2nd European Machine Vision Forum

Where research meets industry

emva
european machine vision association

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY
TOMORROW TODAY

Next generation vision systems for industry – computational imaging, machine learning & more

September 6-8, 2017
AIT Austrian Institute of Technology
Tech Gate Vienna, Austria

Program

The 2nd European Machine Vision Forum is kindly sponsored by the AIT Austrian Institute of Technology (host), the HCI Heidelberg and Edmund Optics GmbH

Venue

Tech Gate Vienna – Sky Stage 19th floor
Donau-City-Straße 1
1220 Vienna / Austria

Deadlines for contributions

Contributed talks: **June 2, 2017**
Poster and software demo: **August 11, 2017**

Attendance fees (before July 14, 2017 / after)

Industry / commercial research institutes: 490,00 EUR / 590,00 EUR

EMVA members (industry):   350,00 EUR / 450,00 EUR

Members from university or nonprofit research organizations:
              350,00 EUR / 450,00 EUR

EMVA members (university /nonprofit research organizations):
              290,00 EUR / 390,00 EUR

Students (up to PhD students, with student card):
              190,00 EUR / 240,00 EUR

(fees except 20% Austrian VAT)

Cancellation

Free cancellation of registration is possible only in early bird period (before July 14, 2017) with full refund. 50% of the participation fee will be reimbursed if cancellation is made before August 11, 2017. Afterwards, no refund is possible. In all cases a replacement person can be named.

Program

Wednesday, September 6, 2017

17:00 **Registration open**

18:00 **Welcome and introduction**
Jochem Herrmann, *President EMVA*
Bernd Jähne, *Chair*

18:15 **Panel discussion on „Next Generation Vision Systems"**
Stefan Schönegger, *CMO Bernecker + Rainer Industry Elektronics, Eggelsberg (Austria)*
Dr. Dietmar Ley, *CEO Basler AG, Ahrensburg (Germany)*
Dr. Wolfgang Eckstein, *MVTec, Munich (Germany)*
Jochem Herrmann, *Chief Scientist Adimec (The Netherlands) & President of EMVA*
Prof. Dr. Jürgen Beyerer, *Fraunhofer IOSB, Karlsruhe (Germany)*
Prof. Dr. Horst Bischof, *TU Graz (Austria)*
Andreas Vrabl, *Head of Center for Vision, Automation & Control, AIT, Vienna (Austria)*

19:30 **Evening get together with finger food and networking**

Thursday, September 7, 2017

08:00 Registration open

08:45 Welcome from local host
Andreas Vrabl, *HoC for Vision, Automation & Control, AIT, Vienna, Austria*

Session I: Novel Image Acquisition Techniques and Computational Imaging

09:00 Image sensors for next generation vision systems?
Prof. Albert J. P. Theuwissen, *Harvest Imaging, Belgium*
invited talk

09:40 Cognitive sensors for nondestructive monitoring along the product life cycle
Prof. Randolf Hanke, *Fraunhofer Development Center for X-Ray Technology, Fürth, Germany*
invited talk

10:20 Coffee break / exhibition / posters & demos

11:00 Hybrid depth sensing using high-speed multi-line scan technology
Dr. Svorad Štolc, *High Performance Image Processing, AIT, Austria*
invited talk

11:40 A sensitive dynamic and active pixel vision sensor for color or neural imaging applications
Dr. Diederik Paul Moeys, *Institute of Neuroinformatics, University of Zurich and ETH Zurich, Switzerland*

12:00 Multimode logarithmic sensor for smart vision systems
Prof. Yang Ni, Nicolas Baroan, Dr. Christian Bouvier, *New Imaging Technologies SA, Verrières le Buisson, France*

12:20 Poster & demo teasers to Session I

12:30 Lunch break / exhibition / posters & demos

14:00 Light field movie acquisition
Dr. Maximilian Diebold, Hendrik Schilling, Marcel Gutsche, Hamza-Aziz Ahmad, Prof. Bernd Jähne, *Heidelberg Collaboratory for Image Processing, Germany*

14:20 A comprehensive comparative study of high-end CMOS cameras using the EMVA1288 standard
Prof. Bernd Jähne, *HCI, Heidelberg University, Germany,* and Dr. Helmut Herrmann, *AEON, Hanau, Germany*

Session II: Platforms, Programming, Integration (Industry 4.0)

14:40 Addressing the challenges of high performance low power real-time computer vision systems with the TULIPP platform
Ben Rodriguez, *HIPPEROS and Université Libre de Bruxelles, Belgium*
invited talk

