PRODUCT DESIGN 2018 Middlesex University School of Science and Technology

Middlesex University London

#MDXPD

"...bringing people and technology together (in meaningful ways) to create useful stuff and things."

At Middlesex University Product Design/Engineering we design everything! From the curriculum, to the recruitment process, to the studio tables. Nothing is ever left "well enough alone".

The aim is a Continuous Design/Redesign Education Programme for BA/BEna/MEna Product Design/Engineering.

This aim has led to the initiation of the newly validated BEng/MEng Product Design Engineering, taking over from our previous BSc Product Design, after creative conversation with students, graduates, industry collaborators, institutional groups and staff. Along with our revalidated BA Product Design, we believe that these latest iterations of our curriculum position the course at the leading-edge of design education, and ensure that the content, approach and outcomes are fit-for-purpose for the next five years. The Institution of Engineering Designers agrees, and has accredited the BA with automatic Registered Product Designer for all graduates, with the BEng/MEng being lined up for CEng pathway accreditation, once one full cycle is complete.

Our revalidated courses are transitioning into action, with our Year 1 being a great success. The more balanced mix of design and engineering during this year has provided a foundation of creative and technical knowledge and skills, and the hands-on ethos has been enhanced.

The landscape of and for design is rapidly evolving, and empowering students with an ethical, as well as a theoretical and practical foundation, which is robust enough to navigate change is the key. Collaboration for social and ecological good is the bedrock - "compete with the issue, not one another" is our ethos. Immerse, Create, Validate, Implement our top-level process driving our prototype-led "do, think" reflective cycle approach.

Our open-minded approach to what Product Design and Product Design Engineering can be, is encapsulated in the fascinating range of professional journeys and achievements documented in our Special Feature in this year's magazine – 'PDE Produce – 10 Years On...where are they now?'. The empowerment of the graduates to evolve with their disciplines, to adapt to leadership roles in sectors ranging from Industrial Design and Design Engineering, to Graphics, UX and Robotics illustrates the power of the MDXPD approach and the number of business start-ups initiated by that same group illuminates the drive and 'gumption' that comes from MDXPD study.

Enjoy the magazine, and drop in to see us on Stand FP2 in New Designers, or on campus Open Days at Hendon.

Best wishes and jechyd da.

Wyn

BA/BSc/BEna/MEna Product Desian/Enaineerina Programme Leader

INTRODUCTION TO #MDXPD

We live in a complex, fluid world, swirling with challenges and opportunities. Design is one of the ways we can approach these opportunities.

We are material creatures, in a material world. The 'things' that surround us, and drive us are increasingly interwoven with the virtual 'stuff' that has come to connect us. This is subject to constant change and evolution. Change is always the fundament in life; in society and technology; in design and innovation. The puzzle is how to mediate that change for specific and holistic good. How to explore and navigate pathways towards creating new things that have a positive impact, that 'make the world a better place...'. A Product Designer can be an important part of this exploration.

There are many, unresolved, ways to think about 'Product', 'Design' and a 'Product Designer/ Engineer', but, regardless of any particular interpretation, we at MDXPD/E think there are some key skills, experiences and attributes that a Product Designer/Engineer needs.

Build skills in design thinking, design & technological craft and professional practice. Build experiences through varied, wide-spectrum exploration, focused sectoral exercises and live industry collaborations. Nurture an attitude of imagination, collaboration, sharing, story-telling, curiosity, ingenuity, perseverance, courage & resilience. The watchwords of gumption, humour and grit will go a long way to helping you on your way as a Product Designer/ Engineer!

Read about our courses

BA Product Design: mdx.ac.uk/courses/undergraduate/ product-design

BEng/MEng Product Design Engineering. mdx.ac.uk/courses/undergraduate/ product-design-engineering

CONTENTS

- 01 WELCOME
- 02 INTRO TO #MDXPD
- 03/04 AWARDS & FEATURES
- 05/06 60 SECS W/ LAURA URIBE [MDXPD PLACEMENT STUDENT]
- 07-09 GRADUATE PROJECTS '18
 - 10 PDE PRODUCE [SPECIAL FEATURE]
- 11/12 10 YEARS ON... WHERE ARE THEY NOW?
- 13/14 MENELAOS & ADAM AMOS
- 15/16 SARAH MATARESE
- 17/18 MONITA & BEN ARENT
- 19/20 ROBIN READ
- 21/22 PAULA & NICK
- 23/24 DAVID RICHARDSON
 - 25 CHRISTOPHER PETCH
 - 26 DAVID KNIGHT & MATTHEW
- 27/28 ALVIN MUNZI
 - 29 AUDERY SEVE & ANDREAS
 - 30 ADAM LEE
- 31/32 REDLOOP
 - 33 25 YEARS FOR EUROBOT
- 34-36 GRADUATE PROJECTS '18
- 37/38 60 SECS W/ JONATHAN JOANES MDXPD ALUMNI
- 39/40 THE ENGINEER AWARD
 - 41 BUILDING THE MOTION DRIVEN EXPERIENCE
 - 42 JOIN US AT MDX

An Innovation Award, Shortlist & Commendations for MDXPD Graduates

Betul Salman's Final Major Project is awarded the **W'innovate & Wilko Award** at ND, National Graduate Design Exhibition // 06 July 2017



An uninhibited method that brings generations together in a fun way and encourages healthy eating. This is an analogue solution to a digital world.

