

Image Sensor and Camera Technology 16-17-18 May 2016 in Brussels

Aphesa organizes an image sensor and camera technology training tour between October 2015 and November 2016. The training sessions are organized as three days per location and split over several courses, it is possible to subscribe for a single course, multiple courses or the full session.

The courses are introductory to mid-level, with some advanced topics, and are designed for engineers who are new to the field of imaging or non-engineering personnel who needs a more in-depth understanding of the technology or engineers familiar with some elements of machine vision but not the whole picture. It is also a good refresher course for experienced engineers and a good introductory course for sales, marketing and support personnel. Each course is accompanied by a question and answer session and an open discussion session. Some courses include exercises. There are PDF notes for each course available for download or on a pen drive.

The course sessions or a customized course session can be organized in company for a special price and an unlimited number of attendees.

This is the last training organized in Belgium in 2016.

Venue

The training is organized at the HOLIDAY INN Brussels Airport (HolidayStraat in Diegem). The hotel has a large parking, a free shuttle from the airport, on-site restaurant, free WiFi and is located within 10 minutes walking from Diegem train station and 10 minutes walking from the closest tram station.



Course schedule

- Day 1:
 - 8:30 AM to 9:00 AM : welcome coffee
 - 9:00 AM to 9:20 AM : Aphesa presentation – code : APHE
 - 9:20 AM to 12:10PM and 1:10PM to 2:00PM : Introduction to imaging (light, light spectrum, light sources, scene, behavior of light, basic radiometry and photometry, lighting techniques, polarization, filters, optical basics, MTF, camera basics, color issues, multispectral and hyperspectral imaging, camera interfaces, photography and imaging terms, lens standards, camera interface standards) – course code : IMAG, including a short break
 - 2:00PM to 5:15PM : Introduction to CMOS image sensors (photodiodes, pixels, arrays, readout circuits, ADC circuits, architectures, spatial and temporal noise sources and noise compensation, color filters, microlenses, dark current, defect pixels, ageing, temperature effects, high temperature imaging), including a short break – course code : CMOS
 - 5:15PM to 5:45PM : open discussion, additional questions
- Day 2:
 - 9:00AM to 9:45AM : Production of CMOS image sensors (design flow, image sensor production process, image sensor packaging, back-side illumination, wafer scale packaging) – course code : PROD
 - 9:45AM to 10:15AM : Introduction to high speed and real time imaging – course code : HSRT
 - 10:15AM to 10:30AM : break
 - 10:30AM to 12:30PM : Introduction to software based (multiple exposure) high dynamic range imaging, including algorithms and artifacts and introduction to specific CMOS image sensors for HDR imaging, including control methods, pixel designs and artifacts – course code : HDRI
 - 1:30PM to 2:30PM : Introduction to 3D imaging – course code : 3DIM
 - 2:30PM to 4:00PM : Introduction to the EMVA1288 standard – course code : EMVA
 - 4:00PM to 4:15PM : break
 - 4:15PM to 4:45PM : Introduction to infrared imaging – course code : IRIM
 - 4:45PM to 5:15PM : Special considerations related to mobile imaging – course code : MOBI
 - 5:15PM to 5:45PM : open discussion, additional questions
- Day 3:
 - 9:00AM to 12:15PM : Introduction to image processing, including a short coffee break – course code : PROC
 - 1:15PM to 2:45PM : practical training on lenses, photography, studio photography and HDR photography (and other topics depending on availability of equipment)
 - 3:00PM to 5:30PM : Additional topics or private consulting sessions per specific request and appointment in the afternoon.

Prices

Course code	Price, before April 15 th	Price, after April 15 th
APHE	Free	Free
IMAG	270 euro	320 euro
CMOS	220 euro	270 euro
PROD	50 euro	70 euro
HSRT	40 euro	55 euro
HDRI	150 euro	170 euro
3DIM	60 euro	75 euro
EMVA	90 euro	110 euro
IRIM	40 euro	55 euro
MOBI	40 euro	55 euro
PROC	150 euro	180 euro

Special price for the full session : 850 euro (ordered before April 15th) or 1100 euro (ordered after April 15th).

Reductions are offered for attendance to multiple courses (-10% on the total price for more than two course) or multiple members of a company attending the same courses (-10% for the second member, -30% for any additional member), or previous attendees (-10%).

Cancellation policy : 50 euro (or 50% of course price if less than 50 euro) if more than four weeks before the courses, 50% if less than four weeks before the courses, 100% after May 10th.

Payment terms : 30 days net, invoiced at the time of booking, net 10 after May 1st.

The full course session of three days will not run or will be reorganized over only one or two days if more than one third of the time does not have the required minimum number of attendees. The minimum number of attendees in Brussels is 5 and the maximum is limited to 12.

Registration

Contact info@aphesa.com or one of our authorized distributors if you intend to attend one or more training sessions, mentioning the course code and the number of attendees from the same company. Aphesa will then provide a quotation for the desired training package. The final decision to organize or cancel courses will be made two weeks before the scheduled training date. Contacting us for a quotation or for more information does not engage yourself to buy a course.

About Aphesa

Founded in 2008, Aphesa provides consulting and development services in the field of imaging. Our company has designed multiple customer specific cameras for use in industrial, medical and oil&gas applications and has provided consulting services for the design of many other image sensors, cameras and systems. Our experience includes GigE-Vision, USB, CameraLink cameras and line scan or area scan sensors in color or monochrome. Our experience also includes high temperature designs, multispectral imaging, high dynamic range imaging, high-speed imaging, embedded image processing and many other topics. Aphesa is also specialized in image sensor and camera testing and has developed EMVA1288 compliant test equipments as well as other specific test equipments for laboratory or production use; the EMVA1288 measurements are also offered as a service.

More information about Aphesa : <http://www.aphesa.com>
Contact us : info@aphesa.com

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Visit our website for distributor's contact information.

Future training sessions

Aphesa plans other training sessions in Asia, North America and Germany in the next 9 months. Contact us for more information or visit our website, newsletter section.

