We are looking to recruit a

PostDoc position in the field of Data Mining and Dislocation Plasticity

Your Job:
We are looking for excellent candidates who have a strong background in machine learning and data mining in the field of computational materials science with focus on dislocation dynamics simulations.

Your primary scientific tasks will be, e.g.:
- planning and performing dislocation dynamics simulations, e.g., concerning mechanical material behavior at small length scales, under extreme environment,
- code development (e.g., adding new features) to existing dislocations dynamics simulation codes,
- simulation model development, e.g., in the spirit of multiscale modelling,
- data mining of dislocation microstructures and machine learning of dislocation dynamics,
• collaboration with internal and external project partners,
• preparation of scientific publications and participation in international conferences,
• supervision of PhD students

Your Profile:
We are looking for a highly motivated colleague who is excited about new scientific endeavors with interdisciplinary approaches. For this you have:
• a completed university degree and doctorate in data science, computer science, mathematics, materials science, physics, engineering or a related subject
• practical experience with discrete or continuum dislocation dynamics (simulation, model development, code development), demonstrated by, e.g., a thesis, publications in peer-reviewed journals or open source projects,
• very good experience in machine learning and data mining, demonstrated by, e.g., a thesis, publications in peer-reviewed journals or open source projects
• very good practical programming expertise (e.g., Python, Java, Julia, R, C/C++) and related libraries
• solid experience in HPC/GPU environments and open source software development demonstrated by, e.g., a thesis, publications in peer-reviewed journals or open source projects
• very good publication track record and visibility within the scientific community
• structured and analytical thinking as well as a systematic, careful, independent, and reliable working method
• excellent communication skills and commitment to work as part of a team
• experience in supervising students and doctoral candidates and in managing your own scientific project
• experience with acquisition and administration of third-party funds is a plus

Our Offer:
We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:
• A large research campus with green spaces, offering the best possible means for networking with colleagues and pursuing sports alongside work
• The opportunity to conduct exciting research in an international and multidisciplinary environment with outstanding infrastructure and to strengthen your reputation in a dynamic and highly active research field
• A creative work environment at a leading research facility, located on an attractive research campus at the TZA Aachen https://go.fzj.de/TZA and the Forschungszentrum Jülich
• The opportunity to attend national and international conferences
• Further development of your personal strengths, e.g. through an extensive range of training courses; a structured program of continuing education and networking opportunities specifically for doctoral researchers via JuDocS, the Jülich Center for Doctoral Researchers and Supervisors: https://www.fz-juelich.de/en/judocs
• Alongside work, our employees can meet and network with other colleagues at various events (e.g. New Year’s Reception, Carnival party, info lunches)
• Flexible working hours in a full-time position with the option of slightly reduced working hours and 30 days of annual leave
• Ideal conditions for balancing work and private life, as well as a family-friendly corporate policy
• Targeted services for international employees, e.g. through our International Advisory Service
• Capital-forming benefits and an employee pension scheme
Place of employment: Aachen and Jülich

To apply, please submit a complete CV, letter of motivation, university degree records and certificates.

You will be initially employed for a fixed term of 2 years but with the prospect of longer-term employment. Salary and social security benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund), pay group 13, depending on your current qualifications and the precise nature of the tasks assigned to you.

In addition to exciting tasks and a collaborative working atmosphere at Jülich, we have a lot more to offer: https://go.fzj.de/benefits.

We particularly welcome applications from people from a diverse range of backgrounds (e.g. regardless of age, gender, disabilities, sexual orientation/identity, as well as social, ethnic, and religious background). We strive to offer a diverse and inclusive working environment in which people enjoy equal opportunities and are able to fulfill their potential.