Judges - New Designers

Designers W'innovate & Wilko Award

Winner: Betul Salman

Title of work: Swishhh

Description of work: A manual blender to connect children and parents together in one activity, Swishhh encourages families to learn about healthy eating and cooking. To blend using Swishhh you push the blender back and forth. The product is predominantly 3D printed with stainless steel blades and a clear acrylic container.

Judge's citation: An uninhibited method that brings generations together in a fun way and encourages healthy eating. This is an analogue solution to a digital world.

Winner's comment: 'I'm proud to have been selected and that design is accepting of people of different backgrounds, because that is how you get a diverse range of ideas.'

Prize: £1,000 prize money and a two week work placement at W'innovate with a contribution of up to £500 towards expenses.

OTHER SUCCESSES AT NEW DESIGNERS

- ► New Designer of the Year: Hawanatu Koroma – Shortlisted
- New Designers Pentland Brands Award: Imran Williams – Commended Hawanatu Koroma – Commended
- New Designers Kenwood Appliances Award:
 Hawanatu Koroma Commended

MDXPD graduate's FMP is featured in DEZEEN as one of the '10 most forward-thinking designs for women'

Christy Chan's Final Major Project is featured in **DEZEEN's** '10 of the most forward-thinking designs created for women', an article as part of International Womens Day // 08 March 2018

dezeen **60** Next story



Joy sex toys by Christy Chan

Christy Chan de signed these sex toys to resemble everyday household items as a wa to normalise intercourse and break down the taboos she fell surrounded female masturbation. The range, which is filled Joy, includes un egg timer with a built in vibrator and a body washing brush whose handle serves as a dildo.

Read the full DEZEEN article,
'Ten of the most forward-thinking
designs created for women' at:
www.dezeen.com/2018/03/08/
10-best-brands-for-women



Christy Chan's Final Major Project, 'Joy' is a political statement where the subject of sex should be seen and not hidden, thus normalising sexual activities for the future societies.

Sexual topics and personal sex stimulation has been considered taboo. Whilst many women are apparently having an uninspired sex life, the UK sex toys industry has the potential to enable women to have fulfilling sex lives.

However many women seem to have a moral

objection towards using sex toys. JOY is a design revolution, aiming to break taboos by transforming sex toys into everyday domestic sexual objects - changing perceptions with these sexual domestic objects.

For more info on JOY & other work by Christy Chan, visit: ytchristydesign.com

#mdxpd 60 seconds

Product Design students are encouraged to take a placement upon completing their second year and prior to commencing their final year. Here is an interview with one of our current placement students, Laura Uribe





You are?

Laura Uribe, I can describe myself as a design thinker who is always looking forward to learning new things. I am an international Product Design student from Colombia and I am currently doing my placement year at Redloop which is the innovation centre run by the School of Science and Technology at Middlesex University, London.

Why Product Design?

I always thought that your perfect job had to be nice, and to be able to have that, I firmly believe that you must do what you love. In my case, that happens with design because it gives me the opportunity to produce my ideas in a meaningful way, since it is part of people's daily lives - and responsible for the most common consumer goods, as well as new and

innovative artefacts.
Being a product designer
also allows me to produce
objects that can solve
problems in a unique way. I
love design in general, but I
chose to study product
design because I wanted to
have the skills to make things
work, not just to look good.

What's a standard day like for you as a Designer?

I think that as a designer any day is like no other as you can find yourself working on a wide range of projects - you can always be working on a different projects which enables you to explore the different areas of design. This always brings new challenges and of course something new to learn each day.

A standard day of a designer could start as a discussion about a topic, followed by idea generation, ideas that

you will use to make iterative prototypes, then go through it all again; evaluate, learn, try to present your idea visually, and repeat. Trying to perfect each step each time.

What's your favourite design tool?

I like prototyping as I have fun making things with my hands and putting my personal touch on my creations; as well as design research, because I am always curious to learn more. I enjoy spending a good amount of time learning new things.

What are you great at?

I believe that I have the ability to think outside of the box! As well as making failure fun. Due to that, I think the real learning comes from testing and pushing the boundaries on the design challenges. And one thing,

Find out more about redLoop at http://redloopdesign.com

for sure, that I am great at is having fun whilst designing.

...be yourself, exploit your strengths and work on your weaknesses.

Be curious, always question everything around you! Pay attention to detail.

Be ambitious in your personal learning, every project brings something new which could at times be challenging but can also push you to do your best.

What do you wish you were great at?

I need to think ahead more and plan more effectively. Sometimes I don't make the most of my ideas, as I need to improve on the marketing of my products, which could make myself more noticeable on the industry.

What is a Product Designer in the 21st Century?

Nowadays designers have an important role in society. When you take a moment to think about it, you realize that the world we live in today is full of design - from the everyday products that we use, through to the transport systems. That is why areat designers constantly need to search for new ways to innovate and make thinas even better than they are. Always looking forward and striving to improve the relationship between people and product - going beyond

the mere aesthetics.

Designers are helping to shape our every day in a better way as their products increasingly take into consideration user experience and how people engage with the product, making contmporary designs more personal and their interfaces more enriching. It is also important that designers are being more conscious about the entire lifecycle of the product according to a sustainable logic, which makes design even better than before.

What's your advice for future Product Design students?

The most important things for me as a designer are to be yourself, exploit your strengths and work on your weaknesses.

Be curious, always question everything around you! Pay attention to detail.

Be ambitious in your personal learning, every project brings something new which could at times be challenging but can also push you to do your best.

Be persistent and work hard to become an expert in your field.

