

**MidIR spectroscopy workshop**

**Date:** Tuesday 10<sup>th</sup> of July, 2018

**Location:** iGent, Auditorium 1, Technologiepark-Zwijnaarde 15, 9052 Gent, Belgium

[http://www.photonics.intec.ugent.be/contact/find\\_us.htm](http://www.photonics.intec.ugent.be/contact/find_us.htm)

**Registration:** <https://webappsx.ugent.be/eventManager/events/safeside>

**Agenda**

9:15: welcome + coffee

9:45: devices for midIR spectroscopy - part 1

- Multitel 1: the SAFESIDE project
- **invited:** Brolis semiconductors: GaSb-based opto-electronic devices for spectroscopy
- **invited:** LASERSPEC: mid-IR sources based on fibre laser pumped OPOs

11:15: coffee break

11:30: devices for midIR spectroscopy - part 2

- Gent 1: III-V-on-silicon midIR photonic integrated circuits for advanced laser sources
- Gent 2: integrated midIR spectroscopic sensors

12:30: lunch + poster session

- Gent:
  - o MIRPHAB project
  - o TERAFOOD project
- Multitel:
  - o High power mid-IR source based on a fibre laser pumped OPO
  - o High energy sub-nanosecond Thulium doped fibre laser
- Reims:
  - o Intracavity midIR laser techniques
  - o enological applications of laser sensing
- Duinkerke:
  - o Photoacoustic Spectrophone for Filter-free Measurement of Aerosol Light Absorption
  - o Optical monitoring of dinitrogen pentoxide (N<sub>2</sub>O<sub>5</sub>) in an atmospheric simulation chamber using an external cavity quantum cascade laser
- **Additional posters from attendees**

14:00: midIR spectroscopy applications - part 1

- **invited:** Frans Harren: Mid-infrared laser-based trace gas sensing towards applications
- Reims 1: Helmholtz photoacoustic sensors
- Reims 2: laser techniques for trace gas detection

15u30: coffee break

15u45: midIR spectroscopy applications - part 2

- Duinkerke 1: ICL-based monitoring of OH radical by Faraday rotation spectroscopy
- Duinkerke 2: QCL-based measurement of the atmospheric CH<sub>4</sub> column by laser heterodyne radiometry

16u45: wrap up