

XORGE CASTRO (George) BSc (Hons), MPhil

www.x-castro.co.uk / +44 (0)7577924718 / +44 (0) 1223 969698

xorge@x-castro.com / 2 Hive Cottages, North Street, Cambridge CB4 3QW

Industrial Designer holding a Masters degree in industrial systems, manufacturing and management with experience in product design, engineering, technology development and innovation. Passionate for detail engineering and concept design. Advanced Solidworks user (surface modelling+ FEA)), experience in designing injection moulding components and complex assemblies products.

Skills

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|-----------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| •Solidworks Advance User | •Concept Design, Detail Engineering and Design for Manufacture of: | •Experience in designing for a wide range of manufacturing process: |
| •Finite Element Analysis -FEA | -Injection moulding products | -Injection Moulding |
| •Computational Fluid Dynamics - CFD | -Household appliances e.g. refrigerators, ovens | -Die Casting |
| •Hands on models and prototype building and testing | -FMCG and packaging | -Steelwork |
| •Sketching and concept developing | -Healthcare | -Blow moulding, vacuum forming |
| •Technology development | •Business acumen | -Paper pulp and cardboard |
| | | -Textiles |

Education

Masters (MPhil) Industrial Systems, Manufacturing and Management

(Advance Course in Design, Manufacturing and Management) (www.ifm.eng.cam.ac.uk/ismm/)

2004- 05 University of Cambridge, (Wolfson College)

Dissertation: •Challenges for Mexican companies when exporting to the UK

Short Projects: •High volume manufacturing analysis (Adande- refrigerator manufacturer) •MRP improvement (Qualitetch- chemical etching) •Marketing Strategy (Hefra – harness manufacturer) •Production line efficiency (Urbis-street furniture)

Provided technical skills, personal development and industrial experience to become effective as Industrial Designer in the manufacturing industry. Topics: Manufacturing Systems and Processes, Lean Manufacturing, Marketing, Product development (NPI), Business Strategy and Finance, Management and Entrepreneurship

Bachelor of Industrial Design, Merit Diploma (BSc (Hons) equivalent)

1997-2003 UNAM (National Autonomous University of Mexico) Score: 8.77 (around 5% top of class) (<http://ce-atl.posgrado.unam.mx/>)

Thesis: Design of Office Furniture Line for National Airports

5 year course with 1 year dissertation project. Topics: Ergonomics, Product Function analysis, Manufacturing Processes, Aesthetics, New product development, Creativity, Team working.

Work Experience

Senior Design Engineer / Industrial Designer . Cambridge Design Partnership

October 2010- Present. (www.cambridge-design.co.uk)

Design and Engineering consultancy. Assists companies in the technology development of consumer, electronics, industrial and healthcare products.

Duties involve: Manage projects with Engineers, Designers and outsource manufacturers. Create proposals for clients; develop projects from concept to detail engineering, presentation of designs and projects to clients and liaison with manufacturers. Projects examples:

- Development of refrigeration equipment, from concept design (ID) to design to manufacture. Including; product testing, prototyping and consumer testing.
- Design of backpacks and suitcase line. Develop from sketches, card board and fabric models to detail product sample and prototype for production
- Provide concept designs and detail engineering for a wide range of consumer products e.g. Beverage household appliances, packaging for FMCG and healthcare products.

Independent & Contract Product Designer / Industrial Designer/ Design Engineer (Jul 08 - Oct 10)

Assist different companies and clients in their design and product development process. Either working at client's premises in a contract basis or from home office. Clients vary from entrepreneurs to multinational companies. Projects:

- Design and development of **injection moulding products**. Produce concepts, develop to detail engineer level, conduct FEA and CFD simulations, produce manufacturing drawings and documentation and rapid prototype models when required. Products examples: •**refrigerator's fan cases, trays and components**, •**Closures, packaging and bottles** •**Weatherproof cases** •**Mop winger and bucket** •**Promotional products** •**Retail display systems** • **Household cutlery set** •**Household storage system (set of boxes and drawers)** *Client: BASF, 3M and Others*
- From concept design to detail engineering and Design For Manufacture (DFM) of kitchenware product line (**electric grill, barbecue , chiller, raclette**). Role included investigate market trends and consumer needs, determine technology boundaries. Define product requirements, produce concept designs, , develop and engineer technology according to specifications and determine ideal components to use and suppliers for manufacturing.
- Design and commercialize technology accessories (**iPod/mobile car holder, mobile cases, laptop stands**) Investigate market trends, size and business potential. Determine user requirements, and purchase behaviour. Create concept designs, prototypes, develop products and manage production.
- Improve performance, reduce costs and improve appealing for commercial refrigeration product line.
- Design Steel coins container to withstand 20tons load. *Client Banc of Mexico*
- Design and supervise manufacturing of Luxury case for cigarettes. *Client: Entrepreneur*

Lecturer, ITESM - (Sep09 –Nov09) (www.itesm.edu)

Part time lecturer for undergraduate course in Industrial Design.

