PERSONAL INFORMATION Alessandro Tassone

01/06/2018–Present	**Research Fellow (Assegno di Ricerca)**
	DIAEE - Sapienza University of Rome, Roma (Italia)

- Development and V&V of numerical tools for Computational Magnetohydrodynamics (CMHD)
- Modelling of incompressible MHD flows for applications in fusion reactors
- Co-supervisor for 4 Master's Degree theses

19/11/2018–Present	**Invited lecturer in Master's Degree course "Numerical Simulation of Nuclear Systems"**
	Sapienza University of Rome, Roma (Italia)

6 Workshops on "Computational Fluid Dynamics", equivalent to 1.5 ETCS, within Master's Degree course "Numerical Simulation of Nuclear Systems" (3 ECTS) held by Ing. Fabio Giannetti

25/09/2017–21/12/2017	**Invited lecturer in Master's Degree course "Numerical Simulation of Nuclear Systems"**
	Sapienza University of Rome, ROMA (Italia)

6 Workshops on "Computational Fluid Dynamics", equivalent to 1.5 ETCS, within Master's Degree course "Numerical Simulation of Nuclear Systems" (3 ECTS) held by Prof. Gianfranco Caruso

01/05/2017–Present	**Invited lecturer in Master's Degree course "Fusion Reactor Technology"**
	Sapienza University of Rome, ROMA (Italia)

1 workshop on "Magnetohydrodynacs in Fusion Reactors" equivalent to 0.25 ECTS within Master's Degree course "Fusion Reactor Technology" (3 ETCS) held by Prof. Gianfranco Caruso

EDUCATION AND TRAINING

01/11/2015–31/10/2018	**PhD in Energy and Environment**	EQF level 8
	Sapienza University of Rome, Roma (Italia)	

PhD thesis title: "Study on liquid metal magnetohydrodynamic flows and numerical application to a water-cooled blanket for fusion reactors", Supervisor Prof. Caruso, thesis defended 11/02/2019 with grade excellent.

Research activities: Numerical modeling of forced, mixed and natural convection MHD incompressible flows for applications in fusion reactors

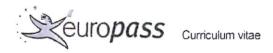|		
01/01/2013–28/10/2015	**Master's Degree in Energy and Nuclear Engineering**	EQF level 7
	Sapienza University of Rome, ROMA (Italia)	

Master's Degree thesis title: "Computational Fluid-Dynamics simulation of the MHD flow in the Water-Cooled Lithium Lead breeding blanket module", Supervisor Prof. Gianfranco Caruso, defended in

28/10/2015 with grade 110/110.

01/10/2008–13/12/2012	**Bachelor's Degree in Energy Engineering** EQF level 3
	Sapienza University of Rome, ROMA (Italia)
	Bachelor's Degree thesis title: "Nuclear fusion technology: theory and applications", Supervisor Prof. Luisa Ferroni, defended 13/12/2012 with grade 99/110

PERSONAL SKILLS

Mother tongue(s) Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C1	B2	B2
	First Certificate in English rilasciato da University of Cambridge				

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills Good workplace communication skills, familiarity with international working environment, skilled lecturer

Organisational / managerial skills Experience in supervising student work, managerial and multi-tasking skills for coordination of small research groups, familiarity with writing of research proposals

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Independent user	Basic user	Basic user	Independent user

Digital skills - Self-assessment grid

- Operative systems: good command of Microsoft Windows, basic knowledge of Linux (Ubuntu and CentOS)
- CFD codes: good knowledge of ANSYS CFX, intermediate user of OpenFOAM, basic user of ANSYS Fluent
- FEA codes: basic knowledge of ANSYS Mechanical
- Neutronic codes: basic user of MCU
- Deskop tools: good command of Microsoft Office and LaTeX
- CAD: good command of ANSYS Workbench, basic user of Solid Edge

Driving licence B

ADDITIONAL INFORMATION

Publications See attached list

Honours and awards Excellent Laureate Award, granted by Sapienza University of Rome for the high quality of the candidate Master's Degree thesis, 15 May 2016

Research grants	• Start-up Grant winner ("Progetto di Avvio alla Ricerca"), awarded by Sapienza University of Rome, 25 July 2017
	• EUROfusion Engineering Grant (EEG) winner (EEG-2018-17 "MHD Analyses and Code Validation"), awarded by EUROfusion Consortium, 20 December 2017
Participation in EU projects	• Horizon2020 **Eurofusion**: partecipation in Work Package Breeding Blanket (WPBB) and Water-Cooled Lithium Lead (WCLL) design team member since 2015
	• FP-7 **ENEN-RU II**: 2-month internship at National Research Nuclear University "MEPhI"
Co-supervisor for Master's Degree thesis	• Jasper Meeusen, "CFD Simulation of Liquid Metal Cross-Flow across Circular Rod Bundles" (Supervisor Prof G. Caruso, in collaboration with KU Leuven), thesis defended February 2019
	• Lorenzo Melchiorri, "Numerical characterization of liquid metal MHD flow in electro-conductive thick orifices with asymmetric contraction" (Supervisor Prof G. Caruso), thesis defended January 2019
	• Simone Siriano, "Numerical study of MHD thin-film flows for Plasma Facing Components: fundamental phenomena and code validation" ((Supervisor Prof G. Caruso), thesis defended October 2018
	• Letizia Chiasso, "Magnetohydrodynamic analysis for prototypical manifolds of liquid metal fusion reactor blankets" (Supervisor Prof G. Caruso), thesis defended October 2018
Courses	• First International Summer School on Engineering Computer Modeling, NRNU MePhI, Moscow, Russia, 4-15 July 2016
	• MSc/PhD course "CFD with OpenSource Software", Chalmers University of Technology, Göteborg, Sweden, 28 August – 6 December 2016 (6 days)
	• European Workshop on "Sodium Facilities Design and Operation", ESFR-SMART training project, ENEA HQ, Roma, Italy, 22-24 May 2018
	• Karlsruhe International Summer School on Fusion Technologies, Karlsruhe, Germany, 3-14 September 2018
	• 26th European Fusion Programme Workshop, Bad Dürkheim, Germany, 21-23 November 2018
Participation in Internation Conferences	• 30th Symposium On Fusion Technology (SOFT), Giardini Naxos (ME), Italy, 17-21 September 2018, poster presented: "MHD mixed convection fow in the WCLL: heat transfer analysis and cooling system optimization"
	• 35th UIT Conference, Ancona, Italy, 26-30 June 2017, oral presentation: "Magnetohydrodynamic flow and heat transfer arounda heated cylinder of arbitrary conductivity"
	• 7th International Symposium on Advances in Computational Heat Transfer (CHT-17), 28 May - 2 June 2017, oral presentation: "THERMO-FLUID DYNAMIC STUDY OF THE MHD FLOW AROUND A CYLINDER IN CASE OF BOUNDING WALLS WITH NON-UNIFORM ELECTRICAL CONDUCTIVITY"
	• 29th Symposium On Fusion Technology (SOFT), Prague, Czech Republic, 5-9 September 2016, poster presented: "CFD simulation of the magnetohydrodynamic flow inside the WCLL breeding blanket module"
	• 34th UIT Conference, Ferrara, Italy, 4-6 July 2016, poster presented: "Numerical study of laminar magneto-convection in a differentially heated square duct"

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