cities | IWT4S | WOSDETC | Tutorial 1 | Tutorial 2 |
| Afternoon | CAVA | VCAVSS | DLAM | | |



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Workshop on Biometrics for Smart Cities

Gee-Sern Jison Hsu, National Taiwan University of Science and Technology.

Moritz Sontheimer, National Taiwan University of Science and Technology

Svetlana Yanushkevich, University of Calgary.

Marina L. Gavrilova, University of Calgary.

Orly Yadid-Pecht, University of Calgary.

Time: 9/21 Sat 8:00am to 12:00pm

Room: Classroom 1 (教室一)

8:00-8:15 Opening

8:15-9:00 **Keynote speaker I:** Prof. Shang-Hong Lai, National Tsing Hua University

9:00-9:40 Session I

9:00-9:20 Deep Single Image Enhancer; Mengchen Lin (University of Calgary)*; Jie Yang (westlake university); Orly Yadid-Pecht (University of Calgary)

9:20-9:40 Identification of Partially Occluded Pharmaceutical Blister Packages; 聖倫 鍾 (國立台灣科技大學)*

9:40-10:00 Coffee break

10:00-10:40 **Keynote speaker II:** Ming-Hsuan Yang, University of California at Merced

10:40-11:50 Session II

10:40-11:10 Improved Part-aligned Deep Features Learning for Person Re-Identification; 聖倫 鍾 (國立台灣科技大學)*

11:10-11:30 Personality Traits Classification on Twitter; Pavan Kumar Karkekoppa Narayanaswamy (University of Calgary)*; Marina Gavrilova (University of Calgary)

11:30-11:50 A Hybrid Facial Expression Recognition System Based on Recurrent Neural Network; Jing-Ming Guo (National Taiwan University of Science and Technology)*; Li-Ying Chang (National Taiwan University of Science and Technology); Po-Cheng Huang (National Taiwan University of Science and Technology)

11:50-12:00 Closing



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Workshop on Small-Drone Surveillance, Detection and Counteraction Techniques (WOSDETC)

Angelo Coluccia, University of Salento, Lecce, Italy
Alessio Fascista, University of Salento, Lecce, Italy
Arne Schumann, Fraunhofer Institute, Karlsruhe, Germany
Lars Sommer, Fraunhofer Institute, Karlsruhe, Germany

Time: 9/21 Sat 8:00am to 12:00pm

Room: Computer Room 1 (電腦教室一)

8.20-8.40 Opening

8.40-9.00 Presentation of the challenge

9.00-9.40 Session I

- 9.00-9.20 M. Nalamati, A. Kapoor, M. Saqib, N. Sharma, M. Blumenstein (University of Technology Sydney): “Drone Detection in Long-range Surveillance Videos”
- 9.20-9.40 V. Magoulinitis, D. Ataloglou, A. Dimou, D. Zarpalas, P. Daras (Information Technologies Institute, Centre for Research and Technology Hellas): “Does Deep Super-Resolution Enhance UAV Detection?”

9.40-10.00 Coffee break

10.00-10.40 Session II

- 10.00-10.20 C. Craye, S. Ardjouné (CerbAir Research Lab): “Spatio-temporal Semantic Segmentation for Drone Detection”
- 10.20-10.40 D. de la Iglesia, M. Méndez, R. Dosil, I. González (GRADIANT - Galician Research and Development Center In Advanced Telecommunications): “Drone detection CNN for close and long range surveillance in mobile applications”

10.40-11.15 Analysis of the results

11.15-11.35 Live demo and discussion

11.35-11.45 Closing remarks



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3rd Workshop on Traffic and Street Surveillance for Safety and Security (IWT4S)

Marco Del Coco, Institute of Applied Sciences and Intelligent Systems, CNR, Italy.

Siwei Lyu, University at Albany, USA.

Pierluigi Carcagni: Institute of Applied Sciences and Intelligent Systems, CNR, Italy.

Ming-Ching Chang: University at Albany, USA.

