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Adrien Bartoli · Andrea Fusiello (Eds.)

Computer Vision – ECCV 2020 Workshops

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Proceedings, Part II

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Foreword

Hosting the 2020 European Conference on Computer Vision was certainly an exciting journey. From the 2016 plan to hold it at the Edinburgh International Conference Centre (hosting 1,800 delegates) to the 2018 plan to hold it at Glasgow's Scottish Exhibition Centre (up to 6,000 delegates), we finally ended with moving online because of the COVID-19 outbreak. While possibly having fewer delegates than expected because of the online format, ECCV 2020 still had over 3,100 registered participants.

Although online, the conference delivered most of the activities expected at a face-to-face conference: peer-reviewed papers, industrial exhibitors, demonstrations, and messaging between delegates. As well as the main technical sessions, the conference included a strong program of satellite events, including 16 tutorials and 44 workshops.

On the other hand, the online conference format enabled new conference features. Every paper had an associated teaser video and a longer full presentation video. Along with the papers and slides from the videos, all these materials were available the week before the conference. This allowed delegates to become familiar with the paper content and be ready for the live interaction with the authors during the conference week. The 'live' event consisted of brief presentations by the 'oral' and 'spotlight' authors and industrial sponsors. Question and Answer sessions for all papers were timed to occur twice so delegates from around the world had convenient access to the authors.

As with the 2018 ECCV, authors' draft versions of the papers appeared online with open access, now on both the Computer Vision Foundation (CVF) and the European Computer Vision Association (ECVA) websites. An archival publication arrangement was put in place with the cooperation of Springer. SpringerLink hosts the final version of the papers with further improvements, such as activating reference links and supplementary materials. These two approaches benefit all potential readers: a version available freely for all researchers, and an authoritative and citable version with additional benefits for SpringerLink subscribers. We thank Alfred Hofmann and Aliaksandr Birukou from Springer for helping to negotiate this agreement, which we expect will continue for future versions of ECCV.

August 2020

Vittorio Ferrari
Bob Fisher
Cordelia Schmid
Emanuele Trucco

Preface

Welcome to the workshops proceedings of the 16th European Conference on Computer Vision (ECCV 2020), the first edition held online. We are delighted that the main ECCV 2020 was accompanied by 45 workshops, scheduled on August 23, 2020, and August 28, 2020.

We received 101 valid workshop proposals on diverse computer vision topics and had space for 32 full-day slots, so we had to decline many valuable proposals (the workshops were supposed to be either full-day or half-day long, but the distinction faded away when the full ECCV conference went online). We endeavored to balance among topics, established series, and newcomers. Not all the workshops published their proceedings, or had proceedings at all. These volumes collect the edited papers from 28 out of 45 workshops.

We sincerely thank the ECCV general chairs for trusting us with the responsibility for the workshops, the workshop organizers for their involvement in this event of primary importance in our field, and the workshop presenters and authors.

August 2020

Adrien Bartoli
Andrea Fusiello

Organization

General Chairs

Vittorio Ferrari	Google Research, Switzerland
Bob Fisher	The University of Edinburgh, UK
Cordelia Schmid	Google and Inria, France
Emanuele Trucco	The University of Dundee, UK

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Thomas Brox	University of Freiburg, Germany
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Diane Larlus	NAVER LABS Europe, France
Cristian Novotny	The University of Edinburgh, UK

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Yvan Petillot	Heriot-Watt University, UK
Paul Siebert	The University of Glasgow, UK

Academic Demonstration Chair

Thomas Mensink	Google Research and University of Amsterdam, The Netherlands

Poster Chair

Stephen Mckenna	The University of Dundee, UK

Technology Chair

Gerardo Aragon Camarasa	The University of Glasgow, UK

Tutorial Chairs

Carlo Colombo	University of Florence, Italy
Sotirios Tsaftaris	The University of Edinburgh, UK

