


PhD position 12: AI-assisted design of high-performance and high-reliability probe technologies for EWS applications	
	
Employers	
Prof. Stefano Mariani from Politecnico di Milano (POLIMI) in Milano, Italy and Dr. Raffaele Vallauri from Technoprobe S.p.A. (TPI) from Cernusco Lombardone, Italy are looking for a PhD candidate to join a three-year research training within the EU-funded MSCA industrial doctorate MIRELAI . You will be enrolled in the PhD programme of Politecnico di Milano and supervised by Prof. Stefano Mariani (POLIMI) and Dr. Marco Mauri (TPI).	
Project description	
Implementation of a machine learning (ML) model able to predict probe card key performance indicators with respect to mechanical and electrical functional requirements to provide a guidance to design engineers and process engineers for optimizing the design based on: 1) Reduction of the experiments to a minimum by design of experiments 2) Reduced-order numerical models and interpolation techniques within the parameters space, like e.g. polynomial chaos expansion 3) Testing and validation of the model based on experimental results.	
International mobility	
As a PhD candidate, you will be employed for 18 months each by Politecnico di Milano and Technoprobe. During the placement at Politecnico di Milano you will undertake a 1-month placement at Materials Center Leoben Forschung GmbH (MCL) in Leoben, Austria supervised by Dr. Elke Kraker.	
Requirements	
Specific Eligibility Criteria on the Horizon Europe: Marie Skłodowska-Curie (MSCA) programme apply, including the mobility rule and PhD rules. Applicants of any nationality are welcome.	
Additional requirements	
<ul style="list-style-type: none"> · Master's degree in Mathematics, Physics, Mathematical/ Mechanical/ Engineering · Background in ML/AI models will be preferred · English proficiency (e.g., IELTS, TOEFL, or similar test, not for native speakers) 	
The monthly support and benefits	
<ul style="list-style-type: none"> · The successful candidate will benefit from an international scientific network of people with research excellence in MEMS development based on experimental characterization, simulation, and data-driven approaches · Flexible working hours, in-house canteen and free public transportations (train) · The PhD candidate will receive an attractive salary in accordance with the MSCA regulations. The financial package will include: 1) Living allowance of €3,400 (country correction coefficient applies), 2) Mobility allowance of €600, 3) Family allowance (€660), if applicable. The exact (net) salary will be confirmed upon appointment and is dependent on local tax, social and health insurance regulations and on the country correction factor and be subjected to deductions for employment costs. 	
Application	
Required documents:	Complete applications in English should include: <ul style="list-style-type: none"> · CV* · Letter of motivation · Letter of recommendation · English language proficiency certificate(s) (not for native speakers)
Selection process:	<ul style="list-style-type: none"> · Our selection procedure for PhD position is open, transparent, merit-based and in line with the principles set out in the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers · The application dossier needs to be submitted as a single PDF file to stefano.mariani@polimi.it by 30-11-2022. Please indicate in the subject line: 'MIRELAI: PhD position 12 - your name' · Pre-selected candidates will be invited for interviews by 15-12-2022. Unsuccessful applicants will not receive any notification
Application deadline:	30-11-2022
Expected start date:	The individual PhD project is set to start between 09-01-2023 and 03-04-2023
Contact person for enquiries:	Prof. Stefano Mariani Email address: stefano.mariani@polimi.it Phone: +39 02 23994279

* The CV must be signed by the candidate and has to bear the following sentence concerning the management of candidate's personal data: *"The undersigned Name and Surname authorizes the management of his/her personal data contained in the application documents as foreseen by the European Regulation 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and declares to be aware of the rights of the data subject as listed in Chapter III of the aforementioned European Regulation"*.



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