



OBJECT
OF DESIRE
PRODUCT
DESIGN &
PRESENTATION

FANG BIN GUO

Product Design and Presentation introduces the discipline of product design, the module emphasises on form generation including: design theory, problem solving methods, conceptualisation of ideas and aesthetic sensibility.

Secondly, it emphasises skill development in two/three dimensionals and awareness of materials/texture/colour. The module encourages students to visualise & present concepts through various CAD approaches to a professional level. The following knowledges are expected from students to demonstrate :

- The knowledge and understanding of the factors, elements & principles of design aesthetics
- The knowledge and understanding of colour studies in two and three dimensional designs
- The knowledge and understanding of material/texture in two and three dimensional designs

After completing the module, the students should be able to:

- Conduct visual researches and develop a 3D rendered model
- Understand how material, colour and texture are applied in creating a persuasive graphic presentation of a product
- Create a high-quality physical model

The students are expected to learn the knowledge and design skills through a design project 'Object of Desire'.

INDUSTRIAL DESIGN NOW & THE FUTURE

INDUSTRIAL DESIGN: THE PROFESSIONAL SERVICE OF CREATING & DEVELOPING CONCEPTS & SPECIFICATIONS THAT OPTIMIZE THE FUNCTION, VALUE & APPEARANCE OF PRODUCTS AND SYSTEMS FOR THE MUTUAL BENEFIT OF BOTH USER AND MANUFACTURER. INDUSTRIAL DESIGNERS DEVELOP PRODUCTS AND SYSTEMS THROUGH COLLECTION ANALYSIS & SYNTHESIS OF DATA GUIDED BY THE SPECIAL REQUIREMENTS OF THEIR CLIENT AND MANUFACTURER. THEY PREPARE CLEAR AND CONCISE RECOMMENDATIONS THROUGH DRAWINGS, MODELS & DESCRIPTIONS. INDUSTRIAL DESIGNERS IMPROVE AS WELL AS CREATE, & THEY OFTEN WORK WITHIN MULTI-DISCIPLINARY GROUPS THAT INCLUDE MANAGEMENT, MARKETING, ENGINEERING & MANUFACTURING SPECIALISTS.

INDUSTRIAL DESIGNERS SOCIETY OF AMERICA
IDSA (2015)

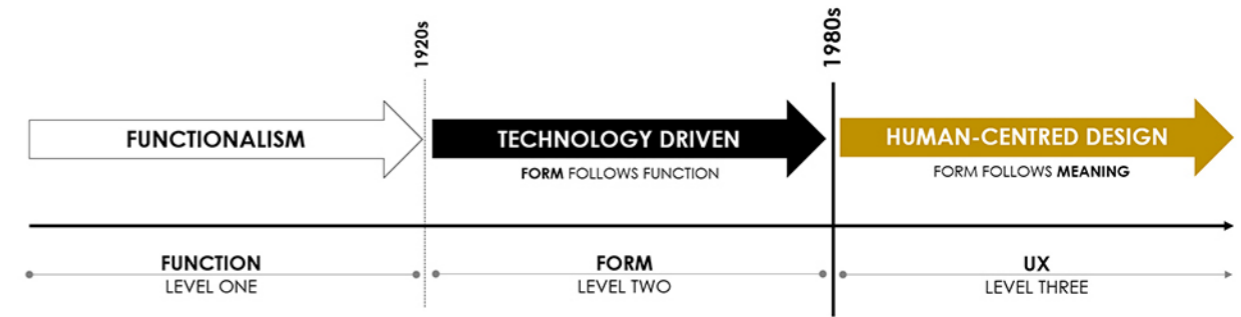
In the 1970s-80s, Industrial Design meant creating mass-manufactured products. The question was 'How do you make the perfect cup or chair or sports car?' to create a more efficient and more beautiful product. Now industrial design is the interface between the world of technology & the world of people, it is as much about designing systems & software & applications as it is about designing objects (Brown, 2013).

Traditionally, product design is about form/styling and requires materials /manufacturing knowledge. Now neither service design nor interaction design requires an understanding of materials and manufacturing practices. Contemporary designer is who can work across disciplines, understands human beings, business & technology (Norman, 2015).

Industrial designers do not usually design motors, electrical circuits, or gearing that make machines move, but they may affect technical aspects through usability design and form relationships. Industrial designer usually work with other professionals such as marketers to identify and fulfil customer needs and expectations. Industrial design can overlap significantly with engineering design, but, in general engineering focuses on functionality or Utility of Products whereas industrial design focuses principally on aesthetic and user-interface aspects of products (Pulos, 1988).

THREE LEVELS OF DESIGN

Whitney (2005) describes industrial/product design that consists of three levels. At level one, the design focuses on functionalism and the role of designers was to support projects. At level two, design concentrates on forms and aesthetics, where the role of designers was emphasised on forms and aesthetics. These two levels of design focused on components and relying on system robustness, which means the design was driven by the system and manufacture capacity. Since the 1980s, technology innovation has shifted the product design from technology driven to user-centred design driven stage (level three). This is where design focuses on solution and values user interface robustness, therefore the real-world scenario drives industrial and product design (Whitney, 2005).



THE TREND OF AESTHETICS

MONOLITHIC It incorporates key elements of minimalism, massiveness and primitive geometries. Most often, pure rectangular forms or basic geometry and simple, unadorned, flat planes are commonly used.

FLOWING CHAMFERS The chamfers flowed around the form in very dynamic/fluid ways flaring from thick to thin to create flowing bands of surface highlight.

BONE LINES These subtle fading ridges that flow along a surface are actually caused by an underlying frame, the way your cheekbones or collarbones impact the overlaying skin.

HEXAGONS/HONEYCOMBS The use of hexagons, alone or in a repeating pattern. The hexagon represents scientific, mathematical, ecological and connotations of cutting-edge technology.

ORGANELLE It uses soft, fluid, organic sculpting to echo natural forms biological joints, pebble-like smoothness, open cellular voids. The key features are the softened smooth surfaces and huge curvature-continuous fillets between form transitions.

ORGANIC FACETS These forms are constructed with large, planar, angular surfaces, which create severe forms that seemed cut, chopped, and sliced.

PLANAR FORMS The technique is extremely simple: take a material that lends itself to bending or forming, and use that simple process to define and enclose a form.

TOPOLOGY The idea of defining a surface via layers of concentrically sliced planes. Creating a sense of flow, lightness and implied volume. Moving from two-dimensional planes to sliced tubular matrices or even pixelated cube clusters.

BIOTECH The BioTech trend evolved as structural and material technologies began to intersect directly with the human form.

COMPRESSION Proportion is typically a first-read aesthetic element. Compression is the proportion of an object that is severely compressed in a specific direction (usually the one that will make the object seem very thin).

MODULAR The form is created through an assemblage of smaller forms: modules that stack and nestle together to construct a larger volume, but still retain their own independent properties.

WIRE FORMS The technique is to utilise a network of long structural wire to define the primary characteristics of a form.

FLEXIBLE STRUCTURES Repeated, mathematical patterns are engineered into the form itself, paired with materials possessing unique bendable properties, allowing these structures a degree of movement beyond just a simple rigid geometry.

FUTURAMA There seems to be a common stylistic agreement that our future will be light, clean, minimal, smooth, both geometric and biological, and white.

Form follows function is a principle associated with 20th-century modernist architecture and industrial design, which says that the shape of a building or object should primarily relate to its intended function or purpose. The idea behind this philosophy is the "efficiency". Efficiency in materials, space planning & ornamentation provides a way to minimise the cost of construction; increase the profit margin, which means to balance money, aesthetics, supply-demand & innovation. Louis Sullivan, the influential modern Architect who coined the phrase form follows function, was known for his use of lush Art Nouveau decorations. He used the rule to define the major shapes of his designs; not as a philosophy against all artistic decoration.

