Raphaël
Jauberteau

ABOUT ME

PhD student in nonlinear optics

WORK EXPERIENCE

2021 – Sapienza Università di Roma, Italy

PhD student

XLIM laboratory (Limoges) and Technology for Health department (Brescia)

Experimental works on:

Supercontinuum light generation in crystal photonic fiber

>Fiber preparation on optical bench

>Spatial, temporal and spectral characterization of nonlinear effects

2018 – 2021 – Limoges-XLIM, France

PhD student

XLIM laboratory (Limoges) and Technology for Health department (Brescia)

Experimental works on:

optical waveform generation, frequency conversion, supercontinuum generation and ultrafast temporal reshaping applications in nonlinear crystals

>Crystals (KTP and PPLN) characterization on optical bench

>Spatial, temporal and spectral characterization of nonlinear effects

>Collaboration in a new M-CARS microscope built

>Ultrafast temporal reshaping application for telecoms

2019 – 2020 – Limoges, France

Directory board member of the PhD student association

XLIM laboratory

2018 – Limoges, France

Master degree internship

XLIM laboratory

Self-cleaning experimental studies in passive and active multi-mode GRIN fibers

>Spatial and spectral characterization of nonlinear effects

2017 – Hong-Kong, China

International student exchange and robotic training

City U

>Robotic training

>Arduino programming

>3D printing

>Soldering

2017 – Toulouse, France

Micro and nanotechnology training

A.I.M.E

2017 – Limoges, France

Group Project

XLIM laboratory

Bench development for ultrashort laser pulse measurement in optical fibers

>Temporal and spectral characterization of linear and nonlinear effects

2016 – Limoges, France

Student internship

XLIM laboratory

Three-photon excited nonlinear microscopy

>Learning and co-working on a new fluorescence microscope build

EDUCATION AND TRAINING

2018 – CURRENT

PhD: Spatiotemporal control of light beams for nonlinear microscopy applications

cotutelle - Technology for Health department, Brescia (Italy) and XLIM laboratory, Limoges (France)

2013 – 2018 – Limoges, France

Degree and Master degree: Hautes technologies, éléctronique et photonique

iXeo

LANGUAGE SKILLS

MOTHER TONGUE(S): French

OTHER LANGUAGE(S):

English

Listening	Reading	Spoken production	Spoken interaction	Writing
B2	B2	B2	B2	B2

DIGITAL SKILLS

Matlab/Octave / OriginPro / Comsol / arduino / Zeiss ZEN / ScanImage / Python / DesignSpark CAD and PCB

PUBLICATIONS

Spatial Beam Evolution in Nonlinear Multimode

2021 https://doi.org/10.1364/CLEO_SI.2021.SM1F.3
JIMA, M. A., DELIANCOURT, E., JAUBERTEAU, R., *et al.* Spatial Beam Evolution in Nonlinear Multimode Fibers. In : *CLEO: Science and Innovations*. Optical Society of America, 2021. p. SM1F. 3.

Versatile supercontinuum generation by using χ (2) and χ (3) nonlinearities in PPLN crystal for direct multiplex CARS measurement

2021 https://doi.org/10.1117/12.2589155
WEHBI, Sahar, MANSURYAN, Tigran, JAUBERTEAU, Raphael, *et al.* Versatile supercontinuum generation by using χ (2) and χ (3) nonlinearities in PPLN crystal for direct multiplex CARS measurement. In : *Proc. of SPIE Vol*. p. 1177017-1.

Boosting and Taming Wave Breakup in Second Harmonic Generation

2021 https://doi.org/10.3389/fphy.2021.640025
JAUBERTEAU, Raphaël, WEHBI, Sahar, MANSURYAN, Tigran, *et al.* Boosting and Taming Wave Breakup in Second Harmonic Generation. *Fr ontiers in Physics*, 2021, vol. 9, p. 106.

Observation of 2D spatiotemporal rogue events in a quadratic nonlinear medium

2020 https://doi.org/10.1364/CLEO_AT.2020.JTu2F.18
JAUBERTEAU, Raphael, TONELLO, Alessandro, BARONIO, Fabio, *et al.* Observation of 2D spatiotemporal rogue events in a quadratic nonlinear medium. In : *CLEO: Science and Innovations*. Optical Society of America, 2020. p. JTu2F. 18.

Self-cleaning on a higher order mode in Ytterbium-doped multimode fiber with parabolic profile

2019 https://doi.org/10.1364/CLEO_SI.2019.STh4L.1
NIANG, Alioune, COUDERC, Vincent, TONELLO, Alessandro, *et al.* Self-cleaning on a higher order mode in Ytterbium-doped multimode fiber with parabolic profile. In : *2019 Conference on Lasers and Electro-Optics (CLEO)*. IEEE, 2019. p. 1-2.

CONFERENCES AND SEMINARS

06/2021 > – Munich, Germany

CLEO EU

Speaker

05/2020 > – San Jose, California, USA

CLEO US

Poster session

07/2019 > – Paris, France

JNOG

Speaker

06/2019 > – Nice, France

Waves Côte d'Azur

Poster session

RECOMMENDATIONS

Vincent COUDERC – vincent.couderc@xlim.fr
PhD supervisor

Alessandro TONELLO – alessandro.tonello@xlim.fr
PhD co-supervisor