

European Calibration and Orientation Workshop EuroCOW 2019 @ ISPRS Geospatial Week in Enschede

This 8th edition of the European Calibration and Orientation Workshop was organized as one of the several workshops of the ISPRS Geospatial Week hosted by University of Twente, The Netherlands.

Respecting its tradition, the topics of sensor calibration, orientation and mapping were covered in different sessions. *The deeper integration of image and LiDAR observations* was one of the main topics in the context of orientation and mapping. Two sessions were dedicated to the camera calibration, introducing some more special calibration approaches. An interesting fact is the obvious gain of importance in calibration of thermal and hyperspectral sensors.

It is also a good tradition that the camera manufacturers employ part of this workshop as their forum to offer an update on their most recent system developments with special focus on the calibration issues.

Two of the EuroCOW sessions should be specially highlighted: *The Single-Photon-LiDAR session* was opened with a keynote given by Dr. Craig Glennie (University of Houston, USA) who introduced the single-photon / Geiger mode LiDAR concept and discussed its differences and potential to the classical linear LiDAR systems. This was then followed by other interesting presentations on the same topic. This first session happened as a joint session of the EuroCOW and the Laserscanning Workshop evolving in parallel.

In addition, the session on *Navigation and Dynamic Network* session merits to be highlighted. This session was also opened with a keynote address delivered by Dr. Steffen Schön (Leibniz Universität Hannover, Germany) who discussed the benefits and limits of collaborative positioning, especially for the use of GNSS in urban areas. This was followed by other innovative contributions on the use of dynamic networks in navigation and sensor orientation. Clear messages came across like that the integration of new sensors, e.g. atomic clocks, now become affordable or the fact that deeper integration of inertial and GNSS raw data into the georeferencing process can significantly help to solve the positioning and orientation problem especially in demanding environments.

Based on this, it was not such of a surprise that one of the contributions of this session was selected as best presentation of this EuroCOW workshop: Dr. Davide Antonio Cucci from EPF Lausanne was awarded for his work on raw inertial measurements in dynamic networks (Figure 1).

There is general feeling that this workshop was very successful, also thanks to the almost perfect settings from the local organization of University of Twente, namely Dr. George Vosselmann and Dr. Francesco Nex! It was another edition of the long series of EuroCOW meetings, which history goes back to nineties and is presented under the name of EuroCOW from 2006 onwards. This workshop series was initiated by Dr. Ismael Colomina, who was and remains the spirit rector of all these encounters! Even though it is not yet clear, when and where the 9th edition of the EuroCOW will happen, it is clear, that there will be another one in the future!



Figure 1: Dr. Cucci receiving Best Presentation Award