Be productive, take your ideas to the maximum level possible. Try to make them tangible in any way. Don't be scared to put them out there. For me is all about enjoying the challenges and making the most of it.

What are the big, looming challenges for designers... for society?

Considering the diversity of changes that our society is facing, designers should be open-minded, this will allow you to think about design solutions from a totally neutral base. In order to develop big advancements in the industry, designers should have a mix of skills in their creative field.

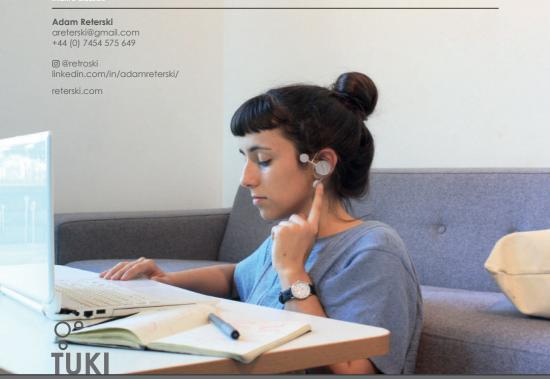
Team work would be vital, working together as designers for a shared interest to be able to develop better outcomes, that could create a benefit in and to our society.

On the other hand, another big challenge is to think more effectively on the whole cycle of your design, taking into account sustainability at the base of the design considerations

Who are the first 5 names on your fantasy exhibition Private View invite list?

Lloyd Groff Copeman Margarita Matiz Tom Dixon Wyn Griffiths My family.

> Follow Laura on Instagram @laurauribeb



Digital assistant that prioritises your subjective well-being

Tuki, the digital assistant is a concept product, which aims to enhance and embed the **state of flow** for those working independently. The concept compiles of a wearable and on-screen application.

The emotionally aware system gathers data through motion detection and heart rate variability to develop more precise feedback and advice to the user. The Bluetooth connected headset pairs automatically with the primary working and allows for great flexibility of use.

Aimed at independently working professionals, **Tuki** caters not only for the user's productivity but most importantly the **subjective well-being through mindfulness** and focus. Internal microphone allows for active **noise cancellation**, while the external MEMS

microphone is used for wake word detection.

Those features allow the user to keep in direct contact with the environment, whereas ANC contributes to inducing the state of flow and mitigates the risks of negative distractions in a busy co-working environment.





FRESH HOT STICKY RICE ROLLS IN 15 MINUTES

CHIFANS, the STICKY RICE ROLL machine, originates from Cantonese, where "CHI" refers to sticky, and "FANS" refers to rice. "FANS" also has the same pronunciation as "FRIENDS", which conveys the message - sharing with friends.

Fast food culture is adopted by many office workers, whose lifestyles are hectic. Some may have fast food or salads for lunch, but they are not freshly made, nor are they necessarily nutritious meals. An alternative is microwaved food, however, the nutritional value of the food is destroyed during the heating process. Moreover, microwaving some ingredients such as eggs and fish can cause explosion, thus limiting the variety of dishes in a meal.

Now, think about a handy machine which allows these individuals in shared accommodations or a co-working

environment to prepare, make and eat healthy, nutritious, fresh meals in 15 mins.

CHIFANS are steamed sticky rice rolls wrapped with flavoured fillings such as minced beef with chives or king prawn with sweetcorn. The device can produce mouth-watering sticky rice rolls in 15 minutes. It is handy, easy to use and aims to enhance eating habits as well as raising awareness towards healthier lifestyles.



HO CHUN JOHN LAN CHOY
PRODUCT DESIGN BA



A playable urban installation

Open London is a temporary urban furniture system which is envisaged to be installed in different recognizable areas of London; combining both privatised and public spaces, as a homogenisation of the city.

Open London stimulates open usage, sensitive to the interactions of the various stake holders; encouraging an understanding of the city as a whole alongside supporting public life.

The system manifests through three different sized cubes. The modular design supports an array of mapping opportunities in the public-private squares, alongside offering diversity in use by all sectors of society. Possible activies include leaning, sitting, resting, jumping, climbing, hiding... Both adults and children can use the street as a place to enjoy explore and share

The design is also sensitive to the context in its detailing and application of materials.

A metal lattice on two faces of the cube features a pattern of an architectural profile, referencing a feature, sculpture or building in the square where it is located. A prevalent metal identified in the square also becomes the material of choice for the lattice in order to personalise the installation to each space.



SPECIAL FEATURE PP. 10-30

Read more about PDE Produce: www.pdeproduce.com

PDE PRODUCE

Middlesex University's Product Design Class of '08 - PDE Produce















PDE Produce – 10 Years on... where are they now?

Our open-minded approach to what Product Design and Product Design Engineering can be, is encapsulated in the fascinating range of professional journeys and achievements that follow. With success and leadership roles in sectors ranging from Industrial Design and Design Engineering, to Graphics, Footwear, UX and Robotics the power of the MDXPD approach, the quality of the graduates and the rich range of opportunities that continue to emerge from Product Design/Engineering study, make for a fascinating and inspiring review of the power of creative education, and the positive impact that talented, driven young people can make on the world.

PDE Produce were recognised and caused a stir internationally before they gaduated. Their final major projects were awarded major awards and published in ground-breaking books such as 'Design Revolution: 100 Products That Empower People'. They were featured in local press, alongside international design blogs and magazines such as Core77, Yanko Design, Design Week, Gizmodo, Wilson-Graf, Design Spotter, Behance and more!

the end... of the beginning. The beginning of big things!

