

ASSA ASHUACH  
LEMON SQUEEZER  
2010

...

The lemon squeezer is one of the first pieces in the co-designed objects collection, which is powered by digital forming technology. The variation in these objects shows the personalisation and adaptation of both form and function by the user through a collaborative design experience.



RICCARDO BOVO  
FLOCK LAMPSHADE  
2011

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Flock Lampshade is the result of a Design Fabrication MicroSystem. Software allows a user to customize a design for an open source 3D printer to produce. The design is constantly redefined in shape by the user, and at any moment is ready for production - the time between design phase and production phase drops to 0.

MICHAEL EDEN  
LARGE OVAL YELLOW  
BLOOM  
2011

...

An iconic object from the first Industrial Revolution is produced in a way that would be impossible using conventional industrial ceramic techniques. The piece is loosely based on early Wedgwood tureens, chosen for their classic beauty and in homage to Josiah Wedgwood's role as a father of the first Industrial Revolution.



JOSIEN PIETERS FOR  
FOC  
REALITY CHECK RING  
2010

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The challenge for Josien Pieters was to develop a new wedding ring design by researching the phenomenon of such rings throughout history and different cultures. FOC's brief dictated that the design had to be manufactured by 3D Printing.

SAM JACOB  
VERSIONED CHAIRS  
2010

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Versioned Chairs explores five canonical chairs through acts of translation. A photograph of the original chair, was first translated into a textual description, next the text was translated into sketches, drawn by a group who had no idea of the original subject. One of each sketch was then digitally modeled and then returned to a 3D form through rapid prototyping.

JUMP STUDIOS  
A GARDEN FOR BRENT  
CROSS  
2011

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This project was a proposal to create an attractive world class outdoor casual eating and takeaway market facility. It would include newly created shelter canopies and a protective enclosure, enhancing the environment adjacent to one of the main entrances to Brent Cross Shopping Centre.

MARKUS KAYSER  
SOLAR SINTER  
EXPERIMENTS  
2011

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Sunlight and sand are used as raw energy and material to produce glass objects using a 3D printing process. The process combines natural energy and material with high-tech production technology.



DIRK VANDER KOOIJ  
ENDLESS  
2010

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Robot Herman, the name of this chairs' printing machine, has learned to build endless pieces of furniture by ejecting a thread of molten plastic in one continuous movement - like squeezing a tube of toothpaste.



CHAU HAR LEE  
RAPIDFORM SHOE  
2009

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This shoe design spans conceptual showmanship with elegant and original yet accessible footwear. A crossover of making and manufacturing processes from fields other than shoemaking, are used in order to realise Chau's designs.



PEARSONLLOYD  
LOX CHAIR  
2010

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This chair for German brand Walter Knoll, delivers a seamless sculptural form and extraordinary comfort through a refined and ambitious piece of plastic engineering. The prototype seats have been 3D printed.



CHLOE MCCORMICK +  
NICHOLAS O'DONNELL  
HOARE  
TAPESTRY SPECTACLE  
2011

...

Taking Joshua Silver's onsite prescription liquid lenses as a starting point, these frames are designed to be hand customised to fit their owners culture. The spectacles could change the way we personalise and connect with our items.

ALAN DEMPSEY/NEX  
TIMES EUREKA  
PAVILLION  
2011

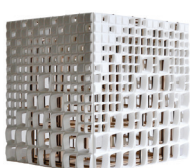
...

This temporary garden and pavillion explore the significance of plants to society. Plant species were chosen to reflect their benefits to society including medicinal, commercial and industrial uses. The structure was designed using computer algorithms that mimic natural growth.

SERIE ARCHITECTS  
V OFFICE  
2007

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The proposal for this office building in Mumbai, imagines a modulated façade, that performs as a series of loggias, storage spaces, sun-shades and window-cabins all moulded into one. The models façade is 3D Printed, the internal supports assembled from laser cut plywood.



SUPERFUSION LAB  
CENTRE FOR THE  
PROMOTION OF  
SCIENCE  
2011

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The Centre for the Promotion of Science presents a forum to experiment with the construction of an operable landscape. The façade is constructed of a series of large-scale concrete louvers which are organized to minimize direct sunlight, but allow constant indirect light into the gallery.

SILVIA WEIDENBACH  
BANGLES  
2011

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In this selection of bangles, a combination of high tech processes like rapid prototyping and haptic interfaces are used in a playful and dynamic way to create at speed and to visualise ideas.



