



# Gontran Lance

PhD Student  
LJLL-Sorbonne Université

- 10.02.1993
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## Languages

- English
- French
- German

## Skills

- Applied Mathematics
- Optimization algorithms
- Optimal control
- Shape design
- PDE's numerical solving

## Informatics

- Python, Matlab, FreeFEM++, AMPL, MAPLE
- Fortran, C/C++
- $\LaTeX$
- HTML, CSS
- Pack Office

## Working Experience

- April to September 2017 **Intern** INRIA  
Investigation of the turnpike property in orbital mechanics and applied to two-impulse orbital transfer
- May to July 2015 **Intern** INRIA  
Preliminary study of approximation by filtering in optimal control and applications in orbital mechanics
- July 2014 **Intern** Technicentre SNCF Charentes-Périgord  
Logistics service : inventory, receipt and sending of train's pieces

## Education

### Postgraduate Training

- Since October 2017 **PhD student** LJLL-Sorbonne Université  
I investigate the problem of finding optimal time-varying shapes in the context of optimal control theory and highlight the turnpike property in this framework, under the supervision of Emmanuel Trélat and Enrique zuazua.
- September 2016 to July 2017 **Master Student** Université Paris-Sud, Orsay  
Master in optimization sciences with an excellent average grade
- 2013 to 2017 **Engineering student** ENSTA ParisTech  
Graduate student of one of the top ten engineering school in France
- September 2015 to Januar 2016 **Exchange student** Eidgenössische technische hochschule Zürich
- September 2010 to July 2013 **Classes préparatoires MPSI** Lycée Pierre de Fermat, Toulouse  
Preparing the exams entrance to the "Grandes écoles d'ingénieurs"

### Study

- 2006 – 2008 **Highschool student** Lycée Bertran de Born  
"Baccalauréat scientifique" with an excellent average grade

## Publications

- 2019 **Turnpike in optimal shape design #1**  
*Gontran Lance, Emmanuel Trélat and Enrique Zuazua*  
IFAC Papers Online
- 2020 **Turnpike in optimal shape design #2 (prepublished)**  
*Gontran Lance, Emmanuel Trélat and Enrique Zuazua*  
Sciences & Control Letters

## Talks

- August 2017 VII PDE's, optimal design and numerics Centro de Ciencias de Benasque Pedro Pascual
- September 2019 11<sup>th</sup> Nolcos TU Wien
- September 2019 FGS in Optimization Nice, Valrose campus
- October 2019 Special Semester Workshop LINZ RICAM, Johann Radon institute
- November 2019 Seminar INRIA team CAGE LJLL

## Extra-Curricular Activities

- Sport Cycling, running, trekking and touring
- Education Tutelage and reading
- Home Manual work