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Hamdi Dibeklioglu	Bilkent University, Turkey
Metehan Doyran	Utrecht University, The Netherlands
Henry Howard-Jenkins	University of Oxford, UK
Victor Adrian Prisacariu	University of Oxford, UK
Siyu Tang	ETH Zurich, Switzerland
Gul Varol	University of Oxford, UK

Website Chair

Giovanni Maria Farinella	University of Catania, Italy

Workshops Chairs

Adrien Bartoli	University Clermont Auvergne, France
Andrea Fusiello	University of Udine, Italy

Workshops Organizers

W01 - Adversarial Robustness in the Real World

Adam Kortylewski	Johns Hopkins University, USA
Cihang Xie	Johns Hopkins University, USA
Song Bai	University of Oxford, UK
Zhaowei Cai	UC San Diego, USA
Yingwei Li	Johns Hopkins University, USA
Andrei Barbu	MIT, USA
Wieland Brendel	University of Tübingen, Germany
Nuno Vasconcelos	UC San Diego, USA
Andrea Vedaldi	University of Oxford, UK
Philip H. S. Torr	University of Oxford, UK
Rama Chellappa	University of Maryland, USA
Alan Yuille	Johns Hopkins University, USA

W02 - BioImage Computation

Jan Funke	HHMI Janelia Research Campus, Germany
Dagmar Kainmueller	BIH and MDC Berlin, Germany
Florian Jug	CSBD and MPI-CBG, Germany
Anna Kreshuk	EMBL Heidelberg, Germany

Peter Bajcsy   NIST, USA
Martin Weigert   EPFL, Switzerland
Patrick Bouthemy   Inria, France
Erik Meijering   University New South Wales, Australia

W03 - Egocentric Perception, Interaction and Computing

Michael Wray   University of Bristol, UK
Dima Damen   University of Bristol, UK
Hazel Doughty   University of Bristol, UK
Walterio Mayol-Cuevas   University of Bristol, UK
David Crandall   Indiana University, USA
Kristen Grauman   UT Austin, USA
Giovanni Maria Farinella   University of Catania, Italy
Antonino Furnari   University of Catania, Italy

W04 - Embodied Vision, Actions and Language

Yonatan Bisk   Carnegie Mellon University, USA
Jesse Thomason   University of Washington, USA
Mohit Shridhar   University of Washington, USA
Chris Paxton   NVIDIA, USA
Peter Anderson   Georgia Tech, USA
Roozbeh Mottaghi   Allen Institute for AI, USA
Eric Kolve   Allen Institute for AI, USA

W05 - Eye Gaze in VR, AR, and in the Wild

Hyung Jin Chang   University of Birmingham, UK
Seonwook Park   ETH Zurich, Switzerland
Xucong Zhang   ETH Zurich, Switzerland
Otmar Hilliges   ETH Zurich, Switzerland
Aleš Leonardis   University of Birmingham, UK
Robert Cavin   Facebook Reality Labs, USA
Cristina Palmero   University of Barcelona, Spain
Jixu Chen   Facebook, USA
Alexander Fix   Facebook Reality Labs, USA
Elias Guestrin   Facebook Reality Labs, USA
Oleg Komogortsev   Texas State University, USA
Kapil Krishnakumar   Facebook, USA
Abhishek Sharma   Facebook Reality Labs, USA
Yiru Shen   Facebook Reality Labs, USA
Tarek Hefny   Facebook Reality Labs, USA
Karsten Behrendt   Facebook, USA
Sachin S. Talathi   Facebook Reality Labs, USA

W06 - Holistic Scene Structures for 3D Vision

Zihan Zhou	Penn State University, USA
Yasutaka Furukawa	Simon Fraser University, Canada
Yi Ma	UC Berkeley, USA
Shenghua Gao	ShanghaiTech University, China
Chen Liu	Facebook Reality Labs, USA
Yichao Zhou	UC Berkeley, USA
Linjie Luo	Bytedance Inc., China
Jia Zheng	ShanghaiTech University, China
Junfei Zhang	Kujiale.com, China
Rui Tang	Kujiale.com, China

