
The Energy Information Networks & Systems group at the Department of Electrical Engineering and Information Technology at Technische Universität Darmstadt seeks to fill the position of a

Research Assistant (Doctoral Student) on Uncertainty Quantification in Energy Management

The position is fully funded, initially has a fixed-term contract for 3 years, and is to be filled as soon as possible.

The Energy Information Networks & Systems group explores the future of energy management. This includes methods for the analysis and optimization of the structure of future energy systems, intelligent methods for their operation, and innovative IT solutions for future energy automation systems.

Renewable energies lead to fluctuations in the operation of energy systems. They also mandate a deep restructuring of existing energy systems towards more sector integration and the use of various kinds of energy storage. Both in operation and extension planning the correct handling of uncertainties plays a decisive role, both technically and economically. While the description of uncertainties in input factors like, e.g., weather data is rather well understood, the description of the uncertainties of energy system model outputs is far less explored. The open position shall develop and validate efficient methods for quantifying the uncertainties resulting from complex energy system models, beating state of the art methods like Monte Carlo sampling. This methodological work will be conducted in an environment with many practical projects to apply the new methods to.

Publications in international top venues are desired. Support of teaching and other lab duties is expected.

Requirements:

- Very good Master's degree in an engineering, mathematics, computer or natural sciences field, optimally with a focus in "computational" subjects
- Interest in algorithm development and testing as well as formal analysis and verification
- Excellent analytical and mathematical skills
- Advanced programming experience
- Very good English is a must, German a benefit
- Independent work attitude, initiative and being a team player

Opportunity for further qualification (doctoral dissertation) is given. The fulfillment of the duties likewise enables the scientific qualifications of the candidate.

The Technische Universität Darmstadt intends to increase the number of female employees and encourages female candidates to apply. In case of equal qualifications applicants with a degree of disability of at least 50 or equal will be given preference. Wages and salaries are according to the collective agreements on salary scales, which apply to the Technische Universität Darmstadt (TV-TU Darmstadt). Part-time employment is generally possible.

By submitting your application, you agree that your data may be stored and processed for the purpose of filling the vacancy. You can find our [privacy policy](#) on our webpage.

Please send your application including a motivation letter, CV, copies of academic transcripts, and the names and contact information of one to three references via e-mail with reference to the code number to: office@eins.tu-darmstadt.de

Code No. 414

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