Assoc. Prof. Mag. Dr. Susanne Saminger-Platz
Department of Knowledge-Based Mathematical Systems
T: +43 2468 4146, F: +43 2468 4142
susanne.saminger-platz@jku.at
www.flll.jku.at

Open PhD Position

` Advanced Multi-Objective Optimization Techniques for Design Automatization of Circuits and Electrical Drives´

The Department of Knowledge-Based Mathematical Systems (FLLL) at the Johannes Kepler University Linz (JKU) is offering a **PhD position** for a *junior researcher* **in the field of design automatization using** *evolutionary optimization techniques* for the tuning of circuits and topology optimization of electrical drives and the supervision of temperature profiles.

The research topics of interest encompass **advanced methods in the field of heuristics-based multi-objective optimization** using a combination of **constraint-based, memetic (nested global/local), discrete, and surrogate modeling** techniques. The developed algorithms should be adopted to the specific needs in two application scenarios, one dealing with **parameter tuning issues and automatically evolving components in circuits** (for the reproduction of temperature profiles), the other addressing the **optimization of topological designs in electrical drives** including the usage of surrogate models for ensuring fast fitness calculations. The work will be carried out in close cooperation with our research partners.

We are looking for PhD candidates interested in joining our international and interdisciplinary team of experienced researchers in the fields of soft computing, machine learning, data- and knowledge-based modeling, quality control, collaborating with national and international companies, research institutions and research partners.

The position shall be filled as soon as possible but not later than January 1, 2018. The cooperation shall be limited to four years. The position will be located in the JKU Softwarepark Hagenberg at the Fuzzy Logic Laboratorium Linz (Department of Knowledge-Based Mathematical Systems).

Requirements:
Applicants should preferably have a **completed master in Mechatronics, Computer Science, Mathematics or Statistics**, and should ideally have some prior *experience in evolutionary algorithms and optimization techniques* and *data-driven modeling*; moreover, any prior *knowledge in circuits and (electrical) drive design is welcome*. We expect willingness for preparing publications in international journals and conferences. A working permission for the EU is requested. We offer an interesting position within an interdisciplinary industrial research project in a friendly and collaborative atmosphere.
JKU wishes to increase the proportion of female faculty and, for this reason, if applicants are equally qualified, women will be given preference for this assignment. The university also welcomes applications from qualified applicants with physical disabilities, which will be given special consideration.

Deadline of App.: November 30th, 2017, **Start Date:** January 1st, 2018 or earlier
Approx. Salary (Gross): The *minimum* gross salary is 28.994 Euro per year for PhD applicants, for an employment of 30 hours a week (FWF rates).

Contact:
Please send your application including CV, certificates, references to publications together with a short letter of motivation (approx.one A4-page) to
Dr. Edwin Lughofer (FLLL), email: edwin.lughofer@jku.at and
Assoz.Prof. Dr. Susanne Saminger-Platz, email: susanne.saminger-platz@jku.at