

# Day of Photonics - 2014-10-21

Update: Photos from event could be found in our Galleries: <http://photonics.pl/index.php/Galleries>

Photonics Society of Poland, Warsaw University of Technology & Faculty of Physics and Polish Technological Platform on Photonics (PPTF) invites for  
DAY OF PHOTONICS

21 October\* 2014 r. 12.00 - 18.00 Main Hall of Faculty of Physics, Warsaw University of Technology Koszykowa 75, Warsaw \*21.10.1983 General Conference of Weights and Measures adopted the value of 299,792.458 km/s for the speed of light. Program:

1. Exhibition of PPTF Consortium Members (12.00 - 18.00)

- Politechnika Warszawska
  - PCO S.A.
  - Instytut Technologii Materiałów Elektronicznych
  - Sensomed S.C.
  - Inframet
  - VIGO Systems S.A.
  - Instytut Optyki Stosowanej im. Prof. M. Pluty
  - Top-Gan sp. z o.o.
  - Lasertex Sp. z o.o.
  - Optolab Sp. z o.o.
2. Inauguration of the Day of Photonics - 16.00

3. A world unique real time holographic projection - 16.15 - 18.00 (click "Read more..." to see more details about the projection)

A main attraction of the Day of Photonics would be a real-time holographic projection of images on a big projection screen. The show will be a demonstration of a novel projection technology developed at the Faculty of Physics, Warsaw University of Technology. In fact this show could be the second such a demonstration in the history. The projection will be realized on a spatial light modulator illuminated with a medium-power green laser. The modulator will diffract the light and focus it on the screen forming the desired intensity patterns. The input signal will be acquired by a camera in a smartphone and transmitted via Wi-Fi to a laptop, which will perform the holographic calculations in real time using graphical board processing (GPU). Because of safety precautions, the power of the laser must be limited therefore the room will have to be dimmed a bit so that the viewers can clearly see the projection. The appropriate distance between the projection device and the screen is above 10 meters, as shown below.

The show would be accompanied by a slide show describing the technology. The key message to the viewers will be the advantages of holography, i.e. the possibility of an extreme miniaturization of projectors in the future, e.g. for handheld devices and the great energetic efficiency of holographic image formation.