FORM FOLLOWS FUNCTION

Bauhaus is one of the first design schools in the world, which was founded in Germany in 1919. It became a dominant force in architecture and the applied arts in the 20th century. The characteristics of Bauhaus style was simple, geometrical and highly refined. The Bauhaus style had a profound influence upon subsequent developments in art, architecture, typography, graphic design, interior design, and industrial design. The major design movements in the 20th-century such as:

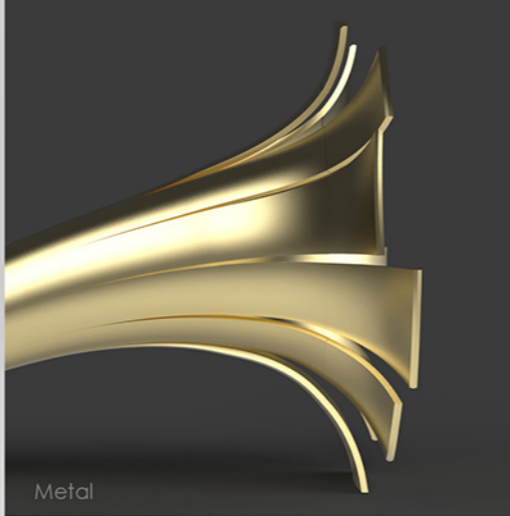
BAUHAUS
MODERNISM
MINIMALISM
RATIONALISM
NATURALISM



Gloss/reflection



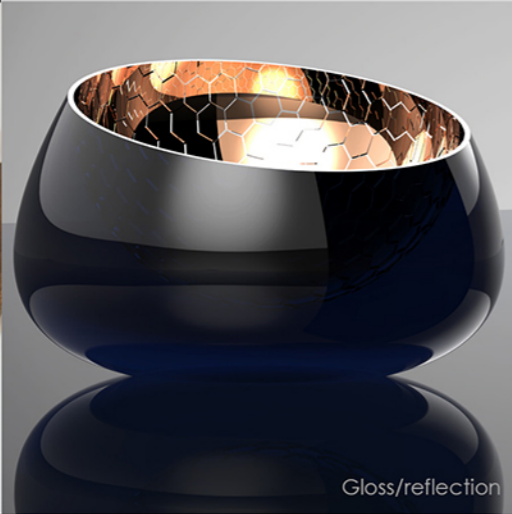
Halftone Patterns



Metal



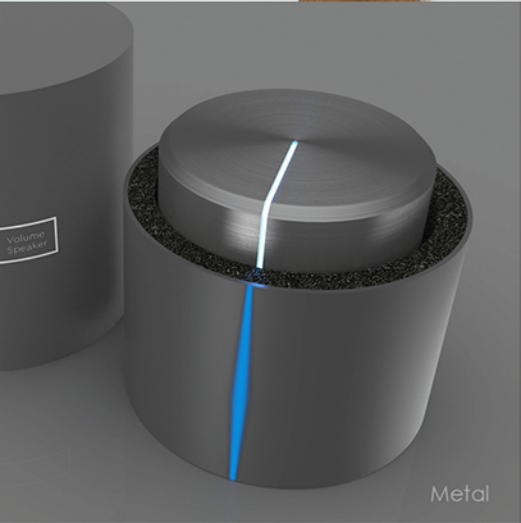
Wood



Gloss/reflection



Leather



Metal



Ephemera



Chromatic Gels

TEXTURE/MATERIALS

GLOSS/REFLECTION

PATTERNS

MACRO PATTERNS

HALFTONE PATTERNS

TRANSPARENCY

EPHEMERA

CHROMATIC GELS

FABRIC

METAL

LEATHER

WOOD

WHAT
MAKES
A GOOD
DESIGN

These are students' work from BSc Product Design Engineering, Level Five, LIMU, 2015-17

OBJECT OF DESIRE

Designer: James Pany, BSc Product Design Engineering, Level Two, LMMU, 2016

THE PROJECT DISCRPTION AND OBJECTIVES

Object of Desire is a NPD project that encourages the students to explore the nature of aesthetics and employ it as a tool for design. It also requires students to generate and develop concept and to present it to a desired standard. The students will design a container (the choice of content is left to the student's discretion), which explores the concept of desirability through the use of form & material against stated objectives. The container itself shall be no larger than 500 x 500 x 500mm. Three course works that require students to complete at the end of the semester include:

- A project process book: to be printed and binded no less than A5 size.
- A poster presentation: A1 poster (portrait) 594 x 841mm.
- An academic model: full scale and less than 500 x 500 x 500mm

After completing the study, students should be able to apply aesthetics objectively, strategically, able to deliver a quality presentation and be able:

- To develop three dimensional model as a means of form exploration and prototyping
- To create a project process book to demonstrate the form study & visual research
- To render a three dimensional model through 3d software to a professional level
- To develop presentation style and techniques
- To demonstrate an appreciation of aesthetics
- To generate concepts from a broader frame of reference (imagination)
- To manage & coordinate individual design activities

THE ASSIGNMENT ASSESSMENT

SKILLS (40%)

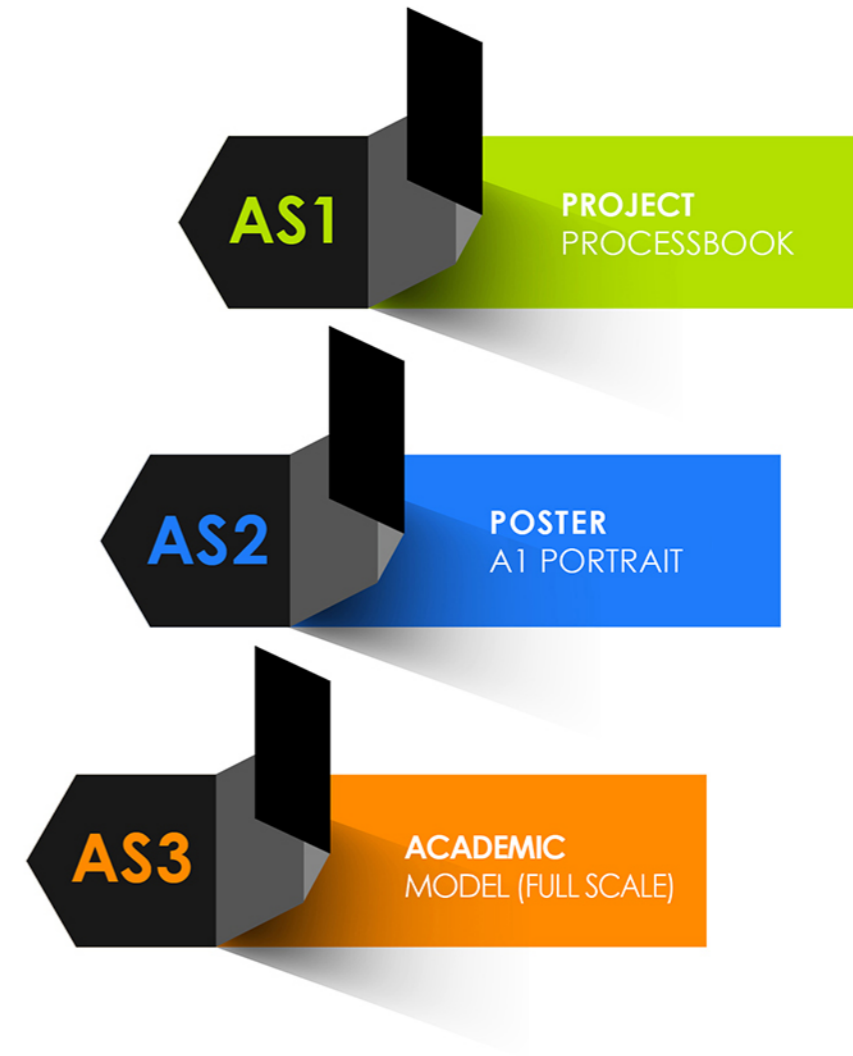
- CONCEPT GENERATION & DEVELOPMENT
- DESIGN TRANSLATION SKILLS
- COMPUTER MODELING (3D)
- COMPUTER RENDERING (3D)
- COMPUTER SKILLS (2D)
- GRAPHIC DESIGN SKILLS
- PROJECT MANAGEMENT

KNOWLEDGE (30%)

- DESIGN AESTHETICS

CREATIVITY (30%)