Have a read about what happened to them after they graduated // pp. 11-20

10 YEARS ON. WHERE ARE THEY NOW?

A glimpse into some of the diverse careers and pathways of **Middlesex University's Product Design** class of '08 - **PDE Produce**



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PDE Produce caused a stir internationally whilst still in the Final Year & before graduation. Read some of the stories and articles online at www.pde produce.com Articles include:

- PDM Student wins Prestigious IMechE Prize!
- Adam Amos and the PDM Impress Core77
 - Ben Arent catches Frech imaginations
 - Adam Amos is in 'DesignWeek'
 Robin Read Front Page News
- · iive + betty hit the international blog-o-sphere





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MENELAOS (Mel) FLORIDES

Freelance Design Consultant & former Creative Lead at the LEGO company







I am an all round creative problem solver with 12 years experience in the consumer product industry, with a particular niche in the research, speculation, concept development, front end process visualisation and design for manufacturing of briefs in the toy and games industry.

As a designer, I was lucky enough to gain some invaluable work experience from studying and working alongside some of the worlds most passionate and talented designers and engineers, in some of the best and most inspiring design environments in the world.

As a Creative Lead at the LEGO company i worked alongside some of the best and most talented people in the toy industry. From MIT scientists to factory production line managers. With the help of an amazing design team and these super folk we managed to create one of the most successful franchises for the LEGO company, LEGO Ninjago. We conceptualised, designed, planned, prototyped, presented, produced and distributed building toys, buildable characters, action toys, animated TV series, card games, a Hollywood movie, books, tv commercials and an array of other consumer products based on the LEGO Ninjago theme.

For the last 3 years i have been working solely as a freelance design consultant from a studio in London, UK and now a permanent base in Nicosia, Cyprus. I have been working alone or with teams, from my studio or in-house, on projects ranging from story writing for a new TV series, 3d modelling and printing models for museum exhibitions, to concept sketching and building the future of play.

View more of Mel's work at www.menelaosflorides.com

ADAM AMOS

Chief Operating Officer at Pigzbe

Connect with Adam on LinkedIn www.linkedin.com/in/adamamos/





Read about Pigzbe's gold at the ICO Race competition cryptovest.com/news/the-icorace-is-over-pigzbe-takes-gold/

From as early as I can remember I loved design. I always wanted to know how things worked and why things were the way they were. I was insatiably curious. At school this led me to study a mixture of science and the arts in order to understand the facts and realities of the world we live in and the space to imagine and create. A product design degree at Middlesex University was the perfect opportunity for me to continue to eat up knowledge across a boundaryless discipline, understand the interplay between human behavior. technology and the world around us and importantly, the skills needed to help improve it.

I have designed award winning luxury modular homes for **Huf Haus Gmbh** & international architecture and house building company, and started two small businesses myself, before first joining **Native Design** - a global innovation design company, then **Method** - a Global Strategic Design consultancy, as a Senior Client and Project Manager.

Following 2-years at **Method** leading strategy and innovation

programmes, I was approached Xmas 2017 to Co-found a fin-tech startup focused on delivering products an services that educate and enable children, parents, and families on a global scale.

As a hybrid with a background across physical and digital innovation and strategy, I took a role as COO, providing overarching leadership, guiding strategic decision making and growth, managing investment and setting up the fundamental operations that enable efforts across all functions of the business (finance, legal, marketing, digital platform and physical product development).

Within 5 months **Pigzbe** raised Seed investment, built a globally recognisable brand, built an MVP product, built ICO capability, won the worlds biggest ICO competition at 'ICO Race' Lugano Switzerland, raised additional funding, built a world-class team and been sneered at in the Financial Times newspaper.

Onwards.

Follow Adam on Twitter @adamamosdesignr

SARAH MATARESE

Senior UX Designer at Bigfoot Biomedical & previously a UX Designer at Tesla



I believe that empathy is what drives innovation; when you take the time to deeply understand both the daily obstacles and small victories people navigate while managing their diabetes, you can craft a better experience for them. There's something satisfying in designing a product that has the opportunity to help and impact millions of users worldwide.

Since I graduated from Middlesex 10 years ago, I have had the privilege to work and learn my craft at purpose driven companies known for user focused design.

As I progress in my career I couldn't agree more with the infamous Steve Jobs quote "You can't connect the dots looking forward; you can only connect them looking backwards. So you have to trust that the dots will somehow connect in your future"

When I graduated, I didn't have clarity in what I wanted to do. I wasn't ready to step into a design-focused role. Instead I wanted to experience something different to gain perspective. I started my journey at Apple Retail;

a company I was aligned with from a visionary, cultural and design standpoint.

Some of the most profound lessons I learnt at Apple were empathy, and the power of services and products that are designed with the end user in mind. I had the opportunity to travel and open some of the most iconic stores in Europe. This experience of cultural immersion shifted my perspective in enabling me to learn about the importance of observation, and experience first hand how different cultures can interact with the same product in different wavs.

I later took a role at a small software startup as a Product Manager developing software. I wanted to be a

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part of the entire product lifecycle from conceptualization through to commercialization. It was through interacting with User Experience Designers here that I realized there was a job for all the things I was interested in. All of a sudden, I had clarity, and the dots started to connect.

