


PhD position 8: Real-time monitoring of the remaining useful life of an electronic system with a data-based approach	
	
Employers	
Dr. Bart Vandeveldel from VZW Interuniversitair Micro-Electronica Centrum (IMEC) in Leuven, Belgium, Dr. Onur Atak and Dr. Gwendal Jouan from Siemens Industry Software NV in Leuven, Belgium 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 Katholieke Universiteit Leuven and supervised by Dr. Bart Vandeveldel (IMEC) and Prof. Mathias Verbeke (KU Leuven).	
Project description	
The aim of this PhD track is to develop an AI methodology, using machine learning (ML) approaches, to predict the remaining useful lifetime of electronic systems by fusing data obtained from both sensors and simulations. The idea is to use the ML-based approach to compensate for the limitations of an approach that relies solely on simulations (uncertainty on the material parameters). The simulation data will be based on a model developed in a parallel PhD track with which close collaboration is expected. Experimental validation of the methodology will also be carried out.	
International mobility	
As a PhD candidate, you will be employed for 18 months each by IMEC and Siemens. During the placement at Siemens, you will also undertake a 1-month placement at Polymer Competence Center Leoben GmbH (PCCL) , supervised by Prof. Dieter Gruber and Dr. Peter Fuchs.	
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"> · The candidate should have a strong background in modelling and data science, with a master's degree in mechanical/electrical/mathematical engineering or related fields. · An experience with statistics and machine learning is a strong plus. · English proficiency. 	
The monthly support and benefits	
<ul style="list-style-type: none"> · The successful candidate will benefit from an innovation-driven industrial environment · Personalised career development plans will be established to support the needs of the PhD candidate · The PhD candidate will receive an attractive salary in accordance with the MSCA regulations. The financial package will include: 1) Living allowance yearly gross budget: 40.800€/year (country correction coefficient applies) (Includes salary, employers cost and different benefits), 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* and 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(s) 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 through by 23-12-2022 https://www.imec-int.com/en/work-at-imec/job-opportunities/real-time-monitoring-remaining-useful-life-electronic-system-data · Pre-selected candidates will be invited for interviews by 15-01-2023. Unsuccessful applicants will not receive any notification
Application deadline:	23-12-2022
Expected start date:	The individual PhD project is set to start between 01-02-2023 and 01-04-2023
Contact person for enquiries:	Bart Vandeveldel Email address: Bart.Vandeveldel@imec.be Phone: +32473694157

* 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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