



inspire AG is the leading Swiss competence centre for product innovation and advanced manufacturing. As a strategic partner of ETH Zurich, our mission is to transfer knowledge and technology from research to Swiss machine, electrical and metal industries.

The Product Development Group at inspire offers in collaboration with the Product Development Group Zurich (pdz) at ETH Zurich the following position:

Research Associate / Researcher - Design automation for additive manufacturing with the option of a PhD thesis at ETH Zurich (100%)

Additive manufacturing offers great potential for future applications that optimally combine both economic and ecological benefits. The research of the Product Development Group focuses on the fundamentals to enable new applications based on additive manufacturing and design tools. The realization of AM applications requires knowledge and methods in product development that are not yet state of the art. The project of the PhD position is in close collaboration with Swiss industry partners.

Your Task:

The position offers the possibility of a PhD program, which will be supervised by Prof. Mirko Meboldt at ETH Zurich, who is co-responsible for the area at inspire. The project will investigate the implementation of automated design tools and an end-to-end digital workflow for products manufactured using additive and advanced manufacturing technologies. A special focus will be the integration of data-driven design and machine learning approaches and the implication to the following aspects: Geometrical, material, manufacturing, ecological, and business. In collaboration with the project partner, the new digital workflow will be applied for structural components of high-performance electronics.

Required experience:

- Very good Master's degree (Master of Science), demonstrating a strong foundation in relevant engineering disciplines
- Experience in CAD tools with focus on design automation.
- Experience in programming (e.g. Python) or machine learning.
- Intrinsic motivation and curiosity to advance the state of the art in additive manufacturing and writing papers.
- Motivated to bridge the gap between academic advancements and industrial applications in the field of digital end-to-end workflows for additive manufacturing (AM) components.
- Passion for industrial applications of additive manufacturing and advanced manufacturing technologies.

Required people skills:

- Independent work style and a confident manner.
- Team oriented working style.
- Proficiency in the English language, both written and spoken.
- Knowledge of the German language is an advantage.
- CH/EU/EFTA citizenship or a valid work permit for Switzerland.

We offer an inspiring, supportive and team-based industry and research environment that helps you to create your own research and expertise profile. Our team shares a common mission to make a measurable impact in both research and research transfer. The team has an excellent international and national network with research institutions and industrial partners.

Please send your full application (cover letter, transcripts, CV, references) with reference "Design automation for AM" to Dr. Julian Ferchow (Phone: +41(0)445565877, email: Julian.ferchow@inspire.ch) and our HR Petra Kahl, email Petra.kahl@inspire.ch.

Please also visit our websites www.inspire.ch and <https://pdz.ethz.ch/research/dnt.html>