

Ph.D. position in Machine Learning, AI, Cloud Platform and Database development for molecular simulations funded by PlasticUnderground Marie Curie ITN

The PlasticUnderground Doctoral Network (DN) is an international, multi-partner, inter-sectoral doctoral research-training network with the aim to prepare an international cohort of Doctoral Candidates (DCs) in the development of solutions to the emerging plastic pollution crisis in soils and groundwater. Given the evolving understanding of subsurface soil and groundwater ecosystems as long-term storage pools of micro- and nanoplastics, interdisciplinary capacity that can support and provide guidance for the management of these systems, as well as development of adequate technological, social behavioural and legislative solutions is urgently needed. This interdisciplinary DN will integrate comprehensive training opportunities in cutting edge technological innovations, regulatory and behavioural approaches across traditional disciplinary and sectoral boundaries. The consortium comprises universities, research institutions and companies located in the UK, France, Spain, Serbia, Italy, Switzerland, Cyprus and Germany.

NovaMechanics (NovaM), an SME specializing in cheminformatics and nanoinformatics, is seeking for a Doctoral Candidate (DC) to join our team in Larnaca, Cyprus. The PhD research, which is funded by the Marie Skłodowska-Curie Action (MSCA), will last for 36 months and require the PhD student to spend 3 months at the University of Birmingham (UoB), 1 month at PlasticEurope (PlastEU), 1 month at the University of Lyon (UCBL), and 1 month at the University of Pisa (UNIFI). The DC will work in the context of PlasticUnderground Marie Curie ITN and will be responsible for performing high-throughput simulations, developing data-driven machine learning and artificial intelligence models and web applications powered by Enalos Cloud Platform as well as the implementation of the project's database.

DCs can be of any nationality but must comply with the following mobility rule: At the time of selection by NovaM (host organization), they must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organization (Cyprus) for more than 12 months in the three years immediately prior to their recruitment. Candidates must demonstrate that their ability to understand and express themselves in both written and spoken **English** is sufficiently high for them to derive the full benefit from DN training. DCs must not yet be in possession of a doctoral degree at the date of recruitment.

Responsibilities

- Develop a ready-to-use and user-friendly interface powered by Enalos Cloud Platform to guide decision making with regards to MnP risk assessment, and implementation of the project's database (powered by Pharos Database Solution)
- Utilize machine learning and artificial intelligence algorithms in Isalos Analytics Platform to guide the decision-making process related to the risk assessment
- Conduct high-throughput simulations with the aid of Enalos Asclepios & Enalos Demokritos KNIME nodes and workflows
- Driving and organizing collaborative efforts with internal and external partners



Desired Requirements

- Bachelor's degree in Computer Science, Electrical Engineering, Chemistry, Chemical Engineering, Physics, Material Science, Chem-Bioinformatics or other related Science.
- M.Sc. degree in Computer Science, Chemical Engineering, Physics, Material Data Science, Sciences, or other related Sciences. (Candidates holding a 5-year MEng degree are not obliged to have a MSc. Degree)
- Proficiency in English
- Diploma Thesis or Master Thesis in the field of Machine Learning or a related field will be appreciated (A web hyperlink of their Diploma or Master Thesis could be included in the attached CV)
- Experience in Java, HTML, and Javascript.
- Knowledge of RDBMS/SQL and design patterns & principles.
- Knowledge of the Git source control tool and Maven build tool.
- Design and implement process, workflow, and data models according to the requirements.
- Strong fundamental computer science skills (OOA/OOD, data structures, algorithms)
- Good understanding of REST standards.

What we offer

- An international work environment, in which you can develop your talent and realize ideas and innovations within a competent team
- Gross Salary (total cost with Cyprus coefficient): 2635€/per month. Mobility allowance 600€/per month (gross-total cost), family allowance if applicable 495€/per month (gross - total cost)
- An individual and well-structured training within the Marie Curie ITN network

How to apply

The candidate should submit a detailed CV and a cover letter matching the above according to his/her expertise. Two recommendation letters are needed from industrial or academic environments. The recommendation letters should not be general and should be referred to the above qualifications. Incomplete applications will be ignored.

All the above should be submitted until 31/07/2023 to hr@novamechanics.com with Ref: **MarieCurie2023IT**.