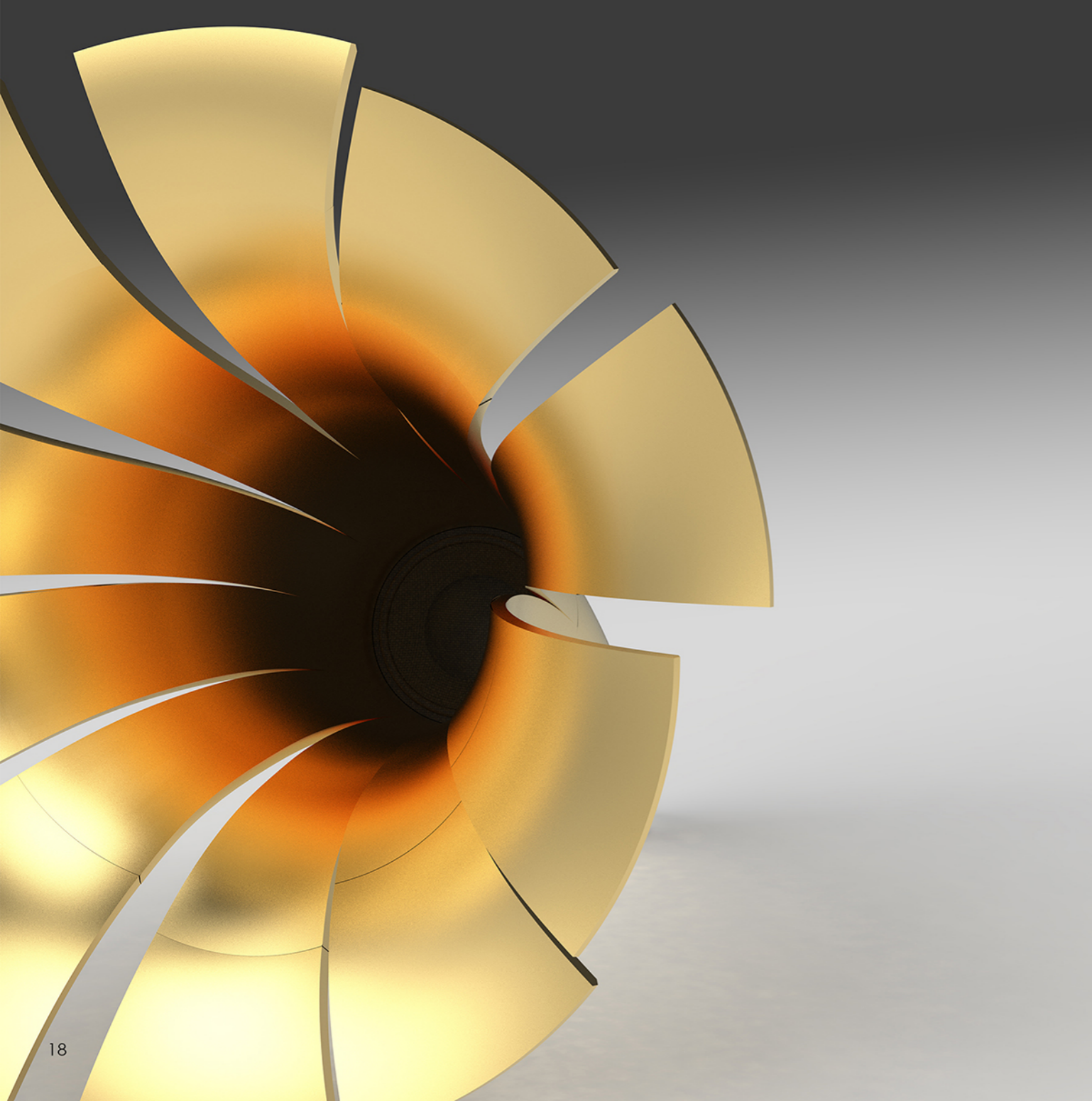
- NATURAL CREATIVE ABILITY



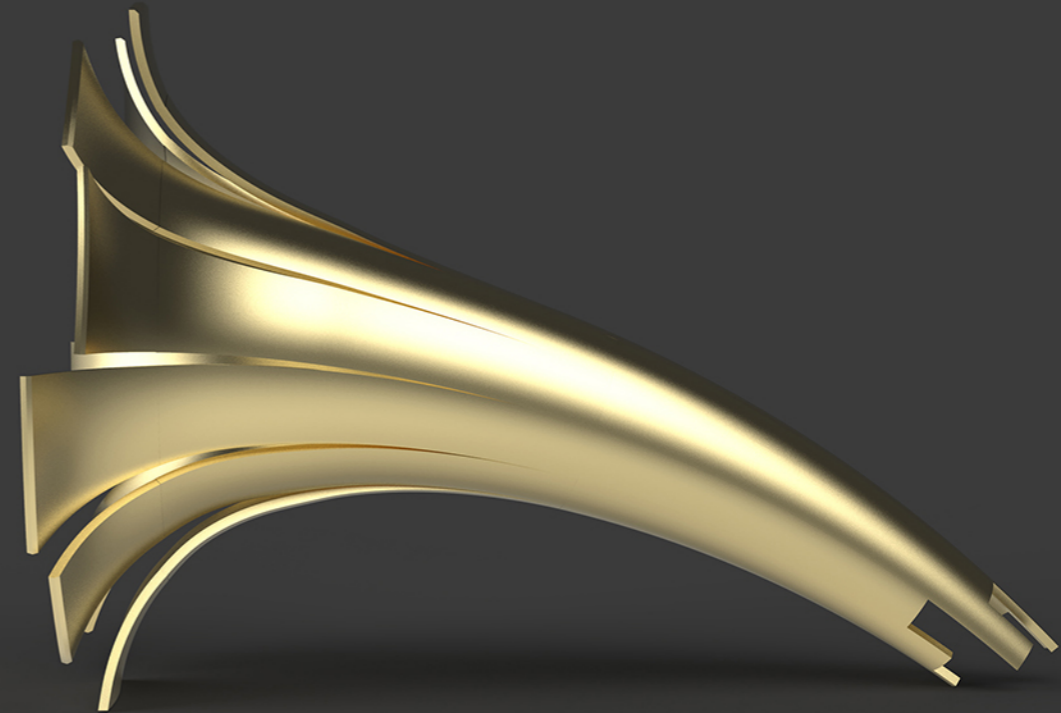
01

PROJECT PROCESS BOOK

A process book requires the students to present the NPD process of their projects incorporates: the visual researches, concept generation/development, design detailing and computer renders. The book should be printed & binded no less than A5 size.



Project: A Speaker Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18





SD

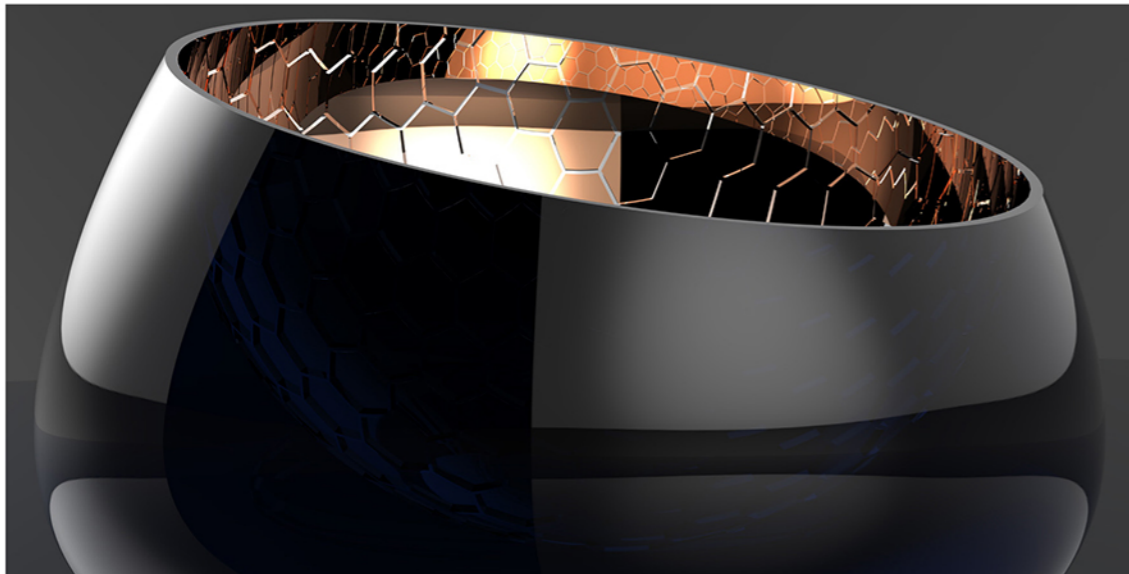
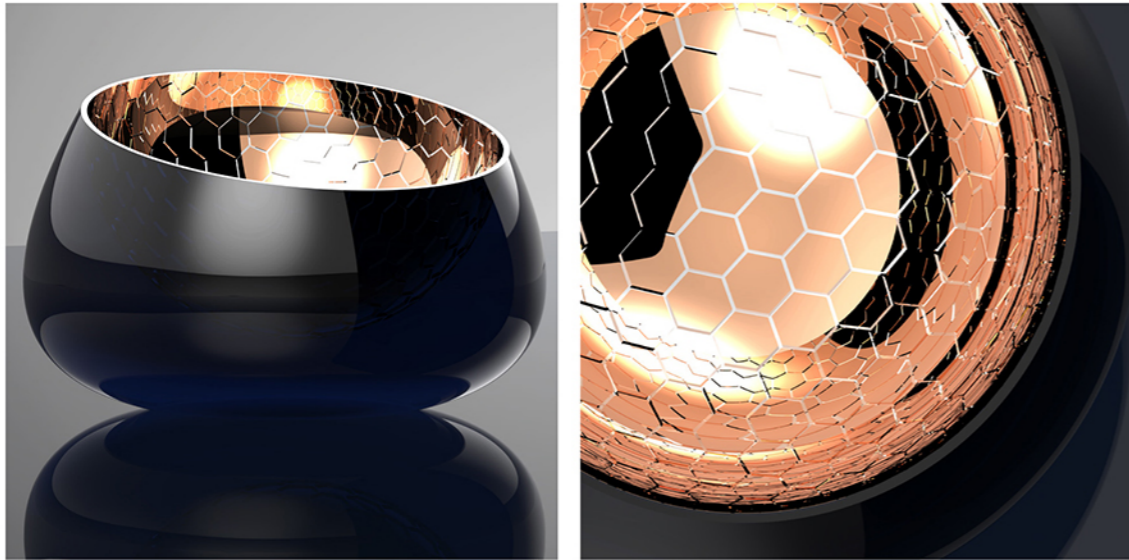
Project: Object of Desire - A Vase Container Design
Modeled by Solidworks and rendered in KeyShot
Student at Product Design Engineering/ Level Two
2017-18