W07 - Joint COCO and LVIS Recognition Challenge

Alexander Kirillov	Facebook AI Research, USA
Tsung-Yi Lin	Google Research, USA
Yin Cui	Google Research, USA
Matteo Ruggero Ronchi	California Institute of Technology, USA
Agrim Gupta	Stanford University, USA
Ross Girshick	Facebook AI Research, USA
Piotr Dollar	Facebook AI Research, USA

W08 - Object Tracking and Its Many Guises

Achal D. Dave	Carnegie Mellon University, USA
Tarasha Khurana	Carnegie Mellon University, USA
Jonathon Luiten	RWTH Aachen University, Germany
Aljosa Osep	Technical University of Munich, Germany
Pavel Tokmakov	Carnegie Mellon University, USA

W09 - Perception for Autonomous Driving

Li Erran Li	Alexa AI, Amazon, USA
Adrien Gaidon	Toyota Research Institute, USA
Wei-Lun Chao	The Ohio State University, USA
Peter Ondruska	Lyft, UK
Rowan McAllister	UC Berkeley, USA
Larry Jackel	North-C Technologies, USA
Jose M. Alvarez	NVIDIA, USA

W10 - TASK-CV Workshop and VisDA Challenge

Tatiana Tommasi	Politecnico di Torino, Italy
Antonio M. Lopez	CVC and UAB, Spain
David Vazquez	Element AI, Canada
Gabriela Csurka	NAVER LABS Europe, France
Kate Saenko	Boston University, USA
Liang Zheng	The Australian National University, Australia

Xingchao Peng   Boston University, USA
Weijian Deng   The Australian National University, Australia

W11 - Bodily Expressed Emotion Understanding

James Z. Wang   Penn State University, USA
Reginald B. Adams, Jr.   Penn State University, USA
Yelin Kim   Amazon Lab126, USA

W12 - Commands 4 Autonomous Vehicles

Thierry Deruyttere   KU Leuven, Belgium
Simon Vandenhende   KU Leuven, Belgium
Luc Van Gool   KU Leuven, Belgium, and ETH Zurich, Switzerland
Matthew Blaschko   KU Leuven, Belgium
Tinne Tuytelaars   KU Leuven, Belgium
Marie-Francine Moens   KU Leuven, Belgium
Yu Liu   KU Leuven, Belgium
Dusan Grujicic   KU Leuven, Belgium

W13 - Computer VISion for ART Analysis

Alessio Del Bue   Istituto Italiano di Tecnologia, Italy
Sebastiano Vascon   Ca' Foscari University and European Centre for Living
                                 Technology, Italy
Peter Bell   Friedrich-Alexander University Erlangen-Nürnberg,
                                 Germany
Leonardo L. Impett   EPFL, Switzerland
Stuart James   Istituto Italiano di Tecnologia, Italy

W14 - International Challenge on Compositional and Multimodal Perception

Alec Hodgkinson   Panasonic Corporation, Japan
Yusuke Urakami   Panasonic Corporation, Japan
Kazuki Kozuka   Panasonic Corporation, Japan
Ranjay Krishna   Stanford University, USA
Olga Russakovsky   Princeton University, USA
Juan Carlos Niebles   Stanford University, USA
Jingwei Ji   Stanford University, USA
Li Fei-Fei   Stanford University, USA

W15 - Sign Language Recognition, Translation and Production

Necati Cihan Camgoz   University of Surrey, UK
Richard Bowden   University of Surrey, UK
Andrew Zisserman   University of Oxford, UK
Gul Varol   University of Oxford, UK
Samuel Albanie   University of Oxford, UK

| Kearsy Cormier | University College London, UK |
| Neil Fox | University College London, UK |

