

## Focus Project SkinReactor

Throughout one year, our goal is to develop a functional medical device. Beside the technical engineering and testing, management and funding are part of our project.

We are an interdisciplinary team of mechanical engineering, bioengineering and industrial design students coached by experienced engineering and biology institutes.

SkinReactor addresses the interdisciplinary challenge to develop a novel automated culturing system for skin cells.

Damage of skin can lead to a protracted healing process. Severe skin burn, skin loss or chronic skin diseases are often associated with multiple surgeries and defacement. Nowadays, a child with a conventional skin transplant need to be re-operated every two years. The global standard is the treatment with split skin grafting. Autologous bioengineered skin can grow with the patient. Hence, this skin can avoid multiple surgeries and scar formation.

The SkinReactor will enable autologous, self-growing, and patient-specific skin patch production for replacement of damaged skin while decreasing health care costs by automation of cell culturing.