In 2014 I got married and moved to Silicon Valley in the San Francisco Bay Area. I got a job as a UX Designer at my dream company; **Tesla**. My journey at Tesla was unforgettable. I discovered a love for Lean Manufacturing, I designed global systems and training programs that reached thousands of people, I learnt how to effectively communicate and collaborate with engineers!

Recently though, I couldn't escape the feeling that I could be doing something even more impactful. I was searching for an opportunity to design products people genuinely need, leveraging the design principles used to create innovative consumer products. This is where I started to explore medical devices and found Bigfoot Biomedical.

Medical Devices is an industry where modern UX, smartphone technologies, and machine learning algorithms is still a relatively new concept, so I found it compelling to see a small startup leverage these as tools to problem solve.

I currently work as a Senior UX Designer leading the Industrial Design and defining the users experience via an App and Cloud Services on a connected insulin injection system.

I believe that empathy is what drives innovation; when you take the time to deeply understand both the daily obstacles and small victories people navigate while managing their diabetes, you can craft a better experience for them. There's something satisfying in designing a product that has the opportunity to help and impact millions of users worldwide.

MONITA CHEUNG

Designer and Director of **Monita Cheung Design Ltd** - a professional Design & Supply service for bathrooms, kitchens and interiors





Monita Cheung Design Ltd offers a professional Design & Supply service for bathrooms, kitchens and interiors. We produce innovative detailed CAD drawings and supply high quality goods to site. Whether you're working on a refurbishment, new build, hotel project or property developing we can tailor our service to suit your project.

Operating a successful business first requires a genuine interest and love towards the field you are planning to specialise in. You need to be organised, often need to multi-task with all elements across the business, forward planning, have a business aswell as a creative mind.

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View more of Monita's work at www.monitacheung.com



Monita is a very passionate designer who thrives on achieving the very best design possible to suit her clients individual needs. Having been in the design industry for 11 years she has worked on many high budget projects and with architects and other specialists on larger refurbishment projects. She has professional experience with creating designs, presenting to clients, project administration and on site implementation. She is an ambitious, proactive and self-reliant designer. Her work has been featured in magazines such as Elle Decoration, Grand Designs, Homes & Gardens, Essential Kitchen Bathroom Bedroom, EKBBusiness, Kitchens Bedrooms & Bathrooms, KBB Review and Designer magazine.

"My design career began after applying for an 8 week summer placement at the high end bathroom company, **CP Hart**, whilst still in my second year of university. I did this in order to stay competitive against other candidates in the 'real world' and what better way to do this to gain work experience.

CP Hart hired me for the 8 week summer placement and soon extended it to 10 weeks, then 12 weeks, and in fact had asked whether I could stay working at CP Hart instead of returning back to University, I knew I wanted to complete my final year at university so CP Hart offered me a part-time position and as soon as I araduated, CP Hart offered me a full-time position as a Junior Designer. Unknown to me at the time, this moment was the very small stepping stone to the career I have today.

With this amazing experience that I have achieved from what only began as an 8 week summer placement, I would absolutely love to provide this stepping stone to others and would love to offer placements to students who have the same enthusiasm and determination to do well.

I absolutely love what I do and have become very proud of what I have achieved and I'm also proud to be a new mum to my beautiful 4 month old baby girl."

BEN ARENT

Lead UX Designer at **Solarwinds**, founder of **Exceptional Cloud Services** & manager of product line for **Rackspace**





Ben Arent is the founder of Exceptional Cloud Services, and now manages that product line for Rackspace. In addition to chairing RedisConf, Ben is the creator of several innovative technical concepts. He previously served at Intel, before leading product teams at Airbrake and RedisToGo. He is heavily involved the software development community, driven by a desire to bring passionate people together to create beautiful experiences through design.

I'm currently a Lead UX Designer working on a suite of developer tools for **Solarwinds.cloud**. Solarwinds is a well established Network monitoring company and I'm heading up the design and UX for the next generation of cloud based monitoring tools. Working with a small team of designers on a range of tasks from usability research, concept creation to

iterative feature improvements.

After my degree I joined an Irish research project into aging. Working with a multidisciplinary team as an Interaction Designer based in Dublin, Ireland. Creating and testing in-home concepts addressing the hot aging topics of falls, social isolation, wellness and cognitive decline.

Near the end of the project I joined a startup called **RightRental** which set out to democratize renting for the US market. After some traction we moved to the San Francisco to grow but eventually decided to shutter the business. During this period we started to grow a range of developer tools and this suite was sold to Rackspace in 2013. I've since been working on a range of developer tools which has lead me to my current role based in San Francisco.

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ROBIN READ

Advanced Robotics Research Engineer at **Dyson**

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The Product Design and Engineering (PDE) course at Middlesex was perhaps the best place I could've been to build the initial foundations for my career. At 18 I knew that I wanted to do something creative and build things, but I wasn't sure what exactly. The PDE course really gave me a versatile skill set: I learnt how to use CAD, got to grips with rapid prototyping, learnt how to communicate ideas visually, build electronic circuits and program micro-controllers, and how to use a well stocked workshop. These are skills I still use to this day! It was in my second year that I built my first robot, an entry to the 2007 Eurobot competition, and from that point on I was hooked. I had uncovered what my passion is and what I wanted to do - build robots that help people.

