Communication platform for bio-inspired design

Initial situation
Biology offers a multitude of solution principles that can be used for solving technical problems and for optimizing technical products. In interdisciplinary cooperation, researchers increasingly use inspirations and transfer analogies from nature to develop "bio-inspired" products. However for researchers and practitioners from biology and engineering, cooperation partners in the other discipline are hard to find: Searching and understanding information from the other discipline poses a real challenge.

Therefore, at the Institute of Product Development, a concept for a "communication platform" has been developed which enables biologists and engineers to build graphs of their knowledge on biological and technical systems. The concept has been tested in a first software prototype. To enable the collection of knowledge graphs via an online platform, a web application has been build using python and the Django framework. The task of the IDP is to further develop the web application to implement new functionalities such as an automated mapping between engineers and biologists.

Project description
The goal of this project is to develop and implement new functionalities of the KoMBi WebApp such as an automated mapping between engineers and biologists.

General conditions
- The project work can start immediately
- Knowledge of the German language is desirable
- The project can be performed by individual students or student teams of ~2 students
- Knowledge of programming with python is required

To ensure the project process and to convey required knowledge and information, regular project meetings will be scheduled.

Please send your application and in case you are interested or have any further questions, please don’t hesitate to contact:
**Helena Hashemi Farzaneh**, Phone: 089-289 15154, E-Mail: hashemi@pe.mw.tum.de