Topic: Technology Applications in Design. Objective: Teach the students about methods and technologies that can assist the design and product development process. Teach the process and techniques involved in design, technology development and detail engineering

(Innovations processes and methods, Brainstorming, Concurrent engineering, Lateral thinking, Design for Six Sigma, QFD, FMEA, DFM)

Design Engineer/ Industrial Designer, Adande Refrigeration- (Sep 05-Jul 08)

(www.adande.com)

(Develop refrigeration technology for licensing)

Job role: Develop new products using Adande's patented technology. Investigate market opportunities and users needs, conceptualise solutions and new products, present new designs and solutions to clients, detail engineering, validation, simulation and testing (CFD, FEA and prototype building and testing), design for manufacture, test management. Patents granted KR20080068680 WO2007036736 WO2007045870 WO2007010267, CN101228404

- Manage the design and product engineering of a **built in domestic fridge freezer** applying and further developing Adande's technology. Design was licensed to blue chip manufacturer. Product proved to offer substantial energy savings, excellent temperature distribution, comply with mechanical requirements and manufacturing conditions as well as an attractive appeal to end users and satisfy consumer requirements.
- Design **retail display freezer** and refrigerator units involving technology development, detail engineering, simulation and testing. Project involved: Research market opportunities, interview and user observations, detect market trends, ergonomic study, CFD simulations, Prototype testing (produce test procedures and schedule). Results proved substantial energy savings as well as improvement of merchandise visibility and access.
- Research, Design and Develop** (from market analysis, trendspotting and user research to concept design and working prototypes). Products developed: Bar units, restaurant equipment, consumer products, healthcare and merchandising equipment.

•Continuous improvement and reengineering of existing products. (Use of CNC sheet metal forming, vacuum forming, injection moulding and PU injection) FMEA analysis, cost reduction, QFD, Lean manufacturing.

Freelance Product Designer (2002-05) (Clients such as marketing consultancies, R&D oriented companies, manufacturing Industry, government and design consultancies)

- Graphic presentations and concept development of refrigeration equipment (UK, Adande)
- Computer animations explaining chemical detection technology (UK, Owlstone)
- Design and development of 65 airport's office work stations. Modular system that allows with few components to set up different distributions suitable for a wide variety of spaces and requirements (ASA)
- Design and development of transportable canopy for measuring fuel quality in truck's tanks. (ASA)
- Design and manufacture of 200 communication units for a bank (Bansefi, Cliente y Medio)
- Design, manufacture and set up of an itinerate TV commercial set (Sigma)

Product Designer, AD+ design consultancy (2002-2004) (Design and product engineering consultancy specialized in plastic injection and blow moulding products)

- Design and product engineering of plastic trays for transporting bakery products
- Design of plastic bottles and lids (coca cola, Innopak)
- Product engineering of Injection moulding plastic exhibition system for Barbie USA.
- Product engineering for injection moulding display system for Mattel

Software, Languages and Other

Advanced user: Solidworks (6 years), with surface modelling, **FEA** (Cosmos), , **CFD** (cfdesign, cosmosflow) , 3DMax, Hypershot, AutoCAD, Photoshop, Freehand, Illustrator, Excel, PowerPoint, Word

Medium user: Pro E, Inventor, Alias Studio, Rhino, Dreamweaver, Flash, Html, Java

Languages: Spanish: Native Speaker English:Expert

Interests: Travelling, Visual Arts, Painting and Drawing (president of Art Society Wolfson College 2004), Music (basic guitar player), Sports (Brown belt Karate, jogging, cycling, kick boxing, gym) and cooking.

Other: Communication officer "Cambridge club México" (www.cambridge.org.mx), IFM Member (Institute for Manufacturing, University of Cambridge).

Work examples

Injection moulding design

Refrigerator tray



Fan Case



Mop Winger



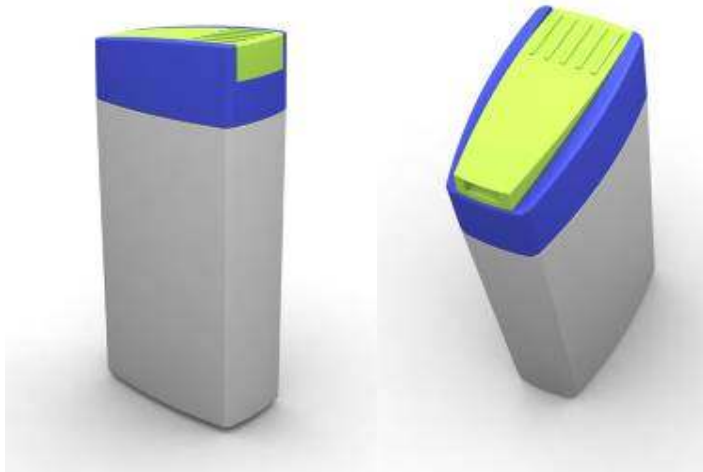
Weather proof case 1



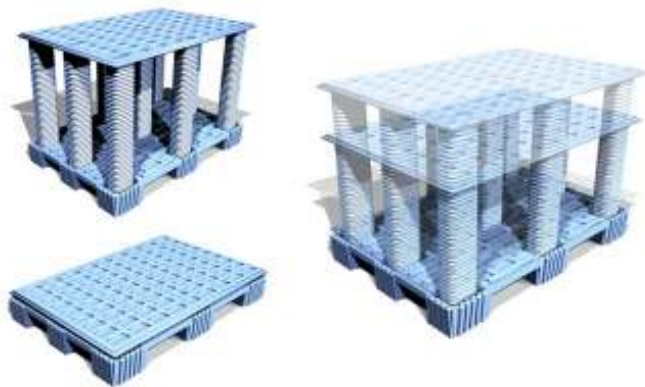
Weather proof case 2



Bottles



Pallet and mobile charger



Injection moulding Trays



Retail display



Promotional products



Consumer products

Raclette



Chiller



Grill



Barbeque



Technology accessories

Ipod /Mobile car holder



Laptop stand



Refrigeration

Refrigeration Concepts



Retail refrigeration



Household refrigeration