W16 - Visual Inductive Priors for Data-Efficient Deep Learning

Jan van Gemert	Delft University of Technology, The Netherlands
Robert-Jan Bruintjes	Delft University of Technology, The Netherlands
Attila Lengyel	Delft University of Technology, The Netherlands
Osman Semih Kayhan	Delft University of Technology, The Netherlands
Marcos Baptista-Ríos	Alcalá University, Spain
Anton van den Hengel	The University of Adelaide, Australia

W17 - Women in Computer Vision

Hilde Kuehne	IBM, USA
Amaia Salvador	Amazon, USA
Ananya Gupta	The University of Manchester, UK
Yana Hasson	Inria, France
Anna Kukleva	Max Planck Institute, Germany
Elizabeth Vargas	Heriot-Watt University, UK
Xin Wang	UC Berkeley, USA
Irene Amerini	Sapienza University of Rome, Italy

W18 - 3D Poses in the Wild Challenge

Gerard Pons-Moll	Max Planck Institute for Informatics, Germany
Angjoo Kanazawa	UC Berkeley, USA
Michael Black	Max Planck Institute for Intelligent Systems, Germany
Aymen Mir	Max Planck Institute for Informatics, Germany

W19 - 4D Vision

Anelia Angelova	Google, USA
Vincent Casser	Waymo, USA
Jürgen Sturm	X, USA
Noah Snavely	Google, USA
Rahul Sukthankar	Google, USA

W20 - Map-Based Localization for Autonomous Driving

Patrick Wenzel	Technical University of Munich, Germany
Niclas Zeller	Artisense, Germany
Nan Yang	Technical University of Munich, Germany
Rui Wang	Technical University of Munich, Germany
Daniel Cremers	Technical University of Munich, Germany

W21 - Multimodal Video Analysis Workshop and Moments in Time Challenge

Dhiraj Joshi	IBM Research AI, USA
Rameswar Panda	IBM Research, USA
Kandan Ramakrishnan	IBM, USA
Rogerio Feris	IBM Research AI, MIT-IBM Watson AI Lab, USA
Rami Ben-Ari	IBM-Research, USA
Danny Gutfreund	IBM, USA
Mathew Monfort	MIT, USA
Hang Zhao	MIT, USA
David Harwath	MIT, USA
Aude Oliva	MIT, USA
Zhicheng Yan	Facebook AI, USA

W22 - Recovering 6D Object Pose

Tomas Hodan	Czech Technical University in Prague, Czech Republic
Martin Sundermeyer	German Aerospace Center, Germany
Rigas Kouskouridas	Scape Technologies, UK
Tae-Kyun Kim	Imperial College London, UK
Jiri Matas	Czech Technical University in Prague, Czech Republic
Carsten Rother	Heidelberg University, Germany
Vincent Lepetit	ENPC ParisTech, France
Ales Leonardis	University of Birmingham, UK
Krzysztof Walas	Poznan University of Technology, Poland
Carsten Steger	Technical University of Munich and MVTec Software GmbH, Germany
Eric Brachmann	Heidelberg University, Germany
Bertram Drost	MVTec Software GmbH, Germany
Juil Sock	Imperial College London, UK

W23 - SHApe Recovery from Partial Textured 3D Scans

Djamila Aouada	University of Luxembourg, Luxembourg
Kseniya Cherenkova	Artec3D and University of Luxembourg, Luxembourg
Alexandre Saint	University of Luxembourg, Luxembourg
David Fofi	University Bourgogne Franche-Comté, France
Gleb Gusev	Artec3D, Luxembourg
Bjorn Ottersten	University of Luxembourg, Luxembourg

W24 - Advances in Image Manipulation Workshop and Challenges

Radu Timofte	ETH Zurich, Switzerland
Andrey Ignatov	ETH Zurich, Switzerland
Kai Zhang	ETH Zurich, Switzerland
Dario Fuoli	ETH Zurich, Switzerland
Martin Danelljan	ETH Zurich, Switzerland
Zhiwu Huang	ETH Zurich, Switzerland

