PERSONAL INFORMATION

Simone Siriano

WORK EXPERIENCE

Dic.2021 – Nov.2022

Post-doctoral researcher, DIAEE Sapienza University of Rome

Main responsibilities:

- Analyst for Computational MagnetoHydroDynamics (CMHD) and fluid-dynamics (CFD) simulations
- Code development for OpenFoam MHD codes
- Teaching at undergraduate (MEng) and graduate (PhD) level: Liquid Metal Magnetohydrodynamics, 1.5 ETCS

EDUCATION AND TRAINING

Nov. 2018 - Feb. 2022

PhD in Energy and Environment

Sapienza University of Rome

Numerical simulation of MHD flows in breeding blanket and plasma-facing components, dissertation defended 14/02/2022 with grade Excellent

European Research Projects, EURATOM:

- EUROfusion FP9 Horizon Europe, 2021-2027, Work Package Breeding Blanket
- EUROfusion FP8 H2020, 2014-2020, Work Package Breeding Blanket

Sep. 2015 - Oct. 2018

MEng in Energy and Nuclear Engineering

Sapienza University of Rome

Numerical study of MHD thin-film flows for Plasma Facing Components: fundamental pheno phenomena and code validation,
thesis defended 22/10/2018 with grade 110 with Honour

Sep. 2011 - Dec. 2014

BEng in Energy Engineering

Sapienza University of Rome

Reprocessing for closed nuclear fuel cycle,
thesis defended 09/01/2015 with grade 110 with Honour

LANGUAGE SKILLS

Mother toungue: Italian

Other languages

UNDERSTANDING		SPEAKING		WRITING
Ascolto	Lettura	Interazione	Produzione orale	
English	B2	B2	B2	B2	B2

Digital skills

Programming	Proficient: C++, MATLAB, Unix shell, Visual Basic for Application, LaTex
Programming	Basic: Python, Fortran
CFD Codes	Proficient: CFX, OpenFoam
Others	Proficient: Ansys DesignModeler, Ansys Meshing, Paraview, Excel, High Performance Computing
Others	Basic: AutoCAD

PEER-REVIEWED JOURNAL PAPER

6. Simone Siriano, Néstor Balcázar, Alessandro Tassone, Joaquim Rigola, Gianfranco Caruso, "Numerical Simulation of High-Density Ratio Bubble Motion with interIsoFoam", *Fluids* 7 (5), 152, Apr. 2022.
5. P. Arena, A. Del Nevo, F. Moro, S. Noce, R. Mozzillo, V. Imbriani, F. Giannetti, F. Edemetti, A. Froio, L. Savoldi, S. Siriano, A. Tassone, F. R. Urgorri, P. A. Di Maio, I. Catanzaro, G. Bongiovì, "The demo water-cooled lead–lithium breeding blanket: Design status at the end of the pre-conceptual design phase", *Applied Sciences* 11 (24), 11592, Dec. 2021.
4. Simone Siriano, Alessandro Tassone, Gianfranco Caruso, "Numerical simulation of thin-film MHD flow for nonuniform conductivity walls", *Fusion Science and Technology* 77 (2), 144-158, Feb. 2021.
3. Alessandro Tassone, Simone Siriano, Gianfranco Caruso, Marco Utili, Alessandro Del Nevo, "MHD pressure drop estimate for the WCLL in-magnet PbLi loop", *Fusion Engineering and Design* 160, 111830, Nov. 2020.
2. Simone Siriano, Alessandro Tassone, Gianfranco Caruso, Alessandro Del Nevo, "Electromagnetic coupling phenomena in co-axial rectangular channels", *Fusion Engineering and Design* 160, 111854, Nov. 2020.
1. Simone Siriano, Alessandro Tassone, Gianfranco Caruso, Alessandro Del Nevo, "MHD forced convection flow in dielectric and electro-conductive rectangular annuli", *Fusion Engineering and Design* 159, 111773, Oct. 2020.

CONFERENCE CONTRIBUTIONS

12. Simone Siriano, Lorenzo Melchiorri, Alessandro Tassone, "Modelling of single-phase and two-phase liquid metal magnetohydrodynamic flows at NERG Sapienza", *1st Italian OpenFoam User meeting*, Oct. 2022.
11. P. Arena, G. Bongiovi, I. Catanzaro, C. Ciurluini, A. Collaku, A. Del Nevo, P.A. Di Maio, M. D'Onorio, F. Giannetti, V. Imbriani, P. Maccari, L. Melchiorri, F. Moro, R. Mozzillo, S. Noce, L. Savoldi, S. Siriano, A. Tassone, M. Utili, "Design and integration of the EU-DEMO Water-Cooled Lead Lithium Breeding Blanket", *32nd Symposium on Fusion Technology*, Sep. 2022.
10. Simone Siriano, Alessandro Tassone, Lorenzo Melchiorri, Gianfranco Caruso, Pietro Arena, "Numerical analysis of extreme magnetoconvective phenomena in the WCLL blanket", *32nd Symposium on Fusion Technology*, Sep. 2022.
9. Lorenzo Melchiorri, Pietro Arena, Fabio Giannetti, Simone Siriano, Alessandro Tassone, "CFD analysis and optimization of the DEMO WCLL central outboard segment bottom-cap elementary cell", *32nd Symposium on Fusion Technology*, Sep. 2022.
8. Simone Siriano, Alessandro Tassone, Gianfranco Caruso, "Magnetoconvection in the WCLL COB equatorial plane cell. WCLL", *BB Review Meeting 2022*, Jul. 2022.
7. Simone Siriano, Tommaso Carnicella, Alessandro Del Nevo, Gianfranco Caruso, Alessandro Tassone, "Numerical Characterization of Liquid Metal MHD Flow in Co-axial Rectangular Channels", *12th PAMIR International Conference Fundamental and Applied MHD*, Jul. 2022.
6. Simone Siriano, "Applied magnetohydrodynamics for design and optimization of breeding blankets and plasma-facing components", *16th ENEN PhD Event & Prize 2022*, Jul. 2022.

5. Simone Siriano, Néstor Balcázar, Alessandro Tassone, Joaquim Rigola, Gianfranco Caruso, "Bubble motion in high-density ratio two-phase mixtures using InterIsoFoam", *18th Multiphase Flow Conference and Short Course*, Nov. 2021.
4. Alessandro Tassone, Simone Siriano, Gianfranco Caruso, Alessandro Del Nevo, "MHD pressure drop estimate for the WCLL in-vessel PbLi loop", *14th International Symposium on Fusion Nuclear Technology*, Sep. 2019.
3. Simone Siriano, Alessandro Tassone, Gianfranco Caruso, Alessandro Del Nevo, "Electromagnetic coupling phenomena in co-axial rectangular channels", *14th International Symposium on Fusion Nuclear Technology*, Sep. 2019.
2. Simone Siriano, Alessandro Tassone, Gianfranco Caruso, Alessandro Del Nevo, "MHD forced convection flow in dielectric and electro-conductive rectangular annuli", *14th International Symposium on Fusion Nuclear Technology*, Sep. 2019.
1. Simone Siriano, Alessandro Tassone, Gianfranco Caruso, "Numerical study of MHD thin-film flows for plasma facing components", *11th PAMIR International Conference Fundamental and Applied MHD*, Jul. 2019.

Dati personali

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".