PM

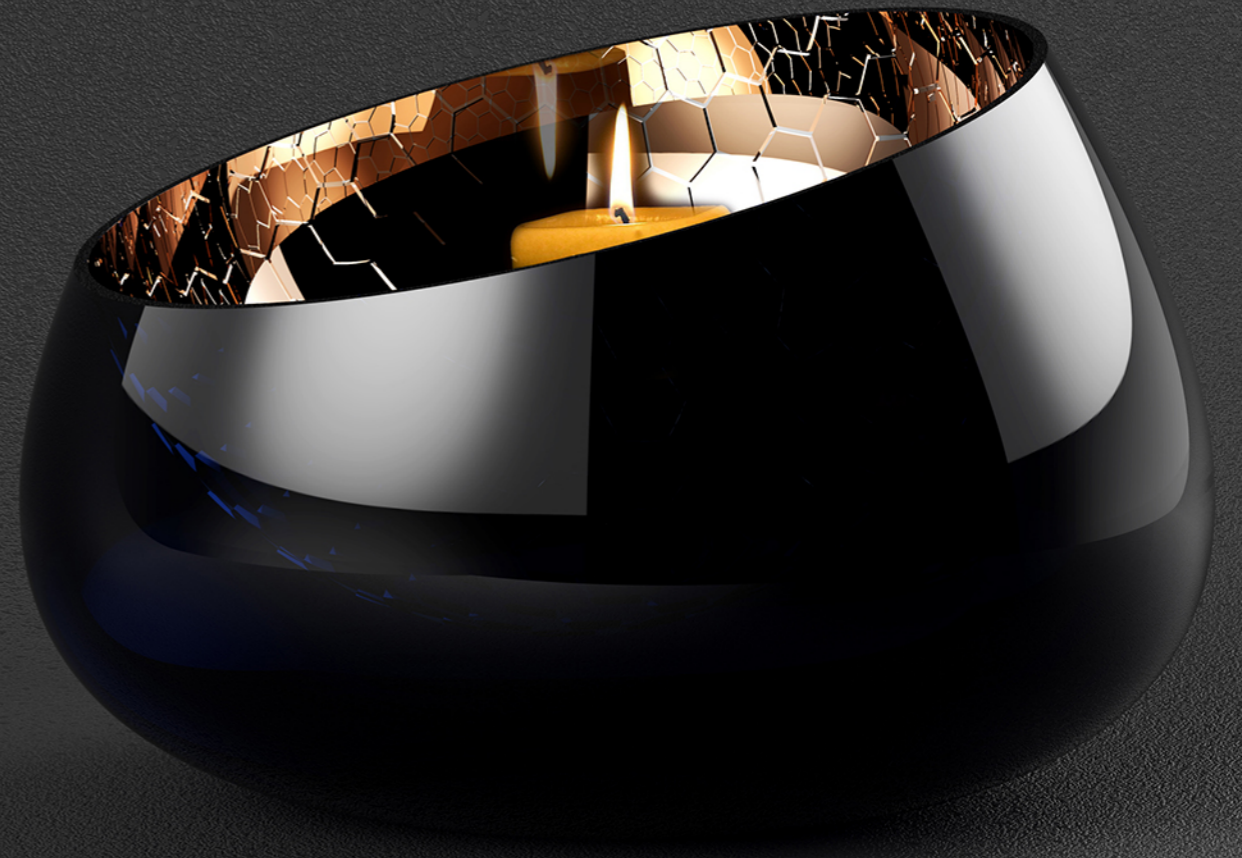
Project: A Perfume Bottle Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2015-16

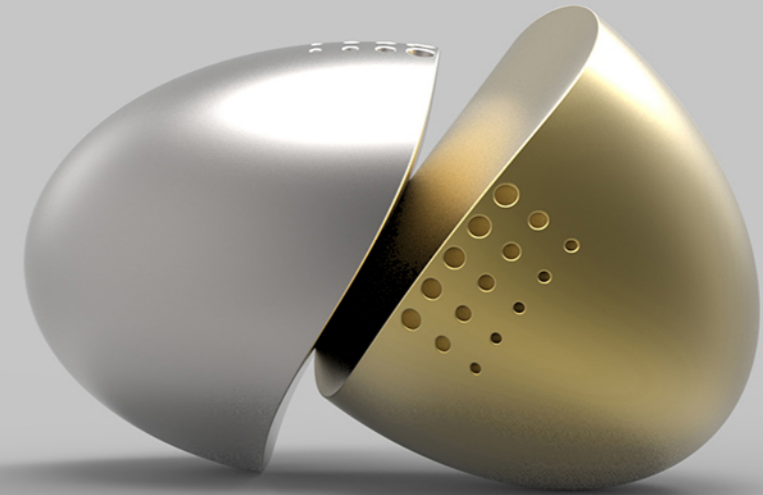




AW

Project: A Candle Holder Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18





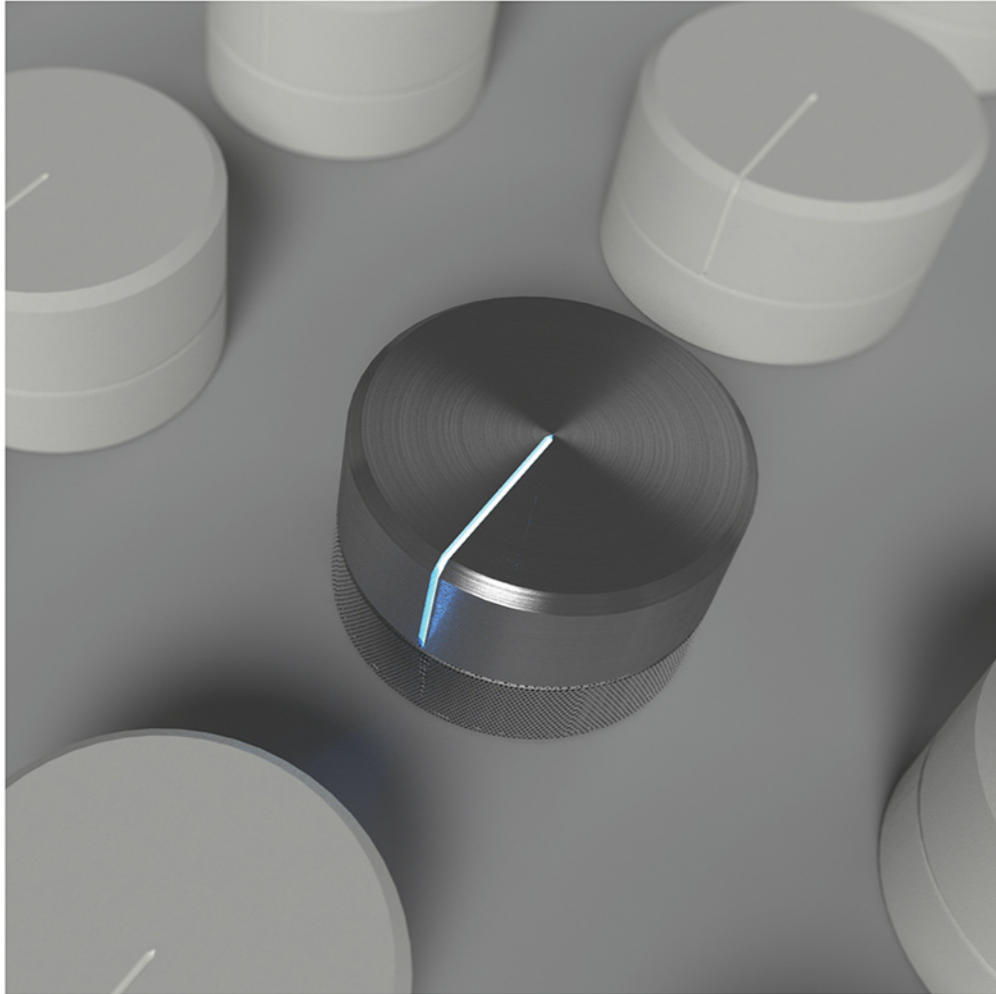
Project: A Salt and Pepper Shaker Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18