Hannan Lu	Harbin Institute of Technology, China
Wangmeng Zuo	Harbin Institute of Technology, China
Shuhang Gu	The University of Sydney, Australia
Ming-Hsuan Yang	UC Merced and Google, USA
Majed El Helou	EPFL, Switzerland
Ruofan Zhou	EPFL, Switzerland
Sabine Süsstrunk	EPFL, Switzerland
Sanghyun Son	Seoul National University, South Korea
Jaerin Lee	Seoul National University, South Korea
Seungjun Nah	Seoul National University, South Korea
Kyoung Mu Lee	Seoul National University, South Korea
Eli Shechtman	Adobe, USA
Evangelos Ntavelis	ETH Zurich and CSEM, Switzerland
Andres Romero	ETH Zurich, Switzerland
Yawei Li	ETH Zurich, Switzerland
Siavash Bigdeli	CSEM, Switzerland
Pengxu Wei	Sun Yat-sen University, China
Liang Lin	Sun Yat-sen University, China
Ming-Yu Liu	NVIDIA, USA
Roey Mechrez	BeyondMinds and Technion, Israel
Luc Van Gool	KU Leuven, Belgium, and ETH Zurich, Switzerland

W25 - Assistive Computer Vision and Robotics

Marco Leo	National Research Council of Italy, Italy
Giovanni Maria Farinella	University of Catania, Italy
Antonino Furnari	University of Catania, Italy
Gerard Medioni	University of Southern California, USA
Trivedi Mohan	UC San Diego, USA

W26 - Computer Vision for UAVs Workshop and Challenge

Dawei Du	Kitware Inc., USA
Heng Fan	Stony Brook University, USA
Toon Goedemé	KU Leuven, Belgium
Qinghua Hu	Tianjin University, China
Haibin Ling	Stony Brook University, USA
Davide Scaramuzza	University of Zurich, Switzerland
Mubarak Shah	University of Central Florida, USA
Tinne Tuytelaars	KU Leuven, Belgium
Kristof Van Beeck	KU Leuven, Belgium
Longyin Wen	JD Digits, USA
Pengfei Zhu	Tianjin University, China

W27 - Embedded Vision

Tse-Wei Chen	Canon Inc., Japan
Nabil Belbachir	NORCE Norwegian Research Centre AS, Norway

Stephan Weiss   University of Klagenfurt, Austria
Marius Leordeanu   Politehnica University of Bucharest, Romania

W28 - Learning 3D Representations for Shape and Appearance

Leonidas Guibas   Stanford University, USA
Or Litany   Stanford University, USA
Tanner Schmidt   Facebook Reality Labs, USA
Vincent Sitzmann   Stanford University, USA
Srinath Sridhar   Stanford University, USA
Shubham Tulsiani   Facebook AI Research, USA
Gordon Wetzstein   Stanford University, USA

W29 - Real-World Computer Vision from inputs with Limited Quality and Tiny Object Detection Challenge

Yuqian Zhou   University of Illinois, USA
Zhenjun Han   University of the Chinese Academy of Sciences, China
Yifan Jiang   The University of Texas at Austin, USA
Yunchao Wei   University of Technology Sydney, Australia
Jian Zhao   Institute of North Electronic Equipment, Singapore
Zhangyang Wang   The University of Texas at Austin, USA
Qixiang Ye   University of the Chinese Academy of Sciences, China
Jiaying Liu   Peking University, China
Xuehui Yu   University of the Chinese Academy of Sciences, China
Ding Liu   Bytedance, China
Jie Chen   Peking University, China
Humphrey Shi   University of Oregon, USA