To build a robot you need to understand three major fields well: mechanics, electronics and software engineering. I felt comfortable with mechanics and electronics, but software was still black magic to me. I realised to realistically have a career in robotics I needed to hone my

understanding of the field and aet to arips with writing software, because without it all you have is a lifeless pile of motors, PCDs, wires and batteries. Software is what brings a robot to life by letting it sense and perceive the world, reason about it and then act on it. I decided to study for an MSc in Robotics at Plymouth University where I was able fill the major knowledge gaps. I was also introduced to the emeraina field of Human-Robot Interaction (HRI), which explores how robots can be built so that nonexpert users can interact with them in natural ways and understand how people react to these kinds of robots.

Little did I know that a year MSc was to become 6 vears as I decided to stay and do a PhD and Post-Doc in HRI in the robotics lab there. We were programming robots to interact with children so that they could be used as educational tools for teachers in schools helping kids with their math skills, or in hospitals help children diagnosed with diabetes to better understand how to manage their condition. It was rewarding work, and opened my eyes to how critical it is to understand how people respond to robots of different shapes and sizes and the power that gives you as a roboticist.

I decided to move on from academia in 2014 and apply what I had learnt at University to real world problems. Building robots at a university is a far cry from building robots that people are actually prepared to pay for, and I wanted to understand how this is done. With that in mind I joined Engineered Arts, based in Cornwall, who make fascinatina Humanoid robots that are interactive installations. My role was to develop the software components that help facilitate HRI (e.a. Speech Recognition, Text-To-Speech, Facial Expressions and person detection and trackina) and integrate these together to allow the robots to project their content at the people in front of the robot rather than running predefined, scripted behaviours. This is a very tricky task, but has a prolific effect on the experience that people have with the robot.

Having focused on HRI for nearly 7 years, I started to get an urge to explore the more traditional aspects of robotics in more detail. I was keen to try something different and become a better, more rounded and experienced roboticist.

Dyson seemed to be a natural fit: we mass produce robots that have to overcome the challenge of operating in peoples homes, which is a

particularly tricky place to put a robot, and requires a different way of approaching building robots

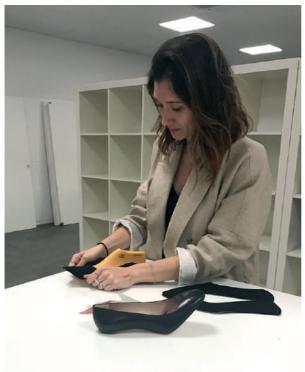
I work in the Research team which is at the secretive "upstream" part of the company where we explore and develop the technologies that will help enable our future products. It's my job to understand what different state-of-theart technologies can do and figure out how they can work together by making working integrated prototypes. I then demonstrate these systems to our product designers, engineers, and senior management (including James and Jake Dyson) to help them understand the potential capabilities our future products could have.

It's very technically challenging and hands on work which I love, and I even get to work with other Middlesex graduates from time to time as there are a few of us knocking around.

The PDE course really gave me a versatile skill set:
I learnt how to use CAD, got to grips with rapid prototyping, learnt how to communicate ideas visually, build electronic circuits and program micro-controllers, and how to use a well stocked workshop. These are skills I still use to this day!

PAULA SOLA

Senior Design Manager at Stuart Weitzman | Brooklyn, New York



Towards the end of my year at Middlesex University, on the Product Design course, I became interested in Footwear ing product lines, business and accessory design. I supplemented my Product Design experience with some courses in these areas, and right after the course was finished I went back to Spain to work for one of Inditex's brands. **Uterque**. At Uterque, I built my experience to become Head of the Footwear Design Team.

I then moved to Zara Woman in 2012, first as Senior Footwear Designer, then as Head of the

Footwear Design Team. From there, I moved to New York to work with Nine West, developopportunities and trend directions. I'm now with Stuart Weitzman, as Senior Design Manager Footwear, where I work closely with the Creative Director, developing new design processes for collection research, designing iconic statement footwear and accessory ornaments, evolving product and elevating brand DNA, and expanding business opportunities.

I've been lucky to work with innovative and business focused footwear brands and companies, internationally, and my work has been featured in Vogue, Elle, Marie Claire, Glamour, Style.com and various other magazines.

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NICK BAMPTON

Freelance Graphic Designer & Illustrator





When I think back to the PDE Produce "Product Designers Market" what I think of first is not the work I or anyone else presented or the 'exhibitiondays' themselves, it is sitting together with the planning aroup in whichever room we could squeeze into and trying to rethink what an exhibition could be and how we could make it our own.

When it came to finding roles for ourselves within the task of 'redesigning' an exhibition, I was itching to design the identity and branding of the exhibition. Nobody seemed to stand in the way of me claiming this role, by this time I think I had a reputation for visual communication within the group following a series of internal presentations where the 'visuals spoke for themselves' allowing me and my

nerves to stand aside and mutter a few pleasantries without a lengthy speech of any sort.

I had my first Logo-Branding-Identity job of sorts, and I am have never really stopped since.

Looking back at the identity now with the benefit of ten vears now creating visual identities, I am actually quite pleasantly surprised, considering I was a Product Design student 'Having a go' at the logo, it's no so bad, but I am sure much of branding of 2008 looks a little bit of its time.

After a time creating new assembly drawing concepts for the aircraft industry. I now work as a freelance Graphic Designer & Illustrator specialising in Logo Design,

Corporate Identity and Branding for small businesses.

Based in Bremen, Germany -I have worked on branding projects across the world includina restaurants in India. cocktail bars and café's in Germany, record labels in the UK, coffee-trucks in Kuwait, and arocery stores in Australia.

I am currently in New Zealand testing the limits of being a nomadic travelling designer, finding quiet spots on tops of hills with enough 4G signal to send my latest logo concept to a client or havina middle-of-the-night video conference calls to discuss colour palettes.

