Finanziato dall'Unione europea NextGenerationEU

Ministero dell'Università e della Ricerca

Italiadomani PIANO NAZIONALE DI RIPRESA E RESILIENZA

PhD Course: FUSION SCIENCE AND ENGINEERING in agreement with Università degli Studi di Napoli Federico II			
Department	Centro di Ateneo "Centro Ricerche Fusione"		
Duration	3 years		
Number of positions	Scholarships funded by external public or private bodies/Departments	n. 6	**1** scholarship funded by Centro Ricerche Fusione - su fondi PNRR - progetto Nefertari - New Equipment for Fusion Experimental Research and Technological Advancements with RFX Infrastructure IR_NEFERTARI - CUP B53C22003070006 **- Topic:** Development of LIBS methodologies for fusion-relevant materials analysis; **1** scholarship funded by Centro Ricerche Fusione - su fondi PNRR - progetto Nefertari - New Equipment for Fusion Experimental Research and Technological Advancements with RFX Infrastructure IR_NEFERTARI - CUP B53C22003070006 **- Topic:** Development of a laser-induced breakdown spectroscopy for fusion-relevant plasma-material interaction studies in the linear device BiGyM; **1** scholarship funded by Centro Ricerche Fusione - su fondi PNRR - progetto Nefertari - New Equipment for Fusion Experimental Research and Technological Advancements with RFX Infrastructure IR_NEFERTARI - CUP B53C22003070006 **- Topic:** Development of advanced neutron and soft X-ray diagnostics with imaging capabilities for RFX-mod2; **1** scholarship funded by Centro Ricerche Fusione - su fondi PNRR - progetto Nefertari - New Equipment for Fusion Experimental Research and Technological Advancements with RFX Infrastructure IR_NEFERTARI - CUP B53C22003070006 **- Topic:** Diagnostics of confinement properties of fusion plasmas; **1** scholarship funded by Centro Ricerche Fusione - su fondi PNRR - progetto Nefertari - New Equipment for Fusion Experimental Research and Technological Advancements with RFX Infrastructure IR_NEFERTARI - CUP B53C22003070006 **- Topic:** Thermal content dynamics in magnetically confined plasmas; **1** scholarship funded by Consorzio RFX **-** **Topic:** Numerical exploration of fast ion distribution functions in fusion devices and their optimization through various mixes of NBI and ICRH heating in view of ITER operations;
	Total number of positions	n. 6	
Selection criteria	PRESELECTION ON THE BASIS OF EVALUATION OF QUALIFICATIONS AND ORAL EXAMINATION		
Oral examination via remote interview:	Applicants who have requested it in the application form will take the oral exam via remote interview using the ZOOM videoconference tool.		
Evaluation criteria	Qualifications: points max 70 Oral examination: points max 30		
Documents to be submitted	Thesis:	Points: max 10	(Applicants waiting to be awarded the entrance qualification: those waiting to be awarded the entrance qualification by 31st January 2023 will submit a summary

			of the master thesis project (max. 4 pages) signed by the applicant and the supervisor)
	Curriculum:	Points: max 30	The CV (please use the Europass CV template) must include the following information: - Weighted average of the exams of the Bachelor + Master degrees or arithmetic average of the exams if in compliance with the former degree regulations. Students with a foreign degree, have to provide the Grade Point Average (GPA) for each degree obtained - List of all exams and corresponding grades obtained for the bachelor and master degrees or in compliance with the former degree regulations - Time spent abroad during your studies (e.g. Erasmus grants, Time, Erasmus Placement, thesis abroad, etc.) - Relevant work experience (research grants, scholarships, internship periods, period of employment) - Awards - Knowledge of foreign languages (certifications)
	Scientific publications:	Points: max 5	Manuscripts accepted for publication can also be considered if suitable documentation is provided (conference programme, acceptance letter, DOI etc.)
	Other documents:	Points: max 25	The candidate must submit a RESEARCH PROJECT on one of the priority research topics for which he intends to compete. The research project must include: 1) Project title and abstract (max 500 words) 2) State of the Art of the subject of the project (max one page) 3) Project objectives and scientific and personal motivations for undertaking the specific research proposed and for choosing the PhD course in Fusion Science and Engineering (max one page) 4) Methods proposed to achieve the project objectives, and sequence of activities (max one page) 5) References (max 10) The project should be written in English using an A4 page format, with 2.5 cm margins, single line, font Times New Roman 12pt.
Preselection: First meeting of the Evaluating Commission	06 DECEMBER 2022 14:00		
Publication of the results of the evaluation of the preselection	Within **07 DECEMBER 2022** the evaluating Commission will publish the results of the evaluation of the qualifications in the following website: **https://crf.unipd.it/phd/admission** In order to be admitted to the examination, the candidate must get a score of at least 7/10 in the preselection.		
Publication of the timetable of remote interviews and instructions on how to use the ZOOM video conferencing	By **07 DECEMBER 2022** the commission will publish on the course website https://crf.unipd.it/phd/admission the timetable of the remote interviews and the instructions on how to use the ZOOM video conferencing for those applicants who have chosen in the application form to take the oral examination via remote interview and who have passed the preselection on the basis of the qualifications with a pass-mark of at least 7/10.		
Oral examination	16 DECEMBER 2022 09:30 - Centro Ricerche Fusione c/o Consorzio RFX Corso Stati Uniti, 4 35127 Padova		
Language/s	**Foreign language/s assessment at the oral examination:** At the oral examination the commission will assess the knowledge of the following language/s: english **Admission exam:** The admission exam will be taken in: english		

Examination topics	Plasma physics and magnetic confinement fusion technology
Didactic program	The teaching activity of the course addresses topics related to Fusion Science and Engineering. Specifically the following three Advanced Courses are offered: - AC1: Physics and Diagnostics of Plasmas - AC2: Plasma Control - AC3: Fusion Technologies Further info: https://crf.unipd.it/phd/courses
PhD Course Website:	https://crf.unipd.it/phd
Further information	**Department:** Centro di Ateneo "Centro Ricerche Fusione" **Address:** Corso Stati Uniti - N. 4, 35127 Padova (PD) **Contact person:** Minicuci Maurizio **telephone**: 0498295014 **e-mail:** maurizio.minicuci@unipd.it
How to apply	The application must be submitted only via the online procedure available at: **https://pica.cineca.it/unipd/dottorati38pnrr/** The documents must be attached in pdf format. The application and the attached documents are submitted automatically by closing the online procedure. So no hard copy of the application and of the documents must be sent to the office.
Deadlines	Publication of the ranking lists and enrollment from **23 December 2022** Beginning of PhD courses **1 February 2023**