

Florian Passelaigue

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Education

THE PENNSYLVANIA STATE UNIVERSITY

Since August 2018

Doctoral Student

Ending May 2022

Master of Science

May 2020

Advisor: Dr. Arthur T. Motta

Nuclear Engineering, Nuclear Materials, Computer Science Minor

GRENOBLE INSTITUTE OF TECHNOLOGY – PHELMA (FRANCE)

2016 – 2020

Master's Degree in Engineering

Reactor Physics & Nuclear Engineering

Received with Highest Honors

LYCEE POTHIER (FRANCE)

2013 - 2016

Intensive Preparatory Classes (CPGE)

Mathematics – Physics – Chemistry

Professional Experience

Computational Nuclear Materials Graduate Assistant

Since August 2018

The Pennsylvania State University,

Ken and Mary Alice Lindquist Department of Nuclear Engineering

Advisor: Dr. Arthur T. Motta

Modeling of hydrogen redistribution and hydride precipitation in Zircaloy, as part of the DOE NEUP IRP project 'Development of a mechanistic behavior model for spent fuel cladding storage and transportation'.

Computational Nuclear Materials Graduate Intern

May – August 2019

Idaho National Laboratory (INL)

Advisors: Dr. Giovanni Pastore, Dr. Arthur T. Motta

Implementation of the Hydride Nucleation-Growth-Dissolution model in BISON, a fuel performance, finite elements-based code developed at INL.

Awarded Best Poster in the *Nuclear Research and Experiment* category during the August 2019 Intern Expo.

Computational Nuclear Engineering Graduate Intern

May – July 2018

Laboratory of Subatomic Physics and Cosmology (LPSC) - Corys

Advisors: Dr. Elsa Merle (LPSC), Olivier Bruneau (Corys)

Development of the foundations of a coupling between the Molten Salt Fast Reactor system code *LiCore* developed at the LPSC (coded in Java) and the Corys simulation toolset *ALICES* (coded in C++).

Undergraduate Intern

June – August 2017

Amrita University (Kerala, India)

Advisor: Dr. Rekha Manoj

Development of a low cost, low maintenance Irrigation and Fertilization System for rural villages.

Publications

F. Passelaigue, E. Lacroix, G. Pastore, A.T. Motta “Implementation and Validation of the Hydride Nucleation-Growth-Dissolution (HNGD) model in BISON”, Journal of Nuclear Materials (submitted)

A. Laureau, E. Rosier, E. Merle, S. Beils, O. Bruneau, J.C. Blanchon, R. Gathmann, D. Heuer, F. Passelaigue, F. Vaiana, A. Zanini “The LiCore power plant simulator of the molten salt fast reactor”, PHYSOR 2020, 2020

R. Prabha, E. Sinitambirivoutin, F. Passelaigue M. V. Ramesh “Design and Development of an IoT Based Smart Irrigation and Fertilization System for Chili Farming.” Wispnet-2018, 2018

Skills

Languages: French (native); English (fluent)

Programming: C++; Matlab; Java; Python

Other Experiences

INITIATIVE · PLANNING

Programming co-director	TEDxPSU	2019 – 2020
Partnership chair	Phelma Art Organization	2016 – 2018
First aid manager	<i>O-Bural</i> Organization	2015 – 2016

INVOLVEMENT · TEACHING

President	Performing Magicians	Since 2019
President	Grenoble INP Magic Club	2016 – 2018
President	<i>Enigmagique</i> (magic club)	2015 – 2016
Private teacher	Local middle/high schools	2013 – 2018