Smooth stainless steel spray head with ergonomic inset grooves

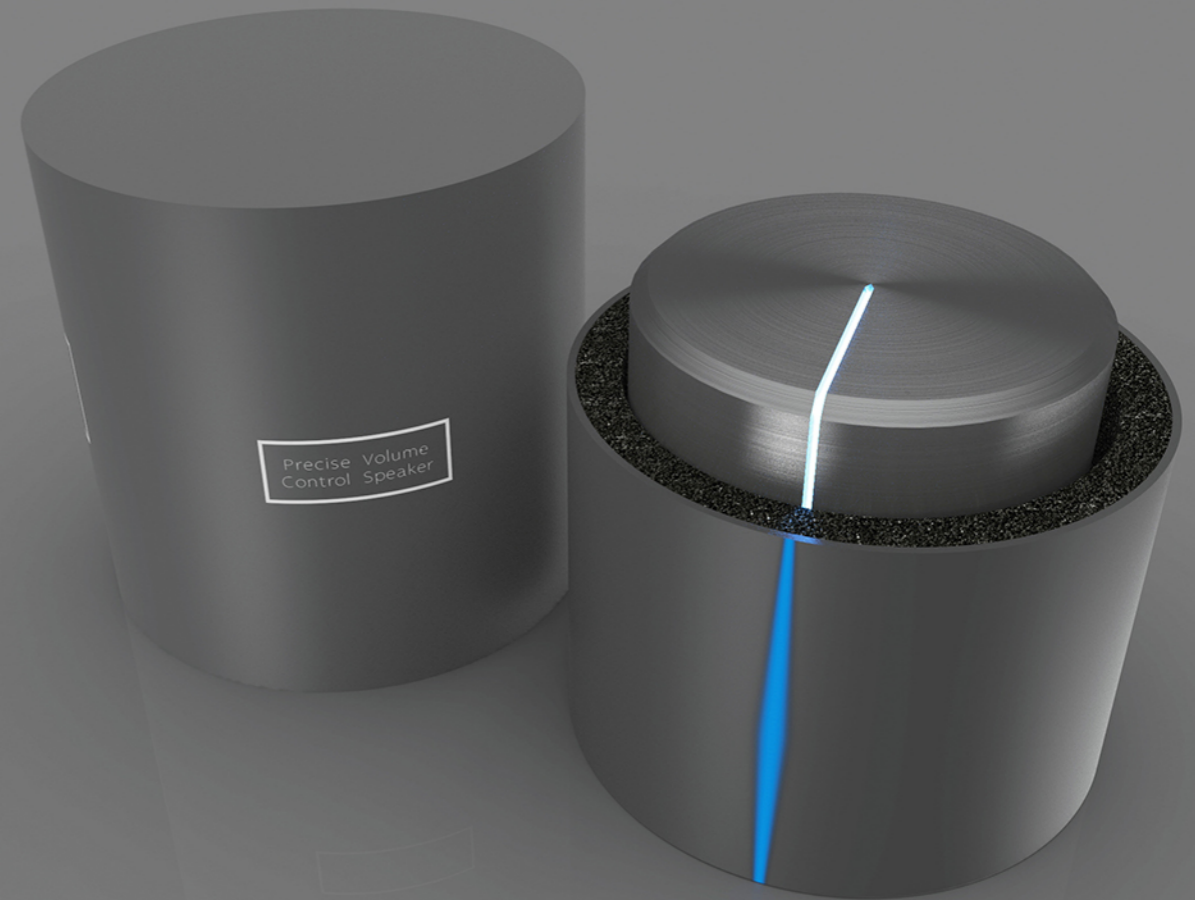


Project: A Perfume Bottle Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2016-17



DM

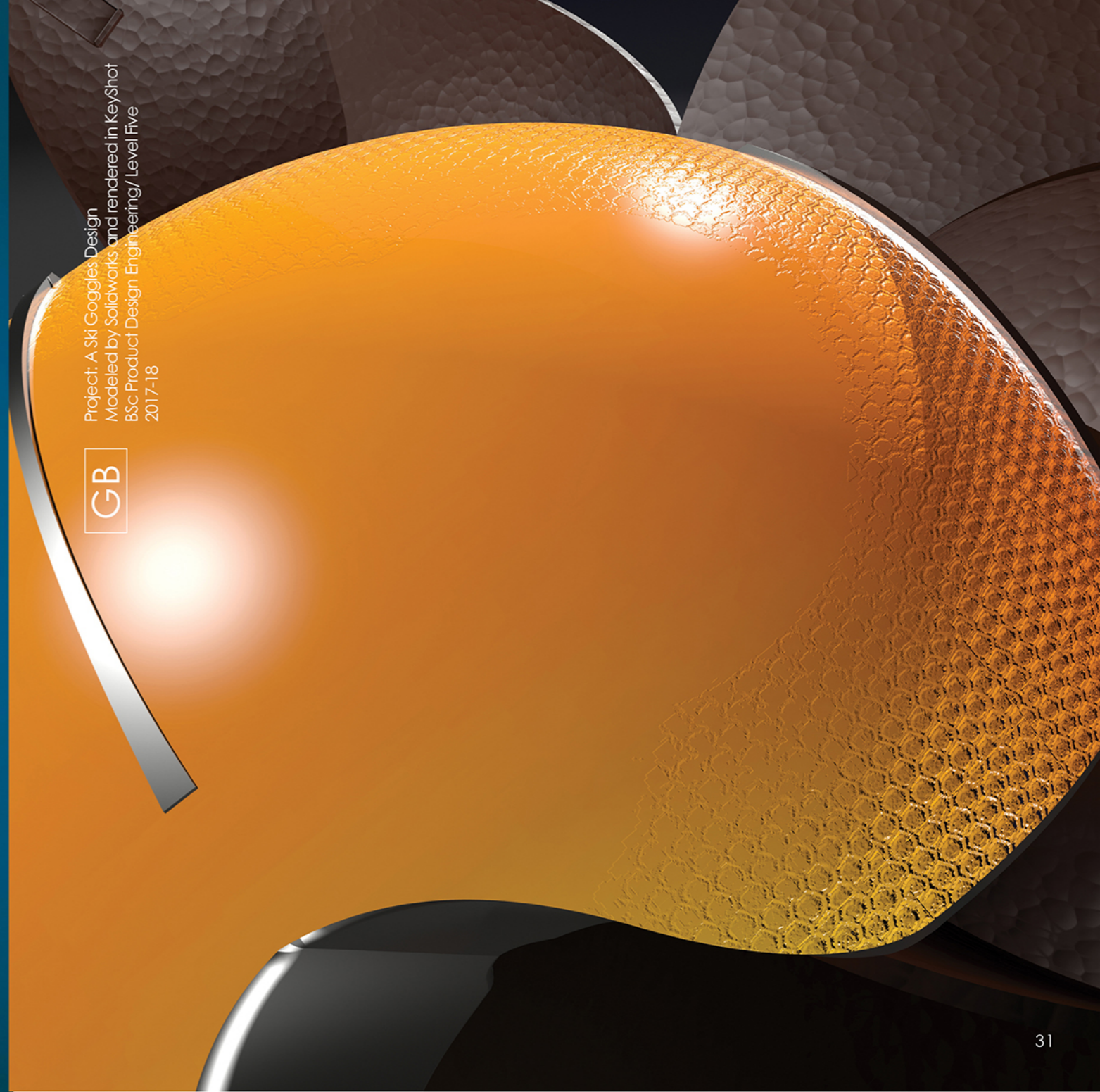
Project: A Portable Speaker Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18





JP

Project: A Watch Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18

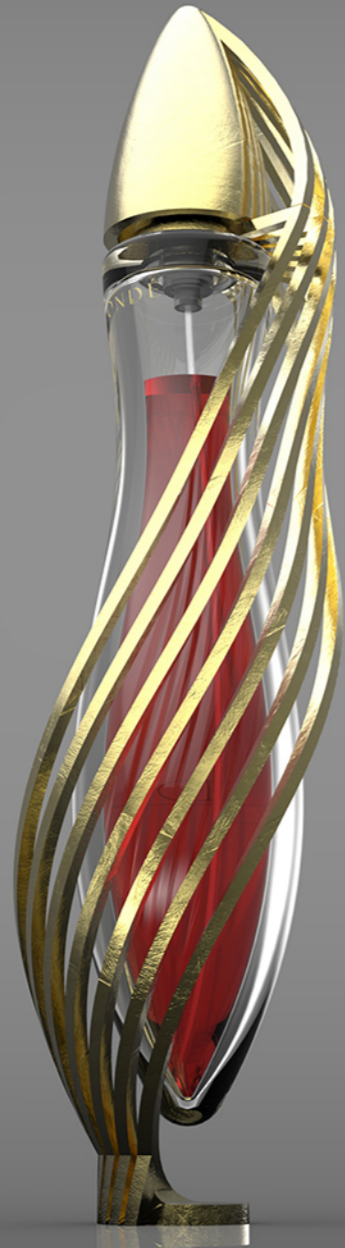


GB

Project: A Ski Goggles Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18

Project: A Perfume Bottle Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2015-16