Time: 9/21 Sat 8:20am to 12:15pm

Room: Classroom 2

8:20-8:40 Opening

8:40-9:40 Keynote

9:40-10:00 Coffee break

10:00-12:00 8 paper oral, 15 min each

- Multi-Component Spatiotemporal Attention and its Application to Object Detection in Videos, Roman Palenychka (University of Ottawa)*; Rami Abielmona (Larus Technologies); Francesco Rea (Istituto Italiano di Tecnologia); Emil Petriu (University of Ottawa)
- Real-time Traffic Analysis Using Deep Learning Techniques And UAV Based Video Huaizhong Zhang (Edgehill University)*
- Using Algorithm Selection for Adaptive Vehicle Perception aboard UAV Christian Hellert (University of the Bundeswehr Munich); Simon Koch (University of the Bundeswehr Munich)*; Peter Stütz (University of the Bundeswehr Munich)
- Domain is of the Essence: Data Deployment for City-Scale Multi-Camera Vehicle Re-Identification Mark Schutera (Karlsruher Institute of Technology)*; Frank Michael Hafner (ZF Friedrichshafen AG); Hendrik Vogt (ZF Friedrichshafen AG); Jochen Abhau (ZF Friedrichshafen AG); Markus Reischl (Karlsruhe Institute of Technology)
- Determining Epipole Location Integrity by Multimodal Sampling Huiqin CHEN (University Paris Sud)*; Emanuel Aldea (University Paris Sud); Sylvie Le Hégarat-Masclé (University Paris Sud)
- Front-View Vehicle Make and Model Recognition on Night-Time NIR Camera Images Burak Balci (HAVELSAN INC.)*; Alperen Elihos (HAVELSAN INC.); Mehmet TURAN (HAVELSAN INC.); Bensu Alkan (HAVELSAN INC.); Yusuf Artan (HAVELSAN INC.)
- Self-Subtraction Network for end to end noise robust classification Donghyeon Kim (Korea university); David K Han (Army Research Laboratory); Hanseok Ko (Korea University)*
- Vehicle Tracking Using Deep SORT with Low Confidence Track Filtering Xinyu Hou (Nanyang Technological University); Yi Wang (Nanyang Technological University); Lap-Pui Chau (Nanyang Technological University)*

12:00-12:15 Summary

12:15 Adjoin



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Visual Computing for Computer Vision and Intelligent Transportation System (VCAVSS).

Ching-Chun Huang, National Chung Cheng University, Taiwan.

Manh-Hung Nguyen, Ho Chi Minh University of Technology and Education.

Vu-Hoang Tran, Ho Chi Minh University of Technology and Education.

Time: 9/21 Sat 1:30pm to 5:30pm

Room: Classroom 2 (教室二)

1:30-2:30 **Keynote speaker: Prof. Wen-Huang Cheng**

2:30-3:30 Session I

2:30-2:50 Cycle-Spinning GAN for Raindrop Removal from Images

2:50-3:10 SSSNet: Small-Scale-Aware Siamese Network for Gastric Cancer Detection

3:10-3:30 WS 3: Helicobacter pylori Classification Based on Deep Neural Network

3:30-3:50 Coffee break

3:50-4:50 Session II

3:50-4:10 Image-based Real-Time Fire Detection Using Deep Learning with Data Augmentation for Vision-based Surveillance Applications

4:10-4:30 Multi-threshold Based Ground Detection for Point Cloud Scene

4:30-4:50 Retinex-based low-light image enhancement with deep learning methods



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Workshop on Content-Aware Video Analysis (CAVA)

Huang-Chia Shih, Yuan Ze University, Taiwan.

Kuan-Hui Lee, Toyota Research Institute, USA.

Chih-Yang Lin, Yuan Ze University, Taiwan.

Time: 9/21 Sat 1:30pm to 5:30pm

Room: Classroom 1 (教室一)

1:30 – 1:35 Opening

1:35 – 2:30 **Keynote speaker: Prof. Weisi Lin (NTU, Singapore)**

2:30 – 3:30 Session I

2:30 – 2:50 Coarse-to-Fine Object Detection for Ride-Hailing Market Analysis

Alvin Prayuda Juniarta Dwiyantoro, Kahlil Muchtar*, Faris Rahman, Muhammad Wiryahardiyanto, and Reynaldy Hardiyanto (Nodeflux, Jakarta, Indonesia)*

2:50 – 3:10 Accurate Traffic Flow Estimation for Highway Surveillance Systems with Scenes Tampered by Raindrops

