Technical Program

Monday, September 9

09:00 - 10:00 Registration

10:00 - 10:10 Welcome from the Chairs

10:10 - 11:10 Oral Session 1: Cameras and Camera Networks

Automatic Extrinsic Calibration of Camera Networks Based on Pedestrians
Anh Minh Truong (Ghent University); Wilfried Philips (IPI - Ghent University - imec); Junzhi Guan (CETC Key Laboratory of Aerospace Information Applications); Nikos Deligiannis (Vrije Universiteit Brussel); Lusine Abrahamyan (Vrije Universiteit Brussel)

Unsupervised continuous camera network pose estimation through human mesh recovery
Nicola Garau (University of Trento); Nicola Conci (University of Trento)

A Distributed Approach to 3D Reconstruction in Marker Motion Capture Systems
Angelo Cenedese (University of Padova); Luca Varotto (University of Padova)

11:10 – 11:40 Coffee Break

11:40 – 13:00 Oral Session 2: Face and Action

Automatic Deception Detection in RGB videos using Facial Action Units
Danilo Avola (Sapienza University); Luigi Cinque (University La Sapienza of Rome); Gian Luca Foresti (University of Udine, Italy); Daniele Pannone (Sapienza University)

Face Liveness Detection Benchmark based on Stereo Matching
Minghui Shi (Beihang University); Jiaming Sun (Beihang University); Zhenhuan Huang (Beihang University); Hainan Wang (beihang); Chunlei Liu (Beihang University); Baochang Zhang (Beihang University)

Face anti-spoofing with multi-color double-stream CNN
Daqiang Mu (Anhui University); Teng Li (Anhui University)

Accurate Single-Stream Action Detection in Real-Time
Yu Liu (ImViA - UBFC)

13:00 – 14:30 Lunch Break

14:30 – 15:45 Special Session: Trends in Free Navigation Technologies

Exploiting view synthesis for super-multiview video compression
Pavel Nikitin (Orange); Marco Cagnazzo (Telecom ParisTech); Attilio Fiandrotti (Télécom ParisTech); Joel Jung (Orange)

Region Merging Driven by Deep Learning for RGB-D Segmentation and Labeling

Umberto Michieli (University of Padova); Maria Camporese (University of Padova); Andrea Agiollo (University of Padova); Giampaolo Pagnutti (University of Padova); Pietro Zanuttigh (University of Padova)

Displacement Error Analysis of 6-DoF Virtual Reality
Ridvan Aksu (University of Alabama); Jacob Chakareski (University of Alabama); Vladan Velisavljevic (University of Bedfordshire)

15:45 – 16:15 Coffee Break

16:15 – 17:45 Demo Session

Demo: A system for image acquisition and processing operating in the visible and the IR bands
Juan Antonio Leñero-Bardallo (Institute of Microelectronics of Seville, Spain)

Demo: CNN Performance Prediction on a CPU-based Edge Platform
Delia Velasco-Montero (Institute of Microelectronics of Sevilla (CSIC-Universidad de Sevilla)); Jorge Fernandez-Berni (Institute of Microelectronics of Seville (CSIC-Universidad de Sevilla)); Ricardo Carmona-Galan (Instituto de microelectronica de Sevilla (CSIC-Univ. de Sevilla); Angel Rodriguez-Vazquez (Institute of Microelectronics of Sevilla (CSIC-Universidad de Sevilla))

Demo: Privacy protection in surveillance systems
Andrea Zanotto (University of Trento); Nicola Conci (University of Trento); Alberto Montresor (University of Trento)

Demo: Camera network optimization: maximize coverage in a 3D virtual environment
Niccolò Bisagno (University of Trento); Cristian Iacovlev (University of Trento)

Demo: Unsupervised camera pose estimation through human mesh recovery
Nicola Garau (University of Trento); Nicola Conci (University of Trento)

Tuesday, September 10

9:00 – 10:00 Keynote: "Can we trust smart cameras?"
   Speaker: Prof. Berhnard Rinner, Alpen Adria University, Klagenfurt (Austria)

10:00 – 10:30 Coffee Break

10:30 – 11:50 Oral Session 3: Applications

Genetic Algorithms for the Optimization of Diffusion Parameters in Content-Based Image Retrieval
Federico Magliani (IMP lab - University of Parma); Laura Sani (University of Parma); Prof. Stefano Cagnoni (Ingegneria, dell'Informazione, University of Parma, Italy); Andrea Prati (University of Parma)

A Heterogeneous Dataset for Large Scale Hotel Search Performance Assessment
Sha Li (Shenzhen Institute of Advanced Technology, CAS); Qiang Qu (SIAT, China); Jialie Shen (Queen's University, Belfast)

Automatic Assessment of Infant Sleep Safety Using Semantic Segmentation
Danielle Tchuinkou Kwadjo (University of Florida); Erman Nghonda (University of Florida); Christophe Bobda (University of Florida)

Screening Early Children with Autism Spectrum Disorder via Expressing Needs with Index Finger Pointing
Zhiyong Wang (Shanghai Jiao Tong University); Kai Xu (Shanghai Jiao Tong University); Honghai Liu (Shanghai Jiao Tong University)