Learn more about Nick's work on: nickbamptondesign.com & connect with Nick linkedin.com/ in/nick-bampton-0157887/

DAVID RICHARDSON

Senior Design Engineer at **Mott MacDonald**, a global management, Engineering and development consultancy





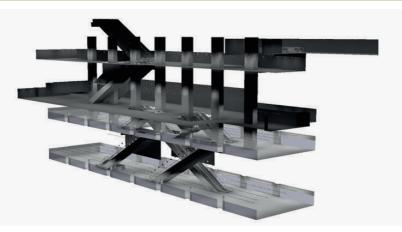
Connect with David www.linkedin.com/in/david-richardson-76a8132b/

I am currently working for Mott MacDonald, a alobal management, Engineering and development consultancy. I work as a Senior Design Engineer and specialise in Lighting and Electrical systems. I have managed projects and designed lighting systems for a variety of iconic stadia and infrastructure projects including Twickenham, Anfield, The Olympic Stadium. Wembley, Headingley Cricket ground, Crossrail, Doha Metro Kuala Lumpur Metro and High Speed 2. I have presented my designs to the FA, the ECB and TFL, I have been lucky enough to travel the world for my job spending time working in both Kuala Lumpur and Moscow.

I have been privileged to see the development of my designs throughout the design and procurement process to fully constructed schemes.

My journey to this point has been anything but straight forward. When I araduated. I feel I could not have timed it worse, the financial crash resulted in a pretty sparse job market, I set myself a target of applying for 30 iobs a day and I started doing my own design projects and enterina design competitions in my spare time to try and fluff out my portfolio. In the end I started having to make decisions fast as I had a house lease coming to end and I need to fund it.

For more info visit www.mottmac.com
Contact David by email David.Richardson@mottmac.com



I tweaked my CV to include Construction and building services in the tags on an online portal (as during my Industrial year I had worked doing CAD drawings and visualisations for the construction industry). Within 2 hours I had 3 interviews.

Although I was hesitant about turning my back on Product Design, I reminded myself of the many commonalities in the design process between Engineering and Product Design. During one of my interviews, despite it being for a junior CAD technician role, my potential future employer understood that I wanted to be involved within the design process

so upon making me an offer of employment they also offered to sponsor me if I wanted to study for a qualification in an engineering discipline of my choice.

I worked as a CAD technician for a year before undertaking a part time day release course in Electrical Engineering. Upon the commencement of the course my responsibilities changed and as well as producing drawings I was becoming ever more responsible for the electrical designs going into the buildings for infrastructure projects.

Despite juggling academic studies and a full-time job I

feel got the best of both worlds as I gained practical experience whilst also studying the engineering theory, plus I had all my design experience to draw on.

In November 2011, I changed companies to Mott MacDonald. My experience in 3D modelling helping me in a time when BIM was starting to become more prevalent and resulting in my straddling the specialist lighting team and Electrical engineering teams, I have progressed within the company to my current position.

CHRISTOPHER PETCH

Manager of Photography at Martin-Baker

martin-baker.com







Studying at Middlesex was a great experience. It was a good challenge I would never change and enjoyed all I learnt about product design and the friends made along way.

Despite my PD degree, I took a different path into an engineering company. Not with my product design but my photography.

I work as the manager of photography at Martin-Baker the world leader ejection seat manufacture. They design manufacture and test ejection seats.

A typical days work would involve testing some seat components or maybe a full system test. This means strapping a manikin in to a seat and simulating an ejection. A range of telemetry record the experience while my department records the test in slow motion using cameras at 1000 frames per seconds.

I remember my interview, it was my design knowledge that helped me stand out from other photographers. A knowledge of design process and the hands on skills I had gained. MDX PDE taught me

many things about prototyping, CAD, manufacturing, usercentered design,

Without this degree I would never have ended up where I am and it was the efforts to encourage, inspire and mentor from the staff that kept me motivated to the end despite the challenges.

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DAVID KNIGHT

Managing Director of blackbox-av







After completing a live final year project with OBO (field hockey goalkeeping equipment manufacturer), I went to work for them in New Zealand for a year to assist in bringing the products to market. These training aids are now sold via the OBO distribution network reaching 62 countries. After my stint in New Zealand I returned to Wales and joined blackbox-av.

Blackbox-av specialise in designing and manufacturing audio visual interpretation products and solutions targeting the museum, heritage, attraction and retail industries. We have supplied equipment and bespoke design for the Victoria & Albert museum, London Zoo, many National Trust sites and the London Olympic Games. A year ago I bought the company and am now Managing Director. I have developed the company into a

global distributor of manufactured products. During the last quarter of 2018, EU sales outsold UK sales for the first time in company history.

Looking to the future I am working to further develop the business with an exciting new range of interactive multi-touch software, a redesigned single cup headphone and a new range of interactive kiosks.

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Connect with Matthew on LinkedIn www.linkedin.com/in/matthewmitchell-camp-07480034/

MATTHEW MITCHELL-CAMP

Freelance Designer



I discovered data visualisation while I was researching my final major project at Middlesex University and was fascinated by it, so much so that it ended up being the foundation of my final proposition.