PM

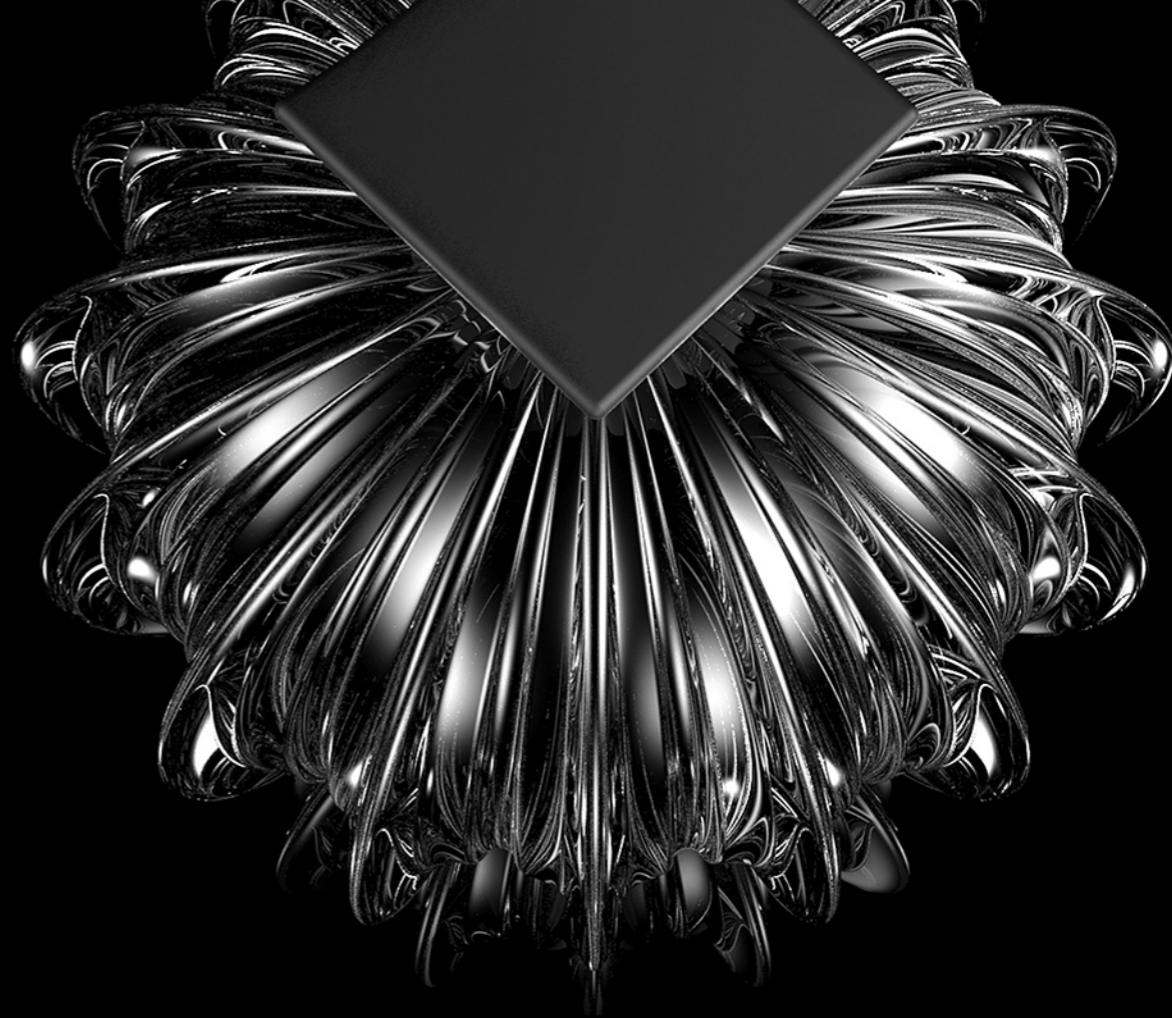
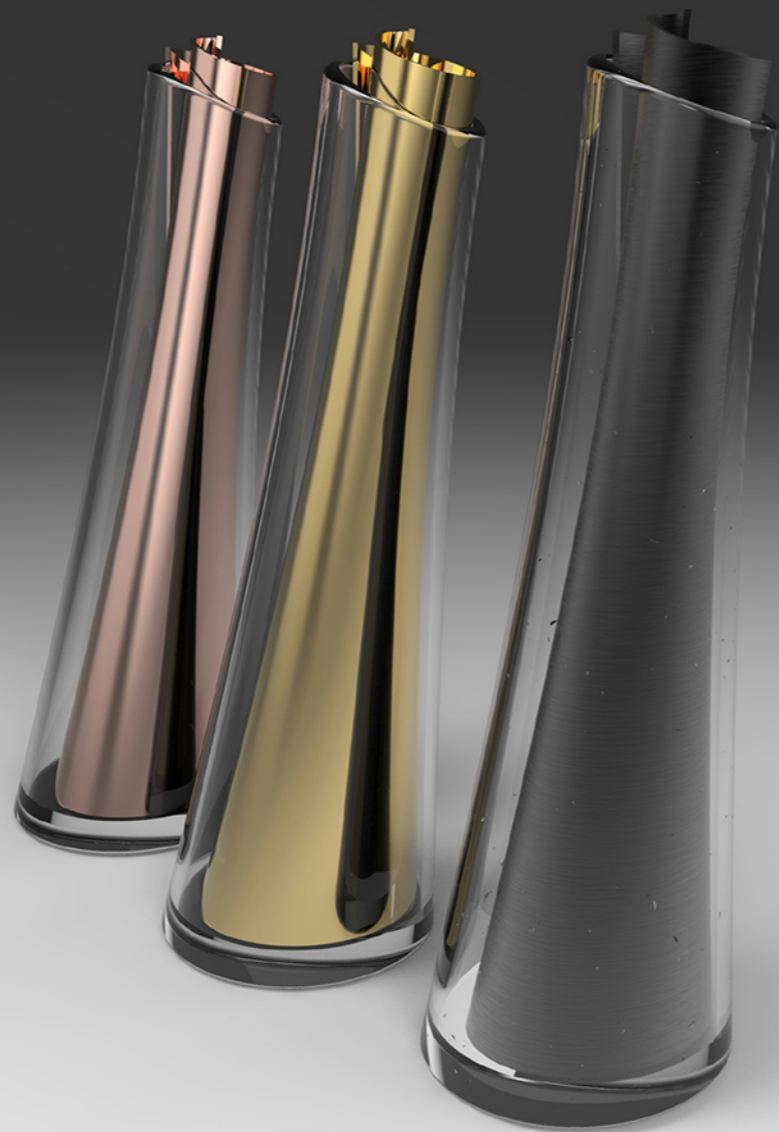


AP

Project: A Perfume Bottle Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18

Project: A Vase Container Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18

MF



AH

Project: A Perfume Bottle Design
Modeled by Solidworks and rendered in KeyShot
BSc Product Design Engineering/ Level Five
2017-18

02

POSTER PRESENTATION

An A1 poster (portrait) requires the students to present their design concepts through graphic presentation. The poster does not have to be one A1 artwork. Alternatively it may consist of two A2 landscapes and/or other forms of presentation within the border of A1 area.



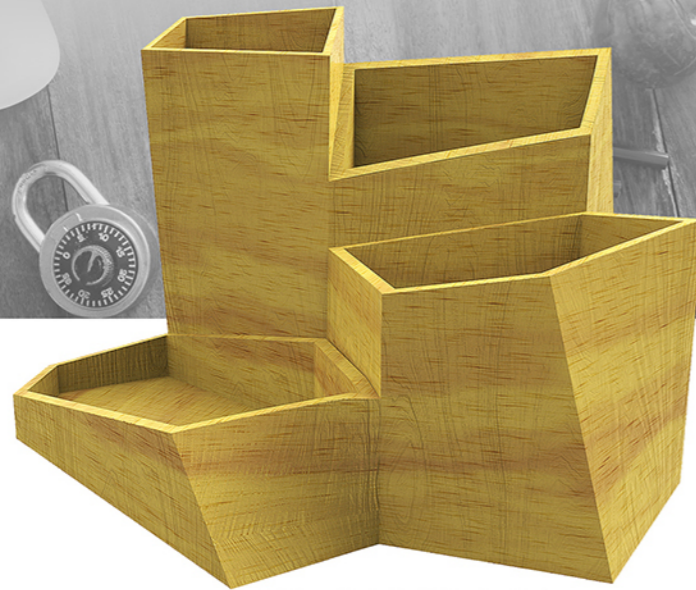
Elena Fratini/ BSc Product design engineering/ Liverpool John Moores University/ Module Design Presentation/ Project: object of desire.

