

Marc-Olivier G. DELCHINI, PhD

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WORK EXPERIENCE

- Oak Ridge National Laboratory**, Oak Ridge, TN, USA 2018-present
Reactor and Nuclear Systems Division (RNSD), computational fluid dynamics analyst/code developer.
- Oak Ridge National Laboratory**, Oak Ridge, TN, USA 2016-2018
Reactor and Nuclear Systems Division (RNSD), computational fluid dynamics Postdoctoral Fellow.
- Texas A&M University**, College Station, TX, USA 2014-2015
Department of Mathematics, Visiting Scholar.

EDUCATION

- Texas A&M University**, College Station, TX, USA 2011- 2014
Doctor of Philosophy in Nuclear Engineering.
Dissertation: *Extension of the entropy viscosity method to low-Mach fluid flows and to the seven-equation two-phase flow model.*
Co-Chairs: Prof. J. Ragusa and Prof. J-L. Guermond.
Committee members: Prof. J. Morel, Prof. Y. Hassan and Dr. R. Berry.
- Texas A&M University**, College Station, TX, USA 2009-2010
Master of Science in Nuclear Engineering.
Thesis: *A preliminary study to assess model uncertainties in fluid flows.*
Chair: Prof. J. Ragusa. Committee members: Prof. J. Morel, Prof. V. Ugaz and Dr. V. Mousseau.
- National School of Physics and Applied Physics**, Grenoble, France September 2009
Master of Science in Nuclear Energy.

HIGHLIGHTS

- Numerical simulations of multi-physics problems
- Numerical method for partial differential equations
- Sensitivity analysis and uncertainty quantification
- Finite volume and finite element methods
- Object-oriented programming language
- Direct Numerical Solution (DNS)
- Single- and multi-phase flow modeling
- Computational geometry
- High performance computing
- Reynolds-Averaged Navier-Stokes (RANS)
- Large Eddy Simulation (LES)
- Complex problem solver and critical thinker
- Good organizational and communication skills
- Ability to work effectively in a team setting

LIST OF CODES AND PROGRAMMING LANGUAGES

- MOOSE Framework.
- Relap-7, Relap-5
- STAR-CCM+, ANSYS
- OpenFOAM
- ICEM, Cubit
- Deal.ii
- COBRA-TF
- Nek5000
- Java, Python, C++, Fortran, Matlab
- Dakota

TECHNICAL SKILLS

- Linux, Mac and Windows environments.
- Latex and Microsoft Office proficient.
- Git, SVN

JOURNAL AND CONFERENCE REVIEWS

- Journal of Computer Methods in Applied Mechanics and Engineering.
- Journal of Nuclear Engineering and Technology.
- M&C conference, South Korea, May 2017.