

# hfg<sub>OF\_MAIN</sub>



## DESIGN INSTITUTE OF TECHNOLOGY

The Institute combines all institutional activities of Professor Frank Zebner's design platform activities as well as the chair for *Technical Products and Product Systems* at Hochschule für Gestaltung (HfG) Offenbach School of Design. It covers scientific design research as well as pragmatic applications and design projects.

The Design Institute of Technology cooperates with important brands and companies including Audi, Bosch, BMW, Brother, FSB, Gaggenau, Hansgrohe, Hewi, Lamy, Linde, Lufthansa, Siemens, and Viessmann.

## DESIGN

Design is a disciplinary term. In a modern (and thus enlightened) academic and professional understanding, it essentially means the epistemic and practical activity of designing in a technical and civilized context. Design with its theories, concepts and methods finds its central work field, its competence and its essence in the visualization.

The openness and holistic view of all malleable phenomena of present and future human (and therefore also technical) action describe the process-oriented objective in design. Therefore, design is not a purely aesthetic matter, but a structuring consideration and competence.

**Design is a technology - in itself!**

### FROM ADDITION TO PRODUCTION

The design research project - supervised by Natalia Echeverri Pinto and Marc Schömann at the Design Institute of Technology - explored the possibilities of rapid prototyping as a manufacturing process. Generative shape development and rapid prototyping technologies open up new design scopes and sales opportunities.

**DESIGN 1** The knee protector flector by Bettina Gabriele Braun is defined by a special structural solution that offers flexibility, movement comfort and protection at the same time.

**DESIGN 2** The design Textile Upgrades by Andreas Grzesiek combines rigid polymers with elastic textiles, resulting in a new versatile composite material.

**DESIGN 3** The project Tradivation1.0 by Elisa Holzer leverages innovative 3D printing technology to ensure the preservation of traditional shoemaker craft for the future, and furthermore develops it from mass production to personalized, bespoke custom production.

**DESIGN 4** The draft RBX (Air Bending Matrix) by Steffen Strehl is a design study in the field of soft robotics. The 3D printed skeleton structure of a shape memory polymer allows movements that are controlled by air.

**DESIGN 5** The racing drone 3D-FPV by Daniel Y. Horie is the result of a study on additive manufacturing and mass suitability. It is based on a lightweight concept in which the frame integrates all the functional requirements.

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