



# Tailoring for Everyone: Adapting Physical Tools with the Help of Personal Fabrication

## Open Bachelor/Master Thesis

### Background

With devices like 3D printers becoming more affordable than ever, personal fabrication of devices and objects is made possible. This means that users can generate physical objects based on readily available or self-made designs.

While we often adapt our *digital* tools (e.g. shortcuts, color schemes), we rarely adapt and change our *physical* tools. Instead, we either adapt to them, accepting their flaws or we purchase a replacement. This is not necessarily because of a lack of necessity, but also because the process to do so is too cumbersome and time-consuming. Ideally, personal fabrication *empowers* users to customize and improve their physical tools and environments. This applies to criteria like visual appeal, ergonomics, added/changed functionality or general repairs of devices or objects.

### Research Goal

A goal of theses in this area revolves around improving the process of personal fabrication for real-world objects. This includes determining requirements (aesthetic, ergonomic, functional), designing parts to be created and fabricating them. Software that improves scanning/design or hardware that improves fabrication can both be the focus of theses in this area.

Based on the graduate level (Bachelor, Master) and interest, the scope of the thesis is adapted.

Evgeny Stemasov  
Institut für Medieninformatik  
027 / 3302

[evgeny.stemasov@uni-ulm.de](mailto:evgeny.stemasov@uni-ulm.de)

