

PERSONAL DETAILS

Birth August 2, 1994 Phone (+33) 7 82 47 09 35

Mail saura.nathaniel@gmail.com

EDUCATION

PhD Candidate 2017-

Laboratoire de Mécanique des Fluides de Lille (LMFL)

Subject of the on-going thesis: Data driven turbulence modeling for turbulent boundary layer control

Masters degree in Fluid Mechanics and Energetics

2016-2017

Université Lyon 1 - Ecole Centrale de Lyon

Combustion, Flow Stability, Statistical Physics, Turbulence, High Performance Computing (MPI), Polyphasic and Complex Flow, Finite Volume Method, Gas dynamics and Aeroacoustics

Mechanical Engineering

2014-2017

Ecole Polytechnique Universitaire de Lyon (EPUL)

Solid, Continuum & Fluid Mechanics, Thermodynamics, applied and theoretical Mathematics, Vibration theory, Acoustics, Numerical methods, overview of several commercial softwares

Baccalauréat & Preparatory Classes

2012-2014

WORK EXPERIENCE

Heavy gases dispersion in a turbulent boundary layer

Spring 2017

6-month Internship; LMFA¹, Lyon - France

Numerical investigation of buoyant gases dispersion in a turbulent boundary layer, steady and unsteady source, using *Lattice Boltzmann Method*. Priminary study using FLUENT

References: Louis Gostiaux, Emmanuel Lévêque, Pietro Salizzoni, Lionel Soulhac

Monitoring and troubleshooting on Caterpillar heavy machinery

Summer 2016

Zoko Enterprises, Holon - Israel

With a team of engineers: performed upstream monitoring and troubleshouting on Caterpillar heavy machinery, to prevent breakdown. Internship in English and Hebrew.

References: Yuri Sandler, David Joseph

Spiral internal waves

Spring 2016

5-month Internship, LMFA¹, Lyon - France

Numerical instigation of spiral internal waves generated by a helical forcing. Performed heavy numerical simulations using the $Lattice\ Boltzmann\ Method$

References: Louis Gostiaux, Alessandro De Rosis, Emmanuel Lévêque

SKILLS

Languages French (mother tongue), English (advanced), Hebrew (intermediate)

Programming

C/C++, IATEX, Python, Bash, SLURM, HTML

HDF5 (C/C++, Python), Embedding (Python in C/C++), MPI, Lattice Boltzmann Method

 $^{^1\}mathrm{Laboratoire}$ de Mécanique des Fluides et Acoustique