

PERSONAL INFORMATION

Dr. Julien Mandon



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Sex male | Date of birth 09/08/1983 | Nationality French

PERSONAL STATEMENT

Accomplished scientist with a background in Optronic engineering. Excels in lab environment with more than 7 years of expertise in electro-optics. Active and creative, with the ability to manage people and successful projects. Looking for new challenges, expend knowledge and provide opportunities for personal and professional growth.

WORK EXPERIENCE

2014 - Present

Research scientist

Radboud University, Nijmegen, The Netherlands.

- Developing numerous electro-optical instruments for spectroscopic applications,
- Leading successfully 1 European and 1 National research projects,
- Coaching PhDs and master students.

**Sector** Electro-optics, Photonics business, applications and technology

2013 - 2014

Electro-optical Engineer

Sensor Sense B.V., Nijmegen the Netherlands.

- Engineering laser-based systems for on-line gas measurement at commercialization level (TRL9).

**Buisness** Laser based trace-gas sensors

2009 - 2013

Research scientist

Radboud University, Nijmegen, The Netherlands.

- Developing laser-based sensors for trace-gas sensing applications including environmental studies, medical breath-analysis or plant science.

**Sector** Electro-optics, Photonics business, applications and technology

2006 - 2009

PhD in Science

EQF level 8

Laboratoire de PhotoPhysique Moléculaire, Centre National de la Recherche Scientifique (CNRS), Orsay, France.

+ 6 months at Max-Planck-Institute of Quantum Optics (MPQ), Garching, Germany.

- Conceiving, designing and realizing a femtosecond solid-state laser (at 1.5 um),
- Demonstration of innovative concepts for spectroscopy based on broadband light sources.

**Sector** Electro-optics, Spectroscopy

2005 - 2006

Optronic engineer

Safran Electronics & Defense, Avionics USA (SAGEM Avionics Inc.), Dallas, Texas, USA and Seattle, Washington, USA.

- Implementing a new repair station for SAGEM biometric products for the US market,
- Responsible for test benches for avionics products.

**Buisness** Photonics Applications for safety and military purpose

EDUCATION AND TRAINING

2001 - 2006

Student in optronic engineering

EQF level 6

Polytech Paris-Sud (IFIPS), Orsay, France

- Optic: Linear/non linear optics, photometry, detector, lasers, optical fibres,
- Electronic: Digital/analog electronics, digital processing of the signal, semi-conductor,
- Computer Science: Language C, Programming Orientate Object (C++),
- Industrial Data processing: VHDL on Programmable Logic Device. C on micro-controllers.

## PERSONAL SKILLS

Mother tongue Français  
 Other language English (TOEIC : 845/990)

## Communication skills

Communication skills gained through my experience as researcher.

- Oral presentations to national (3/year) and international (2/year) conferences,
- Scientific cooperations with different field of research (biologists, physiscians, chemists)
- Transfer of knowledge to my co-workers (students, PhDs, new post-docs).

## Organisational, managerial skills

- Currently responsible for a team of 4 people,
- Lead daily 3 master students and 3 PhD in lab working environment,

## Electro-optical skills

- [Lasers from visible to far-IR:](#)  
(developments) frequency combs, Solide-state, OPO, (user) Quantum Cascade, gas.
- [Spectroscopic techniques:](#)  
light detection, RF modulation, optical cavity enhancement, photoacoustic, Faraday.
- [Electronics:](#)  
RF locking-systems (PPLs) adapted to optics, FPGA, data acquisition.
- [Trace-gas sensing / sensors:](#)  
analysis of molecular spectra, real-time gas concentration monitoring, multivariate statistics.
- [Gas system handling](#)

## Computer skills

- Programming: c, c++, c#, Matlab, Labview
- Other software: Microsoft Office, OriginLab, Inkscape, Blender (3D), SolidWorks (product design)
- Operating system: Linux environments, Windows

## ACHIEVEMENTS

- [Personal research grants:](#)
  - STW Open Technologieprogramm, Title: Mid-infrared Frequency Comb Fourier Transform Spectrometer for chemical analysis,  
*Total Allowance: 534 k€.*
  - EU-Marie Curie fellowships EU-people-2010-IEF, project no 275584 QCLaser Nose,  
*Total Allowance: 176 k€.*
- [Patent:](#)  
Fourier transform spectrometer with a frequency comb light source, PCT/IB2009/006282 dated 20/07/09. Inventors: N. Picqué, G. Guelachvili, J. Mandon.
- [Scientific production:](#)  
30 peer-reviewed publications in journals (5 as 1st author, 4 as last author, 5 with supervised phDs), 29 peer-reviewed publications in conference proceedings (8 as 1st author, 6 as last author),  
9 invited talks (including 2 as speaker), 38 contributed talks (including 15 as speaker), 36 posters (including 14 as presenter) at international or national conferences.