W30 - Robust Vision Challenge 2020

Oliver Zendel   Austrian Institute of Technology, Austria
Hassan Abu Alhaija   Interdisciplinary Center for Scientific Computing
                                  Heidelberg, Germany
Rodrigo Benenson   Google Research, Switzerland
Marius Cordts   Daimler AG, Germany
Angela Dai   Technical University of Munich, Germany
Andreas Geiger   Max Planck Institute for Intelligent Systems
                                  and University of Tübingen, Germany
Niklas Hanselmann   Daimler AG, Germany
Nicolas Jourdan   Daimler AG, Germany
Vladlen Koltun   Intel Labs, USA
Peter Kontschieder   Mapillary Research, Austria
Yubin Kuang   Mapillary AB, Sweden
Alina Kuznetsova   Google Research, Switzerland
Tsung-Yi Lin   Google Brain, USA
Claudio Michaelis   University of Tübingen, Germany
Gerhard Neuhold   Mapillary Research, Austria

Matthias Niessner	Technical University of Munich, Germany
Marc Pollefeys	ETH Zurich and Microsoft, Switzerland
Francesc X. Puig Fernandez	MIT, USA
Rene Ranftl	Intel Labs, USA
Stephan R. Richter	Intel Labs, USA
Carsten Rother	Heidelberg University, Germany
Torsten Sattler	Chalmers University of Technology, Sweden and Czech Technical University in Prague, Czech Republic
Daniel Scharstein	Middlebury College, USA
Hendrik Schilling	rabbitAI, Germany
Nick Schneider	Daimler AG, Germany
Jonas Uhrig	Daimler AG, Germany
Jonas Wulff	Max Planck Institute for Intelligent Systems, Germany
Bolei Zhou	The Chinese University of Hong Kong, China

W31 - The Bright and Dark Sides of Computer Vision: Challenges and Opportunities for Privacy and Security

Mario Fritz	CISPA Helmholtz Center for Information Security, Germany
Apu Kapadia	Indiana University, USA
Jan-Michael Frahm	The University of North Carolina at Chapel Hill, USA
David Crandall	Indiana University, USA
Vitaly Shmatikov	Cornell University, USA

W32 - The Visual Object Tracking Challenge

Matej Kristan	University of Ljubljana, Slovenia
Jiri Matas	Czech Technical University in Prague, Czech Republic
Ales Leonardis	University of Birmingham, UK
Michael Felsberg	Linköping University, Sweden
Roman Pflugfelder	Austrian Institute of Technology, Austria
Joni-Kristian Kamarainen	Tampere University, Finland
Martin Danelljan	ETH Zurich, Switzerland

W33 - Video Turing Test: Toward Human-Level Video Story Understanding

Yu-Jung Heo	Seoul National University, South Korea
Seongho Choi	Seoul National University, South Korea
Kyoung-Woon On	Seoul National University, South Korea
Minsu Lee	Seoul National University, South Korea
Vicente Ordonez	University of Virginia, USA
Leonid Sigal	University of British Columbia, Canada
Chang D. Yoo	KAIST, South Korea
Gunhee Kim	Seoul National University, South Korea
Marcello Pelillo	University of Venice, Italy
Byoung-Tak Zhang	Seoul National University, South Korea

W34 - "Deep Internal Learning": Training with no prior examples

Michal Irani	Weizmann Institute of Science, Israel
Tomer Michaeli	Technion, Israel
Tali Dekel	Google, Israel
Assaf Shocher	Weizmann Institute of Science, Israel
Tamar Rott Shaham	Technion, Israel

W35 - Benchmarking Trajectory Forecasting Models

Alexandre Alahi	EPFL, Switzerland
Lamberto Ballan	University of Padova, Italy
Luigi Palmieri	Bosch, Germany
Andrey Rudenko	Örebro University, Sweden
Pasquale Coscia	University of Padova, Italy

W36 - Beyond mAP: Reassessing the Evaluation of Object Detection

David Hall	Queensland University of Technology, Australia
Niko Suenderhauf	Queensland University of Technology, Australia
Feras Dayoub	Queensland University of Technology, Australia
Gustavo Carneiro	The University of Adelaide, Australia
Chunhua Shen	The University of Adelaide, Australia

