

Post-doc position on human-system partnership, Delft University of Technology, Netherlands.

Department/faculty: Faculty Industrial Design Engineering

Level: Doctorate

Working hours: 40.0 hours weekly

Contract: <empty>

Salary: 2640 - 3303 euros monthly (full-time basis)

Faculty Industrial Design Engineering

The faculty of Industrial Design Engineering is the largest and broadest scientific design institute in the world, with over 2,000 students, more than 6,000 alumni and 300 staff (researchers and lecturers, including designers from industrial practice). The faculty aims to contribute to a better living environment and respond to social challenges by combining human values and desires with technological feasibility and economic viability. We are excellently placed to do so, as we ground design methods and skills in scientific knowledge from a wide range of disciplines, leading to concrete solutions.

The faculty of Industrial Design Engineering consists of three departments: Industrial Design Engineering (ID), Design Engineering (DE) and Product Innovation Management (PIM). The Design Engineering Department is a centre for sustainable system-oriented product-service development, innovation, and manufacturing. The aim of our work is to empower designers through breakthrough technology innovations and to contribute to the innovative capability and competitiveness of the creative industry sector. The Design Engineering Department comprises more than twenty faculty members with research interests in cyber physical systems, intelligent products, internet of things, digital fabrication & 3D printing, data-intensive systems, augmented reality, human-robot collaboration, and sustainable design.

The Cyber Physical Systems research group at TU Delft is looking for a candidate with outstanding academic record for a post-doctoral position in the field of the human computer interaction and/or adaptive systems. The embedding research group is focusing on cognitive engineering of cyber physical systems and within this domain the postdoc will be investigating synergetic interaction of users and adaptive systems.

Job description

The postdoc candidate will work together with other researchers on investigating factors influencing human-system partnership in the context of cyber physical systems. This new research direction aims to address research challenges of adaptation- 1) transparency, (i.e. how to achieve transparency of adaptation in human-system cooperation) , 2) engagement (i.e. how to involve humans in decision making and task execution), 3) resiliency (i.e. how to guarantee safe and reliable operation under misuse and system failure), 4) responsiveness (i.e. how to manage proper timing of adaptation), and 5) robustness (i.e. how to facilitate

adaptation to context and mitigate negative effects of the context). The successful candidate will have the freedom to specify the focus of his/her research within the above-mentioned domains of research.

Though the research primarily investigates theoretical aspects of human-system partnership, practical application of the developed theories is expected to be validated in various domains of applications (e.g. medical assistive devices, adaptive haptic feedback, human robot cooperation in manufacturing and automotive applications). The candidate will be offered the opportunity to cooperate with start-ups, mentor graduate students to accelerate his/her research.

Requirements

The successful candidate is in possession of a doctoral degree in human computer interaction, or systems engineering with affinity for human factors and proven experience in experimentation. He or she should have a good understanding of (and be fascinated by) machine learning technologies, artificial intelligence and/or human modelling. The candidate is expected to publish her/his research in scientific journals and conferences. The candidate should be capable of performing independent research and working in a team on research projects. He/she should have an open personality and good communication skills to closely cooperate with colleagues, and students. Note that there is not a Dutch language requirement.

Conditions of employment

TU Delft offers a customisable compensation package, a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged. An International Children's Centre offers childcare and an international primary school. Dual Career Services offers support to accompanying partners. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.

Information and application

For further information please contact Zoltan Rusak, assistant professor, by phone +31 15 2789779 or by email z.rusak@tudelft.nl.

Applications should be sent by email to secr-de-io@tudelft.nl and include the following documents:

- A motivation letter explaining your research interest and the relevance of your experience to this position
- A detailed CV including a complete list of publications and the name and contact information of two to three references,
- A copy of three of your most relevant publications.