






Lucien VIENNE

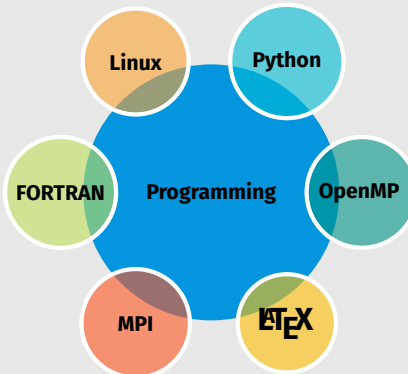
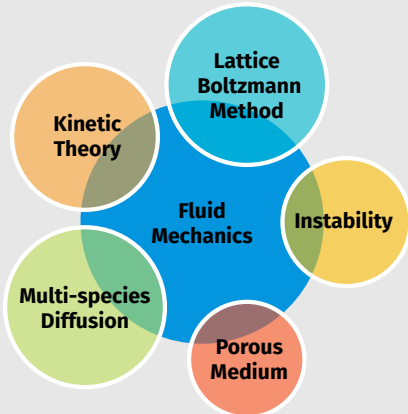
 17 December 1993

 lvienne.com

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Skills

Topics



Languages

- French native speaker
- English oral: fair - written: good
TOEIC score: 940

Extra

- Sports: windsurfing, sailing, hiking, mountain biking
- Hobby: sci-fi books and movies, Blender (3D graphics software)

Research

- 2016 - 2019 **PhD. Student, CNAM DynFluid laboratory** Paris, France
Thesis: Simulation of multi-component flows by the lattice Boltzmann method and application to the viscous fingering instability
- Development of a new lattice Boltzmann method for the simulation of multiple miscible species. For pure diffusion cases, Maxwell-Stefan equations are recovered. The implementation in an existing code is easier compare to previous models.
 - Simulation of the viscous fingering instability. The effects of ternary diffusion are highlighted.
 - Coding from scratch using FORTRAN and Python with MPI and OpenMP paradigms. Simulations performed on national supercomputers ($O(1000)$ cores).

Publications

Journal articles

- Lucien Vienne, et al. "Lattice Boltzmann method for miscible gases: A forcing-term approach". In: *Physical Review E*.
- Lucien Vienne, et al. "Viscous fingering simulation by the lattice Boltzmann method". Under preparation.

Conferences

- ICMMES 2019, talk, Edinburgh UK
- AIAA Aviation 2019, talk & conference paper, Dallas USA
- DSFD 2018, poster, Worcester USA
- ICMMES 2017, poster 🏆, Nantes FR

Education

- 2015 - 2016 **MSc. Student, Université Côte d'Azur** Nice, France
Dual master's degree, major: numerical mechanics
- 2013 - 2016 **MSc. Student, SeaTech school of engineering** Toulon, France
Major: fluid mechanics and marine engineering

Experience

- Sep 2017 **Teaching practicals on numerical optimization** Paris, France
Sep 2019 Arts et Métiers ParisTech
- 72h over the two years, master level, part of computer science and mathematics lessons .
 - Introduction to numerical optimization with Python: conjugate gradient, Newton and quasi-Newton methods, Lagrange-Newton for constrained optimization, and simulated annealing for global optimization.
- Mar 2016 **Offshore installation analysis engineer - Internship** Paris, France
Aug 2016 Saipem
- Bibliographic research on the installation method.
 - Sensitivity study and new laydown method development (OrcaFlex software).
 - Determination of the allowable sea state of the new method (DNV standard).
 - Presentation of the new method and results to the design and method team in anticipation to include this method for next projects.
- Jun 2015 **Research intern** Helsinki, Finland
Aug 2015 Aalto University
- Bibliographic research on Mars atmosphere and turbulence models.
 - Writing a trajectory code in order to provide basic flow information (in Fortran).
 - Lander mesh generation (with Pointwise).
 - CFD simulations with SST $k-\omega$ turbulence model (Finflo, finite volume solver).
 - Report writing and presentation of results to the Russian and Finnish project managers.