June 2010 - May 2011: 'Fabrication Laboratory', DHUB Design Museum, Barcelona. International exhibition of design works produced with the aid of rapid prototyping technologies. Five items selected from Automake project to be exhibited.

Research team:

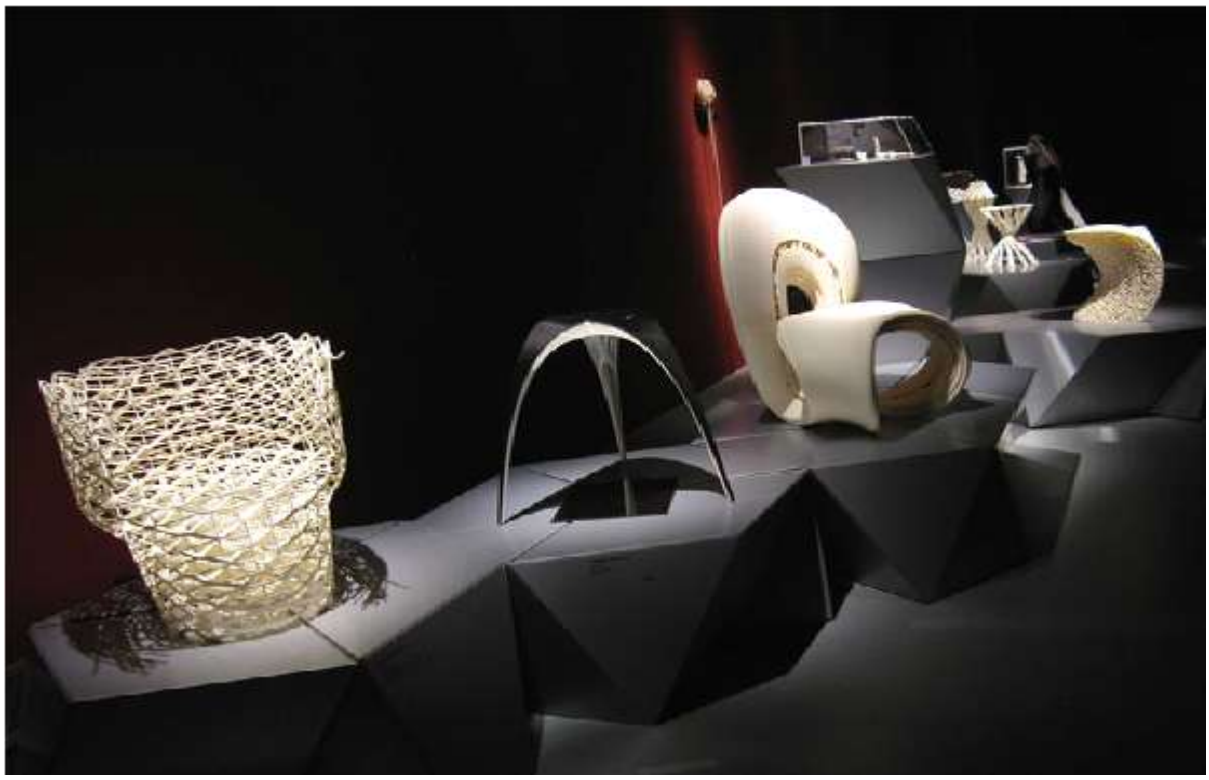
Dr. Ertu Unver : University of Huddersfield, School of Art & Design, Department of Architecture and 3D, Huddersfield, HD1 3DH, UK,

Dr Justin Marshall : University College Falmouth, Associate Professor of Digital Craft, Design Centre, Tremough Campus, Penryn, Cornwall. TR10 9EZ, UK.

Dr Paul Atkinson : Reader in Design, Faculty of Arts, Computing, Engineering and Sciences, Sheffield Hallam University, City Campus, Howard Street, Sheffield S1 1WB, UK

Automake is about combining generative systems with craft knowledge and digital production technologies to create a new way of designing and making objects that blurs the boundaries between maker and consumer, craft and industrial production. *Automake's product creation process in relation to traditional craft and industrial processes.* Automake was developed as a research project that aimed to investigate the potentials of using generative systems to digitally design unique one-off works and produce them using a range of rapid prototyping/manufacturing technologies and CNC equipment.

We have created form building software that is designed to be extremely user friendly and allow anyone to design their own craft/design works. In addition we have developed a system for outputting construction files so that you can send us your new designs to be physically produced. Visit the gallery page to see many examples of completed works and how they were created. The context and process pages provide an overview and a description of the underlying principles behind the project.



This research project involves the development of a digital generative system for the creation of one-off craft/design works based on randomly generated 3D matrices. The system is to be used by the maker involved in the project to develop new work by consumers. The consumers will then become ‘co-creators’ of their own craft/design works. They will not need any CAD or advanced computer skills. The data produced by this new software will be used to control a range of rapid prototyping/manufacturing machines, which will physically produce the new items / artefacts.

If seen in the wider context of a post industrial manufacturing era involving increased use of smart technologies and the development of personal fabrication techniques, these systems can be considered as part of a growing number of speculative projects and theoretical debates that seek to redefine the relationship between people and objects. it could be argued that the digital systems developed in this project do not conform to a traditional, discipline-based approach, and instead propose an undisciplined design process - a new way of creating objects which can be related to the older tradition of bespoke commissioning, but potentially in a more democratic and widely available way. Therefore this type of system has the potential to rekindle and expand a craft tradition in which maker and client work together to develop a design that is unique to the individual.