Scientific Advisory Board

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

Prof. Dr. Bernd Jähne, EMVA Board Member
Heidelberg Collaboratory for Image Processing (HCI)
Heidelberg University (Germany) – Chair

(to be completed by two members from universities, two from applied research institutes, and two from industry)

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.

At present, about 100 companies, some national machine vision associations and several scientific organizations are members – representing more than 20 countries.

More information can be found at www.emva.org.

Preview

The 2nd European Forum on Machine Vision will be held on

September 7/8, 2017

Information about venue and focal topic will follow.

Sponsor

The 1st European Machine Vision Forum is kindly supported by the Heidelberg Collaboratory on Image Processing (HCI) at the Interdisciplinary Center for Scientific Calculation (IWR), an industry-on-campus project of Heidelberg University (hciweb.iwr.uni-heidelberg.de)

Heidelberg Collaboratory for Image Processing

UNIVERSITÄT HEIDELBERG ZUKUNFT SEIT 1386

Venue

Mathematikon (Part A) – Heidelberg University
Im Neuenheimer Feld 205
69120 Heidelberg / Germany

Registration

Register online at **www.emva-forum.org**

Deadline for poster and software demo submission is August 19, 2016.

Attendance Fees (before July 1, 2016 / after)

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

EMVA members:
340,00 EUR / 440,00 EUR

Members from university or 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 VAT)

Accommodation

Hotel recommendations can be found at www.emva-forum.org. Accommodation has to be organized and paid by the attendee herself/himself.

Cancellation

Cancellation of participation can be made until June 30, 2016 without fees. For later cancellations, the complete participation fee has to be paid. Instead of a cancellation, an alternative participant can be nominated.

Event Organization

AEON Verlag & Studio

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

1st European Machine Vision Forum 1

emva
european machine vision association

Image Processing Algorithms – from low level to deep learning

Heidelberg
September 8/9, 2016

The European Machine Vision Forum

Aim

The European Machine Vision Forum is a new annual two-day event of the European Machine Vision Association (EMVA). The aim is to foster interaction between the machine vision industry and academic research to learn from each other, discuss the newest research results as well as problems from applications, learn about emerging application fields, and to discuss research cooperation between industry and academic institutes. The overall aim is to accelerate innovation by translating new research results faster into practice.

The venue for the annual event changes every year to a different location in line with the selected focal topic of the respective forum. In this way, participants get the benefit of becoming acquainted with major research and industrial centers in machine vision throughout Europe.

Who should attend

The forum is directed at scientists, development engineers, software and hardware engineers, and programmers both from research and industry.

Elements of the forum

1. **Plenary sessions** with about a dozen of invited and carefully selected talks, presenting a broad variety of a focused topic of the forum.
2. **Extended coffee and lunch breaks and evening sessions for networking**, poster presentations as well as software demonstrations with ample room for discussions in small groups. **Each participant can submit posters and demos free of charge** (see registration form).
3. **Poster and demo teasers:** Each presenter has one slide and two minutes (max) to introduce her/his presentation.

Each participant will receive a certificate of his participation detailing the programme. All talks will be recorded and participants will receive links to the recorded material in the form of interactive online applications without additional charge. Non-participants can buy individual talks for e-learning.

Focal topic

Image processing algorithms play an increasingly important role in vision systems. The more complex a vision task, the more important is a careful selection of the best possible algorithms.

The first European Machine Vision Forum aims at providing clear guidance in the world of algorithms. Developers from industry and academic researchers get the opportunity to meet and exchange their experience. More information is provided at www.emva-forum.org/focal-topic.html.

Programme

Thursday, September 8, 2016

13:30 **Welcome and introduction**
Jochem Herrmann, President EMVA
Adimec, Eindhoven, The Netherlands
Bernd Jähne, EMVA Board Member
HCI, Heidelberg University, Germany

13:45 **Feature extraction**

Visual tracking – the transition from hand-crafted features to deep features
Prof. Dr. Michael Felsberg, Linköping University, Sweden

Fast unsupervised detection of segments and curves in images and applications
Rafael Grompone and Prof. Jean-Michel Morel, CMLA, Université Paris-Saclay and CNS Cachan, France

Time-causal and time-recursive receptive fields for invariance and covariance under natural image transformations
Prof. Dr. Tony Lindeberg, KTH Royal Institute of Technology, Stockholm, Sweden

15:15 **Coffee break / demos /poster**

16:00 **Segmentation and 3-D reconstruction**

Spline-based models for image segmentation
Virginie Uhlmann, EPFL Lausanne, Switzerland

Multicuts – an optimal way to turn superpixels into regions
Dr. Ullrich Köthe, HCI, Heidelberg University, Germany

Direct methods for camera localisation and 3-D reconstruction
Christian Kerl, Computer Vision Group, Tech. University Munich, Germany

Reconstruction via detection: Efficient and auto–matic reconstruction from unorganized 3-D scans
Tolga Birdal, Tech. University Munich, and Siemens Munich, Germany

18:00 **Poster and demo teaser**

18:30 Evening get-together with finger food, software demonstrations, poster presentations and discussions in small groups (open end)

Friday, September 9, 2016

09:00 Image compression with diffusion-based inpainting
Prof. Dr. Joachim Weickert, Saarland University, Saarbrücken, Germany

Subdivision surfaces in computer vision
Dr. Andrew Fitzgibbon, Microsoft Research, Cambridge, United Kingdom

Performance evaluation in computer vision
Katrin Honauer, HCI, Heidelberg University, Germany

10:30 **Coffee break / demos /poster**

11:15 **Learning**

Recent advances in deep learning for object detection and image segmentation
Prof. Frédéric Jurie, Université de Caen, France

End2end learning of CNNs and CRFs with application to stereo
Prof. Dr. Thomas Pock, Tech. University Graz, Austria

Compositional visual learning and retrieval
Prof. Dr. Björn Ommer, HCI, Heidelberg University, Germany

12:45 **Closing remarks**

13:00 Farewell lunch, continuing software demonstrations, poster presentations and discussions (end at approx. 14:00 h)