**Ma' dame
Passionnee de l'
elegance rouge**



ANDROMEDA - Est. 1807. Designer / Jamie Nelson

OBJECT OF
DESIRE
STATIONARY
STORAGE
DESIGN



Dunmy Nutter / BSc Product Design / Level Five / Liverpool John Moores University

"Object of desire" is a NPD project that encourages students to explore the nature of aesthetics and employ it as a tool, and also require the students to generate & develop concept and to present it to a desired standard.



OBJECT OF DESIRE

Aaron Welsh



HYALUS

"Object of Desire" is an exploration into the nature of aesthetics, Contemplating Form, Texture and Colour to find visual balance, and here culminating in the creation of the HYALUS, a combination of light curves, simplicity and tradition. A pen for extraordinary occasions.

Sen Perez - 5002PDE - 2017



JAMES ALEXANDER.



OBJECT OF DESIRE.

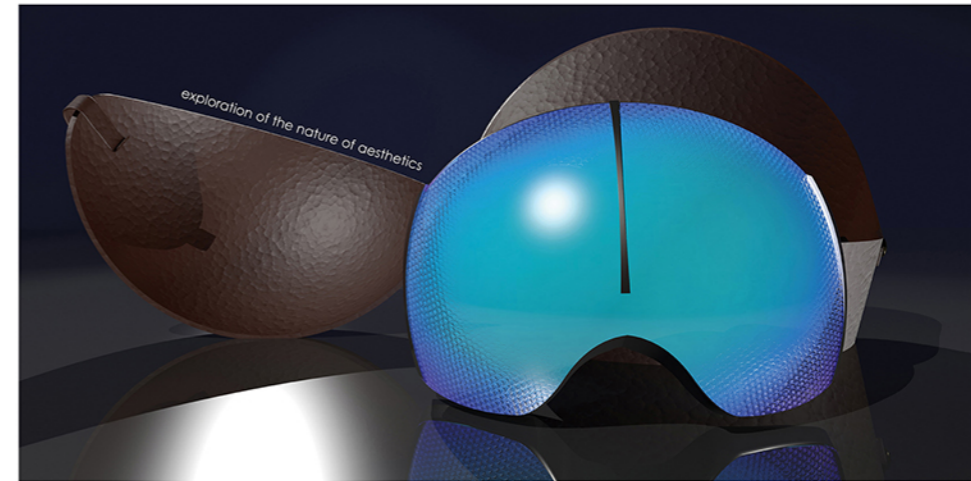
OBJECT OF DESIRE A PENCIL CASE DESIGN



SEAN PORTER | UICSON | PRODUCT DESIGN ENGINEERING | AT | BRPOOL | JOHN MOORES UNIVERSITY



OBJECT OF DESIRE
DESIGN PRESENTATION MODULE



CONTAINER INNOVATION OF DESIRABILITY THROUGH THE USE OF
FORM, COLOUR & MATERIAL, SKI GOGGLE AND ADJACENT LEATHER
CASE, INFLUENCED BY THE COMPOUND EYES OF FLIES

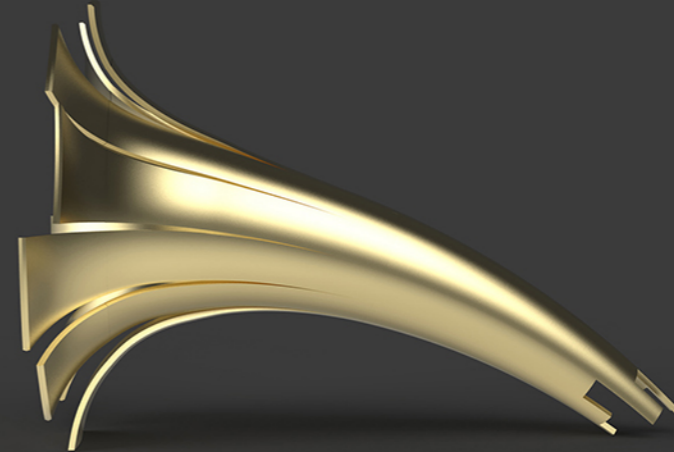
オブジェクトの思い
Object of Desire



Aakash Patel

OBJECT
OF DESIRE
A CONCEPT
OF **SPEAKER**
DESIGN

"Object of desire" is a NPD project that encourages students to explore the nature of aesthetics and employ it as a tool, and also require the students to generate & develop concept and to present it to a desired standard.



Tomaz Castagnil



03

ACADEMIC MODEL

A full scale academic model that requires the students to present their concepts. The model can be handmade, 3D printed, CNC routed or other forms of prototypes. The model should be no larger than 500x500x500 mm.



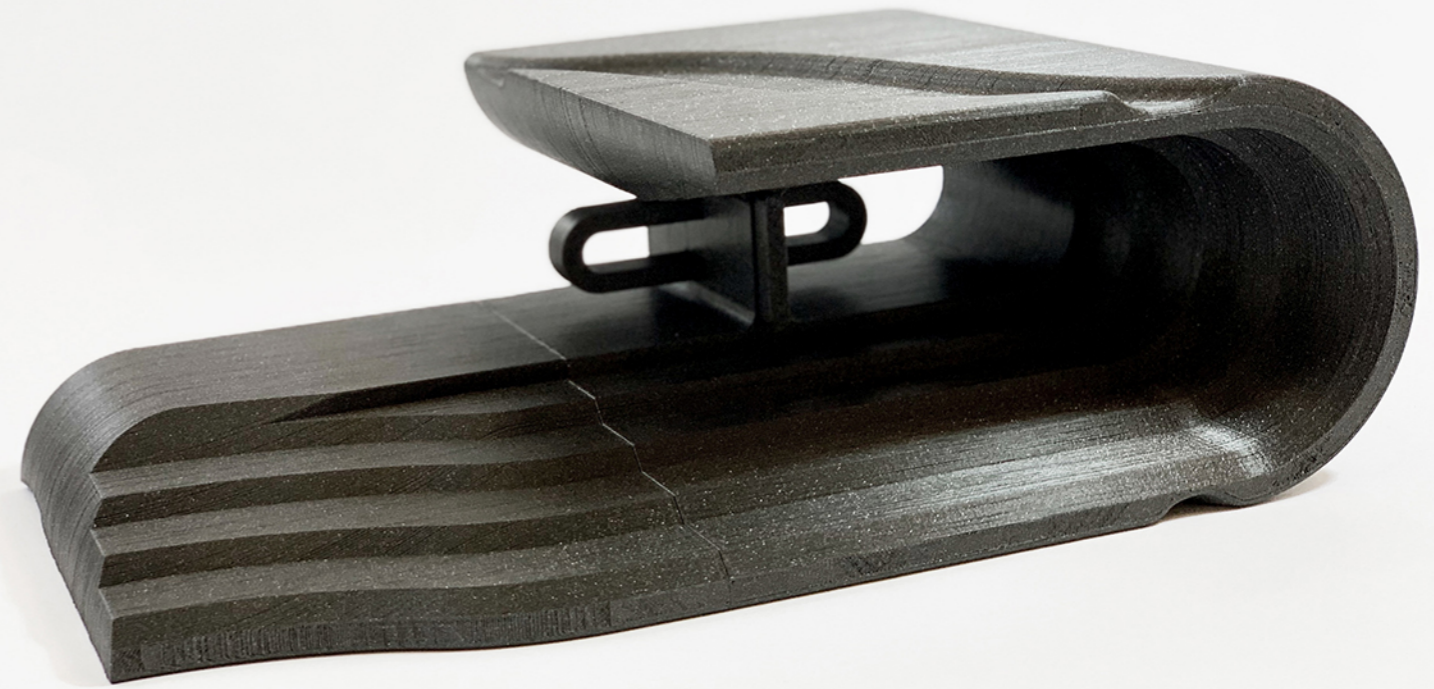
KN

Project: A Salt & Pepper Shaker Design
Manufactured by 3d printer and CNC router
BSc Product Design Engineering/ Level Five
2016-17



JC

Project: Kitchen Knif Holder Design
Manufactured by 3d printer
BSc Product Design Engineering/ Level Five
2017-18