Hsu-Yung Cheng (National Central University, Taiwan) and Chih-Chang Yu (Chung Yuan Christian University, Taiwan)*

3:10 – 3:30 Video-based Bottleneck Detection utilizing Lagrangian Dynamics in Crowded Scenes

Maik Simon, Markus Kuchhold, Tobias Senst, Erik Bochinski, and Thomas Sikora (Communication Systems Group, Technische Universität Berlin, Germany)*

3:30 – 3:50 Coffee break

3:50 – 5:10 Session II

4:10 – 4:30 High Efficient Single-stage Steel Surface Defect Detection

Fityanul Akhyar (Yuan Ze University, Taiwan), Chih-Yang Lin (Yuan Ze University, Taiwan), Kahlil Muchtar (Syiah Kuala University, Banda Aceh, Indonesia), Tung-Ying Wu (China Steel Corporation, Taiwan), and Hui-Fuang Ng (Universiti Tunku Abdul Rahman, Malaysia)

4:30 – 4:50 TrackNet: A Deep Learning Network for Tracking High-speed and Tiny Objects in Sports Applications

Yu-Chuan Huang, I-No Liao, Ching-Hsuan Chen, Tsí-Uì Ìk, and Wen-Chih Peng (National Chiao Tung University, Taiwan)*

4:50 – 5:10 Square Puzzle Solving Using Border Compatibility Matching

Huang-Chia Shih, Jian-Liang Lu, and Chang-Hsian Ma (Yuan Ze University, Taiwan)*

5:10 – 5:15 Closing remarks



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Workshop on Deep Learning in Activity Monitoring (DLAM)

Pier Luigi Mazzeo, Permanent Researcher, National Research Council, Italy.
Paolo Spagnolo, Permanent Researcher, National Research Council, Italy.
Rama Challapa, University of Maryland, College Park, USA.
Lei Zhang, Microsoft AI and Research, USA.

Time: 9/21 Sat 1:30pm to 5:30pm
Room: Computer Room 1 (電腦教室一)

Session I

- 1:30 – 02:00 Multiple Instance Learning for CNN Based Fire Detection and Localization
Toygar Akgun (ASELSAN)*; Metin Aktas (ASELSAN); Ali Bayramcavus (ASELSAN)
- 02:00 – 02:30 Spatio-Temporal Feature Extraction and Distance Metric Learning for Unconstrained Action Recognition
Yongsang Yoon (Gwangju Institute of Science and Technology)*; Jongmin Yu (Curtin University); Moongu Jeon (Gwangju Institute of Science and Technology)
- 02:30 – 03:00 A case study on the impact of masking moving objects on the camera pose regression with CNNs
Claudio Cimarrelli (SnT – Interdisciplinary Centre for Security, Reliability and Trust)*; Dario Cazzato (SnT – Interdisciplinary Centre for Security, Reliability and Trust); Miguel Olivares (Universidad de Luxemburgo); Holger Voos (SnT – Interdisciplinary Centre for Security, Reliability and Trust)
- 03:00 – 03:30 Reptile Meta-Tracking
Chi-Yi Tsai (Tamkang Uiversity)*; Shang-Jhih Jhang (Tamkang Uiversity)

3:30 to 3:50 Coffee Break

Session II

- 03:50 – 04:20 Sports Video Summarization with Limited Labeling Datasets Based on 3D Neural Networks
ChingShun Lin (National Taiwan University of Science and Technology)*; YuChing Chen (National Taiwan University of Science and Technology)
- 04:20 – 04:50 What goes around comes around: Cycle-Consistency-based Short-Term Motion Prediction for Anomaly Detection using Generative Adversarial Networks
Thomas Golda (Karlsruhe Institute of Technology)*; Nils Murzyn (Fraunhofer IOSB); Chengchao Qu (Fraunhofer IOSB); Kristian Kroschel (Fraunhofer IOSB)
- 04:50 – 05:20 A new annotated dataset for boat detection and re-identification
Paolo Spagnolo (ISASI-CNR), Filieri Francesco (University of Salento), Pier Luigi Mazzeo (ISASI-CNR), Cosimo Distanto (ISASI – CNR)



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