Researcher Position (m/f/d)

Optimization of flight networks for hydrogen usage

Salary group
EG 13 TV-L

Employment
Full time (100 %), initially limited to 3 years, with a possibility for extension

Starting date
As soon as possible

Institute of Automotive Management and Industrial Production

What is your task?

The decarbonization of aviation requires the development of new types of aircraft engines. For short- and medium-haul flights, research is currently focusing on hydrogen-powered aircraft, whose widespread use will lead to a considerable demand for hydrogen at airports. As part of the project HyNeat, an interdisciplinary team will explore hydrogen supply networks' evolution and its effect on the air transport system. Your task is to develop and implement a suitable optimization model of the flight network and improve corresponding MILP solution techniques.

Who are we?

The design, planning and control of sustainable production and logistics systems are considered important levers of sustainable development. At the interface of sustainability, production and logistics, we work to answer selected business management questions with our interdisciplinary team. The aim is to support various actors in short- to long-term decisions. For more than 20 years, the AIP has proven research competence in this field. Our guiding principle is to link scientific research with industrial practice within the framework of technology- and decision-oriented business administration. The successful applicant will work in the Junior Research Group "Overall System Evaluation" with Dr. Imke Joormann.

Who are we looking for?

To strengthen our team, we are looking for a **Researcher (m/f/d) as soon as possible**, the duration is initially limited to three years. The possibility to obtain a doctorate is given. Your profil:

- Completed scientific higher education (master, university diploma) in Mathematics (or a closely related field)
- Solid knowledge in the area of Discrete Optimization
- Programming skills in C/C++ and/or Python
- Good command of written and spoken English
- Interest in working on topics with a real-world application, in cooperation with partners from engineering and economics
- Experience with Scip/Gurobi/Cplex would be desirable

How to apply?

Applications should be sent by e-mail to i.joormann@tu-braunschweig.de and must contain the following documents: Motivation letter, curriculum vitae, copies of bachelor and master diploma and transcript of grades, copy of master thesis, contact information for at least two references. All documents should be in PDF format, preferably in a single file. The position will be filled as soon as a suitable candidate is found.

The average weekly working time is 39.8 hours. The payment is made according to task assignment and fulfillment of personal requirements to salary group 13 TV-L. In principal, the position is part-time suitable, but should be 100% occupied. At TU Braunschweig, we aim to increase the share of women in academic positions and therefore particularly welcome applications from women. Handicapped applicants will be preferred if equally qualified; a proof must be enclosed. Applications from international scientists are welcome. International applicants may have to successfully complete a visa process before hiring can take place. For the purpose of carrying out the application process, personal data will be stored. Application costs cannot be reimbursed.

For further inquiries, you can contact

Dr. Imke Joormann

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