11:50 – 13:00 Ph.D Forum

Towards an Embedded Stereo Matching Algorithm Based on Multiple Correlation Windows
Marco A. Palacios Ramos (TNM ITTG); Héctor Daniel Vázquez Delgado (TNM ITTG); Madaín Pérez Patricio (TNM ITTG); Abiel Aguilar González (TNM ITTG)

A survey on FPGA-based high-resolution TDCs
Mojtaba Parsakordasiabi (Instituto de Microelectronica de Sevilla (IMSE-CNM))

PhD Forum: Impact of CNNs Pooling Layer Implementation on FPGAs Accelerator Design
Alberto Munio Gracia (IMSE-CNM CSIC)

Towards an FPGA-Based Smart Camera for Virtual Reality Applications
Antonio Pérez Cruz (TECNM ITTG); Madaín Pérez Patricio (TNM ITTG); Abiel Aguilar González (TNM ITTG)

Dynamic Obstacle Detection in Traffic Environments
Gopi Krishna Erabati (University of Coimbra); Helder Araujo (University of Coimbra)

Generating Domain and Pose Variations between Pair of Cameras for Person Re-Identification
Asad Munir (University of Udine); Gian Luca Foresti (University of Udine, Italy); CHRISTIAN MICHELONI (University of Udine, Italy)

PhD Forum: Towards Embedded Heterogeneous FPGA-GPU Smart Camera Architectures for CNN Inference
Walther Carballo Hernández (Institut Pascal)

13:00 – 14:30 Lunch Break

14:30 – 16:10 Oral Session 4: Deep Learning and Machine learning

An Exploration of the Interaction Between capsules with ResNetCaps models
Rita Pucci (University of Udine); Christian Micheloni (University of Udine, Italy); Vito Roberto (University of Udine); Gian Luca Foresti (University of Udine, Italy); Niki Martinel (University of Udine)

Guided Convolutional Network
Chunlei Liu (Beihang University); Wenrui Ding (Beihang University); Yuan Hu (Beihang University); Hanlin Chen (Beihang University); Baochang Zhang (Beihang University); Shuo Liu (Beihang University)

PLFCN: Pyramid Loss Reinforced Fully Convolution Network
Shuo Liu (Beihang University); Wenrui Ding (Beihang University); Hongguang Li (Beihang University); Chunlei Liu (Beihang University)

Deep Super-Resolution Network for Single Image Super-Resolution with Realistic Degradations
Rao Muhammad Umer (University of Udine); Gian Luca Foresti (University of Udine, Italy); Christina Micheloni (University of Udine, Italy)

EdgeNet - Balancing Accuracy and Performance for Edge-based Convolutional Neural Network Object Detectors
George N Plastiras (University of Cyprus); Christos Kyrkou (KIOS CoE, University of Cyprus); Theocharis Theocharides (University of Cyprus)

16:10 – 16:40 Coffee Break

16:40 – 18:00 Oral Session 5: Sensors and Architectures

An IoT Edge-Fog-Cloud Architecture for Vision Based Planogram Integrity
Rocco Pietrini (Università Politecnica delle Marche); Davide Manco (Grottini Lab); Marina Paolanti (Università Politecnica delle Marche); Valerio Placidi (Grottini Lab); Primo Zingaretti (Università Politecnica delle Marche); Emanuele Frontoni (Università Politecnica delle Marche)

Design Exploration of Multi-Camera Dome
Hiba Alqaysi (Mid Sweden University); Mattias O'Nils (Mid Sweden University); Najeem Lawal (Mid Sweden University); Igor Fedorov (Mid Sweden University); Benny Thörnberg (Mid Sweden University)

A Battery Powered Vision Sensor for Forensic Evidence Gathering

Yu Zou (Fondazione Bruno Kessler); Michela Lecca (Fondazione Bruno Kessler); Massimo Gottardi (Fondazione Bruno Kessler); Nicholas Vretos (CERTH); Lazaros Gymnopoulos (ITI-CERTH); Petros Daras (ITI-CERTH, Greece); Giulio Urlini (STMicroelectronics)

From PC2BIM: Automatic Model generation from Indoor Point Cloud
Danielle Tchuinkou Kwadjo (University of Florida); Erman Nghonda (University of Florida); Nareph Menadjou (Camertronix); Nafissetou Nziengam (Camertronix); Cedriq Fotsing (Camertronix); Christophe Bobda (University of Florida)

Wednesday, September 11
This part of the program is conducted jointly with ICIAP - International Conference on Image Analysis and Processing, hosted at the Palazzo di Giurisprudenza

9:00 – 10:00 Keynote: "Autonomous, Agile, Vision-controlled Drones: from Frame to Event Vision"
    Speaker: Prof. Davide Scaramuzza, ETH Zurich (Switzerland)

10:00 – 10:30 Coffee Break

10:30 – 12:00 Oral Session 6: ICDSC meets ICIAP

Drone patrolling with reinforcement learning
Claudio Piciarelli (University of Udine, Italy); Gian Luca Foresti (University of Udine, Italy)

Automatic Generation of Waypoint Graphs from Distributed Ceiling-Mounted Smart Cameras for Decentralized Multi-Robot Indoor Navigation
Christophe Bobda (University of Florida, USA); Andrew Felder (University of Arkansas); Dillon VanBuskirk (University of Arkansas)

12:00 End of ICDSC 2019