Call for papers:

Special Session: Machine Learning in Advanced Machine Vision

Monday-16th of December 2019 – all day A special session in conjunction with ICMLA2019 in Boca Raton, Florida, USA.

We are proud to present a special session on Machine Learning in Advanced Machine Vision (AMV2019). This workshop is in conjunction with <u>ICMLA2019</u>, Boca Raton, Florida, USA and is scheduled on Monday the 16th of December 2019 (all day workshop).

A large variety of industrially oriented applications (e.g. quality control, pick and place) have in the past decades been successfully implemented throughout a wide range of industries. These implementations are characterized by very controlled surroundings and objects (e.g. CAD models of objects available, controlled lighting). *Advanced Machine Vision* refers to computer vision and machine learning - based systems where such assumptions do not hold, for example, when handling biological objects as seen in the food-production industry or when operating outdoors. With recent advancements in sensing and processing power, the potential for further automation in industry based on computer vision and machine learning) provides dozens of new opportunities. The ambition of this full-day workshop is to bring together practitioners and researchers from different disciplines related to *Advanced Machine Vision* to share ideas and methods on current and future use of computer vision and machine learning algorithms in real-life and industrially relevant systems. This field raises the need of applied research that focuses on the technology transfer from academics towards practitioners, yielding several challenges like top-notch accuracies, real-time processing, minimal training data, minimal manual input, user-friendly interfaces, ...

To this end we welcome contributions (full papers) with a strong focus on (but not limited to) the following topics within Advanced Machine Vision:

- Data input sources (data fusion, multi-modal data)
- Improving robustness of algorithms (real-time performance, non-controlled illumination, non-trivial intraobject variability, top-notch accuracies, ...)
- Removing or reducing the need of training data (data augmentation, artificial data, ...)
- Processing power and memory requirements
- Obtaining training data and ground truth annotations
- Lab testing versus inline testing
- Transfer learning towards new applicational domains
- Deep learning for advanced machine vision
- Quality assessment of non-trivial objects
- Real-life and industrially relevant applications

For more information visit:

http://www.eavise.be/AMV2019/

The workshop will provide a best paper award of **700 euro** sponsored by <u>ROBOVISION</u>.



Important dates:

Paper submission: September 7 Notification of acceptance: October 7 Camera-ready deadline: October 17 ICMLA conference: December 16-19