PhD position 2: Global criticality assessment based on feature surrogates

Employers

Prof. Dieter Gruber from Polymer Competence Center Leoben GmbH (PCCL) and DI Thomas Krivec from AT&S Austria Technologie & Systemtechnik AG (AT&S), both in Leoben, Austria are looking for a PhD candidate to join a three-year research training within the EU-funded MCSA industrial doctorate MIRELAI. You will be enrolled in the PhD programme of Montan University Leoben (MUL) and supervised by Prof. Dieter Gruber (PCCL).

Project description

· Development and calibration of a data driven surrogate model of a PCBA feature.
· Implementation of a script-based approach to apply the surrogate model for reliability assessment within a standard High-Density-Interconnect (HDI) PCB).
· Identification if of critical instances and automatically repeated FE feature model simulations. Global feature critically assessment based on surrogate model and simulation results.
· Validation based on experimental measurement results.

International mobility

As a PhD candidate, you will be employed for 18 months each by PCCL and AT&S. During the placement at PCCL, you will also undertake a 1-month placement at IMEC, supervised by Dr. Bart Vandevelde.

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

· Master's degree in mathematics, physics or data science/machine learning.
· Background in machine learning, python programming and FE simulation
· English proficiency (e.g., IELTS, TOEFL, or similar test, not for native speakers)

The monthly support and benefits

· The successful candidate will benefit from an international scientific network of academic and industrial partners with research excellence in microelectronics reliability based on experimental characterization, simulation, data-driven approaches and machine learning
· Flexible working hours and part-time home office
· 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 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: · CV* and letter of motivation · Letter of recommendation · English language proficiency certificate(s) (not for native speakers)
Selection process:	· 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 dieter.gruber@pccl.at by 08-01-2023. Please indicate in the subject line: 'MIRELAI: **PhD position 02** - your name' · Pre-selected candidates will be invited for interviews by 15-01-2023. Unsuccessful applicants will not receive any notification
Application deadline:	08-01-2023
Expected start date:	The individual PhD project is set to start between 16-01-2023 and 01-04 -2023
Contact person for enquiries:	Prof. Dr. Dieter P. Gruber Email address: dieter.gruber@pccl.at Phone: +43 3842 42962-0

* 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".*