15:20 **Coffee break / exhibition / posters & demos**

16:00 Manycore embedded processors for portable, optimized and power-efficient processing of methods for vision algorithms
Prof. Jean-François Nezan, *INSA, Université de Rennes, France*
invited talk

16:40 Fully automatic inline measurement using collaborative robot systems equipped with fast high resolution 3D sensor
Dr. R. Danzl, T. Lankmair and F. Helmli, *Alicona, Raaba, Austria*

17:00 Towards more flexible image sensors for multi-modal in-line image acquisition
Dr. Ernst Bodenstorfer, Dr. Svorad Štolc, Andreas Vrabl, *AIT Austrian Institute of Technology, Vienna, Austria,* Christian Nitta, *Fraunhofer IMS, Duisburg, Germany,* Laurin Ginner, Christian Doppler, *Medical University of Vienna, Austria*

17:20 **Poster & demo teasers to Session II**

17:30 **Evening get together with fingerfood / exhibition / posters & demos**

19:15 Vienna Sightseeing-Tour (optional)
Duration approx. 1.5 h

Friday, September 8, 2017

Session III: Image Processing Algorithms and Machine Learning

09:00 Industrial hyperspectral imaging
Markus Burgstaller, *CEO, Head of R&D, Perception Park, Graz, Austria*
invited talk

09:40 Snapshot hyperspectral imaging with RGB sensors
Boaz Arad and Prof. Ohad Ben-Shahar, *Department of Computer Science, Ben-Gurion University of the Negev and HC Vision, Be'er Sheva, Israel*

10:00 VOLA: A compact volumetric format for 3D mapping and embedded systems
Dr. Jonathan Byrne, Sam Caulfield, David Moloney, *Computer Vision and Machine Learning Group, Movidius / Intel, Ireland*

10:20 **Coffee break / exhibition / posters & demos**

11:00 Deep learning: Success stories, open challenges and future outlook
Prof. Sergios Theodoridis, *University of Athens, Greece, and* Soterios Chatzis, *Cyprus University of Technology, Cyprus*
invited talk

11:40 Polimago - Using machine vision classifiers for accurate scale and rotation in variant object detection
Frank Orben, *STEMMER IMAGING, Puchheim, Germany*

12:00 Learning and recognising objects on demand
Dr. Michael Zillich, Markus Vincze, Johann Prankl, *TU Wien, Automation and Control Institute, Vienna, Austria*

12:20 **Poster & demo teasers to Session III**

12:30 **Closing, announcement of location and focal topic of the 3rd European Machine Vision Forum in 2018**

12:40 **Farewell lunch / exhibition / posters & demos** (end at approx. 14:00 h)

Scientific Advisory Board

Prof. Dr. Bernd Jähne, Chair / EMVA board member
HCI, Heidelberg University (Germany)

Jochem Herrmann, President EMVA
Adimec, Eindhoven (The Netherlands)

José Angel Gutiérrez Olabarria
Tecnalia, Special Machinery B.A. - Industry & Transport Div. , Derio
(Bizkaia, Spain)

Prof. Dr. Michael Heizmann
Fraunhofer IOSB / Institute for Industrial Information Technics at KIT,
Karlsruhe (Germany)

Prof. Aytül Erçil
VISPERA Bilgi Teknolojileri A.S. / Sabanci University, Istanbul (Turkey)

Prof. Ludovic Macaire
Université de Lille (France)

About EMVA

Founded in Barcelona in May 2003, the European Machine Vision Association
is an industry-driven networking framework providing a constant source of
exchange, information and inspiration on machine vision technology in
Europe. More than 100 companies, some national machine vision associa-
tions and several research organizations are members – representing more
than 20 countries. More information can be found at www.emva.org.

Address:

Gran Via de Carles III, 84 (3rd floor)
08028 Barcelona, Spain

Phone: +34 931 807060
Fax: +34 931 807060

E-mail: info@emva.org
Website: http://www.emva.org

©Foto: A. Tischler

Event Organization
AEON Verlag & Studio GmbH & Co. KG
Alter Rückinger Weg 31
63452 Hanau, Germany

Phone: +49 61 81 520 51-0
Fax: +49 61 81 520 51-90
E-Mail: info@emva-forum.org
Internet: www.emva-forum.org

Venue
Tech Gate Vienna – Sky Stage 19th floor
Donau-City-Straße 1
1220 Vienna / Austria

www.techgate.at
www.the-stage.at