UNFOLD  
L'ARTISAN  
ELECTRONIQUE  
2010

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In L'Artisan Électronique, pottery, one of the oldest artisanal techniques for making utilitarian objects, is combined with new digital media. Despite this, the installation still clearly refers to the artisanal process of working in clay.

technology.

printed and the machine on which it is printed is exemplary of the possibilities of this experimentation with the design of the printed object, the material in which it is built by their designer so as to accommodate the particular 'ink' they wanted to use. This case with 3D Printers. Some pieces in the exhibition have been printed on machines whereas an everyday printer uses mostly a standardized carton of ink, that is not the finalised by the designer before they can literally click 'Send to Print'. However, computer. Each physical object to be printed starts out as a computer drawn sketch, The similarities between ordinary and 3D Printers also extends to the role of the

object can be built up layer by layer right before our eyes.

of ink, it spouts a continuous thread of nylon, polyamide, or even metal. As a result, a 3D simultaneously printing on a vertical plane and, instead of individual droplets pre-determined order to generate letters. A 3D Printer operates in a similar way whilst emits ink on a horizontal axis, placing miniscule droplets next to one another in a Presumably we are all acquainted with the way a conventional desktop printer

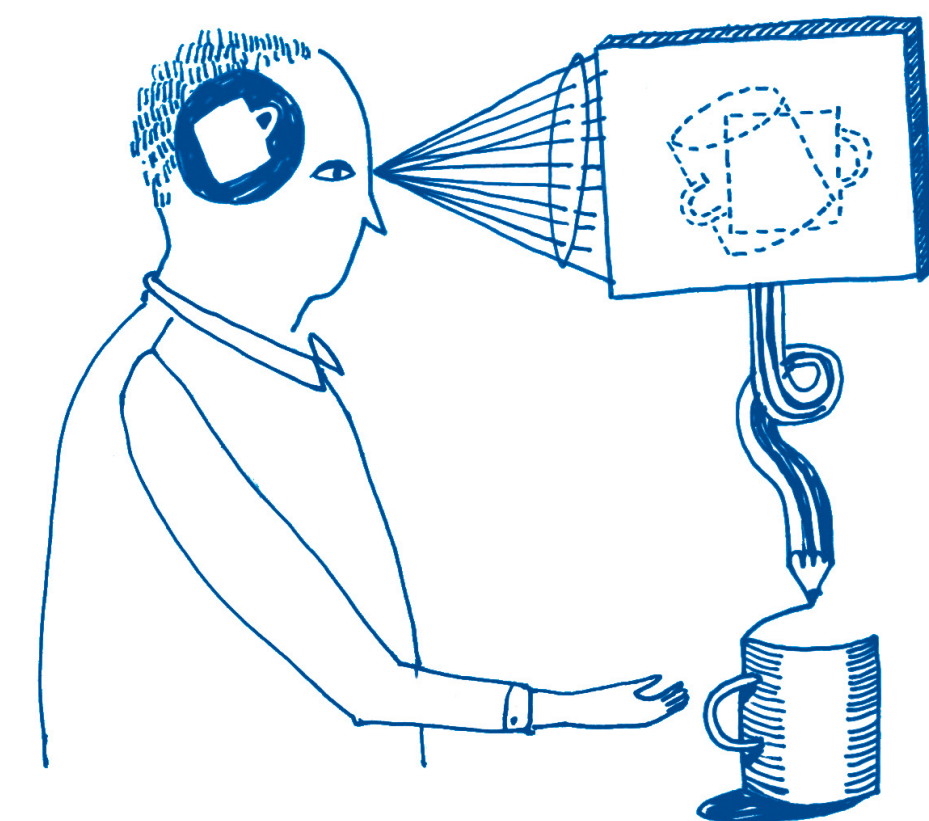
these uses.

being used to produce 'finished' end designs. This exhibition shows examples of both of the technology have developed, in part due to designers' experimentation, it is now costly, it is still much quicker than producing a handmade model. As the capabilities been in operation for decades. Early users of it were for creating prototypes, as although Although the rise of general interest in 3D Printing is fairly recent, the technology has

a person to create a three dimensional object using a specifically designed printer. design industry. In summary they all refer to a developing technology which enables 3D Printing, Rapid Prototyping, Additive Manufacturing...these terms which once

## SEND TO PRINT

## PRINT TO SEND



## SEND TO PRINT PRINT TO SEND

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www.assaashuach.com

integrated part of their design methodology.

Together they use dedicated 3D software and electronics and engineering tools as an network of skilled specialists from the design, science and manufacturing sectors.

Assa Asuach is a London based designer. He set up his studio in 2003. Today it includes a . . .

Assa Ashuach MA RCA, FRSA

A shift in the order of use - User Informed Objects

together, and one which has the users values at its core.

have set. This co-designing process is about designer and user creating an object are then free to adjust the design to suit their preferences, within some boundaries we customization. We provide a user with access to a pre-designed object design file. They I developed Digital Forming as a software house that proposes to revolutionize product

designed object as a digital file; a virtual object that can evolve.

development of new industrial design methodologies. The centre of my research is the user working together. My research is very much about the innovation and

their object is sent to print. Technology enables us to do this in real-time - designer and means designers are able to accommodate consumers design decisions digitally, before An industrial evolution is occurring on several levels of the design process. 3D Printing

The Aram Gallery is an independently curated space that encourages and promotes understanding of contemporary design. We do this by presenting the work of designers and artists in their early careers.

**Send to Print / Print to Send** presents a snapshot of the uses of 3D Printing technology today, expanding on designers processes as they grapple with this new way of making.

Director Zeev Aram  
Curator Héloïse Parke

Cover Illustration by Rachel Gannon  
www.inkillustration.com

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