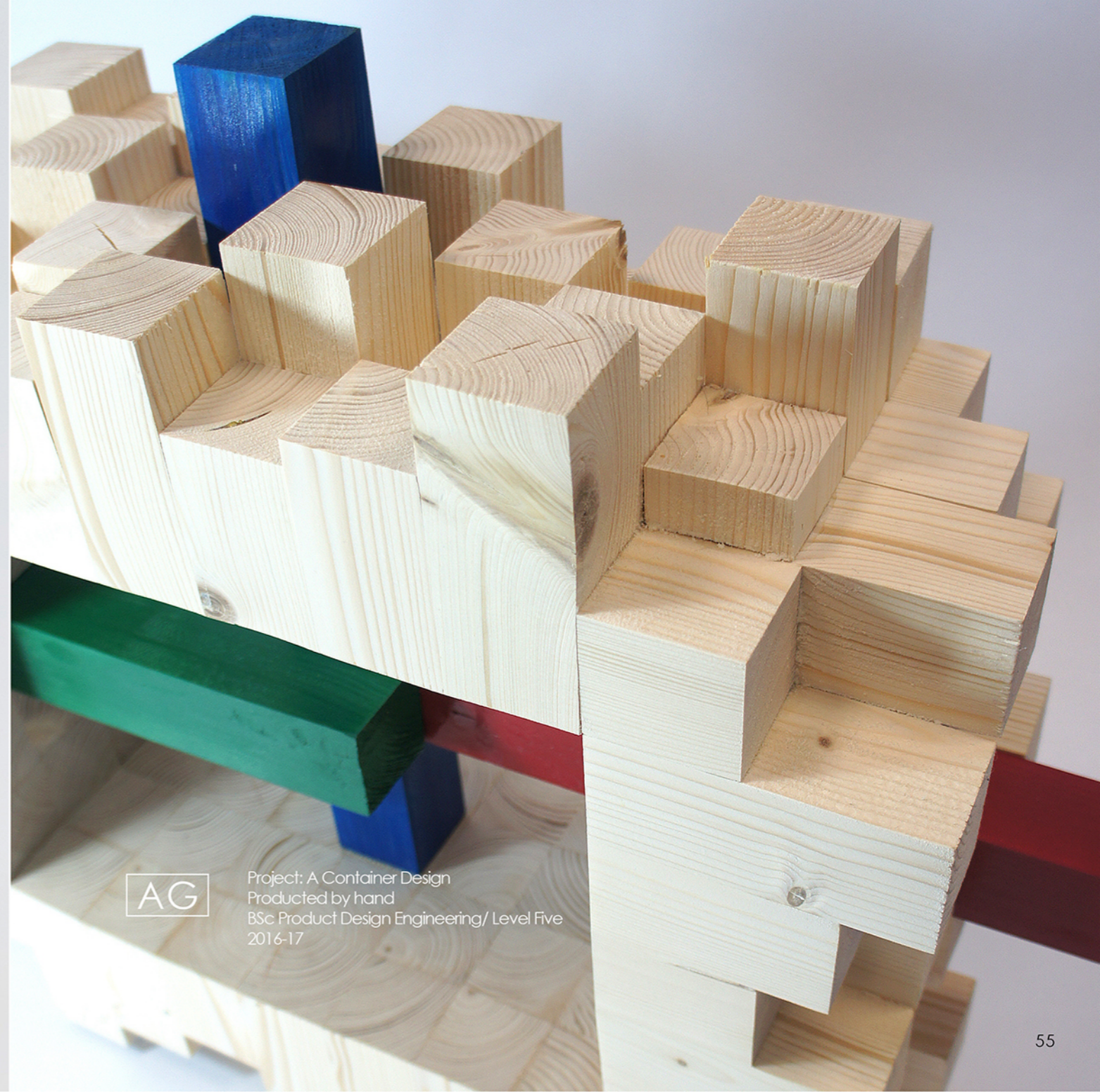


SB

Project: Vehicle Headlight Design
Manufactured by 3d printer
BSc Product Design Engineering/ Level Five
2017-18

MF

Project: A Vase Container Design
Manufactured by 3d printer
BSc Product Design Engineering/ Level Five
2017-18



AG

Project: A Container Design
Produced by hand
BSc Product Design Engineering/ Level Five
2016-17



SPL

Project: A Pencil Case Design
Produced by hand
BSc Product Design Engineering/ Level Five
2017-18



DN

Project: A Vase Container Design
Manufactured by 3d printer
BSc Product Design Engineering/ Level Five
2016-17



Project: A Container Design
Manufactured by 3d printer
BSc Product Design Engineering/ Level Five
2016-17

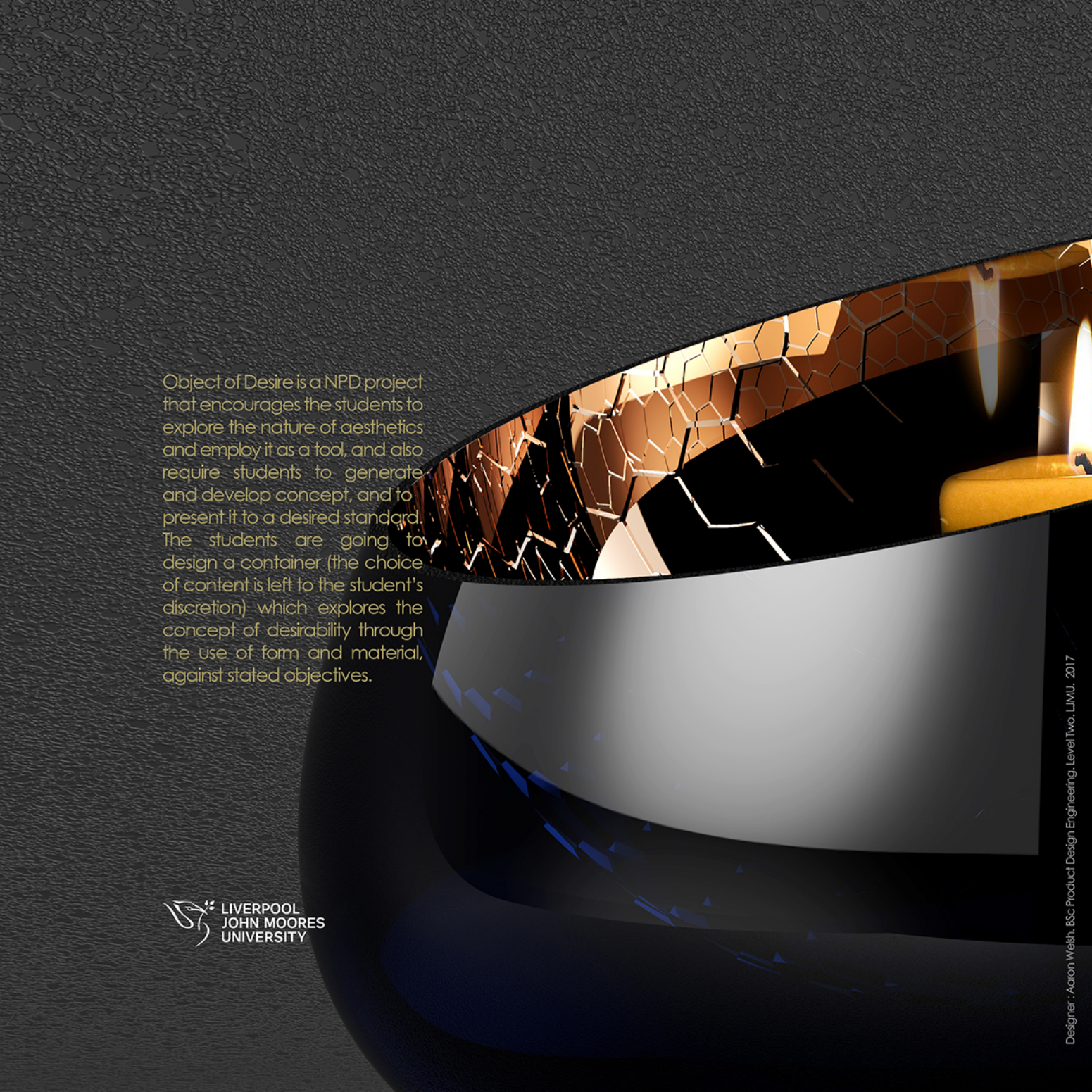
EH



THANK YOU

to all the students who worked hard on their projects. The work examples contained in this book are from "Design Principles" module. Copyrights reserved by the students and Liverpool John Moores University. Other images are collected from various resources for educational purpose, the copyrights belong to the original authors/organisations.

Dr Fang Bin Guo
BSc Product Design Engineering
Liverpool John Moores University



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