W37 - Imbalance Problems in Computer Vision

Sinan Kalkan	Middle East Technical University, Turkey
Emre Akbas	Middle East Technical University, Turkey
Nuno Vasconcelos	UC San Diego, USA
Kemal Oksuz	Middle East Technical University, Turkey
Baris Can Cam	Middle East Technical University, Turkey

W38 - Long-Term Visual Localization under Changing Conditions

Torsten Sattler	Chalmers University of Technology, Sweden, and Czech Technical University in Prague, Czech Republic
Vassileios Balntas	Facebook Reality Labs, USA
Fredrik Kahl	Chalmers University of Technology, Sweden
Krystian Mikolajczyk	Imperial College London, UK
Tomas Pajdla	Czech Technical University in Prague, Czech Republic
Marc Pollefeys	ETH Zurich and Microsoft, Switzerland
Josef Sivic	Inria, France, and Czech Technical University in Prague, Czech Republic
Akihiko Torii	Tokyo Institute of Technology, Japan
Lars Hammarstrand	Chalmers University of Technology, Sweden
Huub Heijnen	Facebook, UK
Maddern Will	Nuro, USA
Johannes L. Schönberger	Microsoft, Switzerland

| Pablo Speciale | ETH Zurich, Switzerland |
| Carl Toft | Chalmers University of Technology, Sweden |

W39 - Sensing, Understanding, and Synthesizing Humans

Ziwei Liu	The Chinese University of Hong Kong, China
Sifei Liu	NVIDIA, USA
Xiaolong Wang	UC San Diego, USA
Hang Zhou	The Chinese University of Hong Kong, China
Wayne Wu	SenseTime, China
Chen Change Loy	Nanyang Technological University, Singapore

W40 - Computer Vision Problems in Plant Phenotyping

Hanno Scharr	Forschungszentrum Jülich, Germany
Tony Pridmore	University of Nottingham, UK
Sotirios Tsaftaris	The University of Edinburgh, UK

W41 - Fair Face Recognition and Analysis

Sergio Escalera	CVC and University of Barcelona, Spain
Rama Chellappa	University of Maryland, USA
Eduard Vazquez	Anyvision, UK
Neil Robertson	Queen's University Belfast, UK
Pau Buch-Cardona	CVC, Spain
Tomas Sixta	Anyvision, UK
Julio C. S. Jacques Junior	Universitat Oberta de Catalunya and CVC, Spain

W42 - GigaVision: When Gigapixel Videography Meets Computer Vision

Lu Fang	Tsinghua University, China
Shengjin Wang	Tsinghua University, China
David J. Brady	Duke University, USA
Feng Yang	Google Research, USA

W43 - Instance-Level Recognition

Andre Araujo	Google, USA
Bingyi Cao	Google, USA
Ondrej Chum	Czech Technical University in Prague, Czech Republic
Bohyung Han	Seoul National University, South Korea
Torsten Sattler	Chalmers University of Technology, Sweden and Czech Technical University in Prague, Czech Republic
Jack Sim	Google, USA
Giorgos Tolias	Czech Technical University in Prague, Czech Republic
Tobias Weyand	Google, USA

Xu Zhang   Columbia University, USA
Cam Askew   Google, USA
Guangxing Han   Columbia University, USA

W44 - Perception Through Structured Generative Models

Adam W. Harley   Carnegie Mellon University, USA
Katerina Fragkiadaki   Carnegie Mellon University, USA
Shubham Tulsiani   Facebook AI Research, USA

W45 - Self Supervised Learning – What is Next?

Christian Rupprecht   University of Oxford, UK
Yuki M. Asano   University of Oxford, UK
Armand Joulin   Facebook AI Research, USA
Andrea Vedaldi   University of Oxford, UK

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