I didn't realise it then but it was at that time that data visualisation was really starting to blow up. After araduation (and a brief 1-year hiatus to do some traveling) I found there were a lot of opportunities within the data vis space and people advertising for graphic design/data visualisation roles. Initially, I set about creating a few pieces to flesh out my portfolio, which I posted online and which luckily garnered a bit of attention. I then took an internship at the RSA focused specifically on network visualisation before getting a junior graphic design role at a creative marketing agency called Distilled. At Distilled I was part of a team focused on building creative content for brands of all shapes and sizes. A lot of it was data visualisation but there was a bunch of other work - website design, UX overhauls, video, animation, games, etc. I was there for 5 years and worked my way to up senior graphic designer.

Two years ago I left Distilled to go freelance. I have a declicated office in my flat in Brighton where (for at least the last year or so) I work out of on a full-time basis. I still do a lot of data visualisation though it takes a variety of forms and is interspersed with a variety of other design work.

ALVIN MUNZI

Product Designer for **Current**, a startup subsidiary at GE; a smart lighting systems provider





Beina a Product Designer in the Lighting Industry has been a fascinating experience, as it is a multidiscipline profession, which blends conventional product design, engineering, mechanical design, digital and electronics. The general public do not tend to appreciate the quality of liahtina within a space, and probably don't need to, but if you ever see me walking into a building or along a street, whilst everyone else is looking down at their phones, I'll be the one looking up.

I araduated from Middlesex University with a Product Design BA Honours Degree. off the back of the success of organising and exhibiting at both the MDX Degree show. and New Designers. The summer of 2008 was set amidst the height of global financial crisis: it was a tough time for any Degree araduate to enter the workforce, and especially so when you're rocking blue hair and multiple face piercings. However, with the experience gained from my years' placement in industry and a comprehensive portfolio of University work, I secured a position at Light **Projects**, a lighting manufacturina company based in London, as a Product Design Engineer. Now entering my 10th year in the Lighting industry, I am presently working as a

Product Designer for **Current**, a startup subsidiary at GE; a smart lighting systems provider, that incorporates Sensors, cloud based Software and Analytics, into network connected LED luminaires, creating a platform to harvest data, and help businesses drive their productivity.

My role as a Product Designer involves discussing new product development with the commercial and product management teams, so features, functions, costs and timescales can be agreed before any design work is begun. Depending on whether the customer is interested in energy savings. space utilisation management, or data capture, specific IoT solutions will be selected and integrated into the design of

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the luminaire, to fulfil the customer's requirements.

Lighting calculations are run, and design proposals submitted, that will contain information on luminaire spacings, light output levels, colour, light distributions and lumens per watt; this will indicate the rate of payback on an installation, by switching from conventional lamped luminaires to smart LED fixtures and controls.

My areas of expertise as a Product Designer, still include concept generation through sketching and 3D visualisations, to producing DFM 3D models and drawings, 3D printed and rough machined prototypes to large volume manufacture in high pressure die cast aluminium and plastic injection Exhibition and Moon Rock display at The Science Museum, and The Lord Ashcroft Gallery at The Imperial War Museum. And have also worked on high profile rollouts for Tiffany & Co, Christian Dior, Polo Rul Lauren, and Mulberry. Duri my time at DW Windsor, are exterior lighting manufacture.

mouldings. My Visual Design skills are utilised to produce supportive technical datasheets and marketing documentation.

Throughout my professional career I have had the privilege of collaborating directly with key clients. including Frank Gehry Partners and Speirs+Major, I have worked on prestigious liahtina projects such as Vermeer's Girl with a Pearl Earring at The Hague, The F1 Exhibition and Moon Rock display at The Science Museum, and The Lord Ashcroft Gallery at The Imperial War Museum, And I profile rollouts for Tiffany & Co, Christian Dior, Polo Ralph Lauren, and Mulberry, Durina my time at DW Windsor, an exterior liahtina manufacturer. I designed and lead the development of the *Kirium Pro*, an LED street lighting range currently being rolled out across the LIK

Beina a Product Designer in the Liahtina Industry has been a fascinatina experience, as it is a multidiscipline profession, which blends conventional product design, engineering, mechanical design, digital and electronics. The general public do not tend to appreciate the quality of lighting within a space, and probably don't need to, but if you ever see me walking into a buildina or alona a street, whilst everyone else is looking down at their phones, I'll be the one looking up.

AUDREY SEVE

Chargée de communication Graphiste Print & Web



Ileft London just after my graduation to return to France. I then had several jobs but not in Product Design. Finally, after 2 years of unemployment, I worked for a few months as graphic designer for a big event in Lyon called RunInLyon. I then joined Le Progrès our regional newspaper as a graphic designer and project manager assistant for few months.

Finally I found a good place as a graphic designer in a big company (tourism) where I progressed during 4.5 years to become communication manager. After those 4.5 years I decided to leave my job and my country and went to Australia for a trip for 9 months. There I worked for 4 months as graphic and product designer and travelled for 5 months.

I came back in 2016 and did a course during 3 months to get a double certification in web integration and development. Then I worked in Events for a good company in Lyon and now I'm a graphic designer and project manager for a property developer. I manage the communication for the launch of our new real estate programs (relations with contractors, graphic design ...).

And after?

Time will tell ;)

ANDREAS NYDAHL

Environmental Consultant







A couple of months after graduation I moved back to Sweden working as a Visual artist using my skills I picked up during school and my placement year. Alongside this I also worked as a designer for a small carpentry making custom-built kitchens and furniture in Stockholm. Every customer was different and every outcome was unique. All pieces was created in-house using sketches, CAD technical drawings and a CNC router

The last couple of years I have been teaming up with my mother/mentor. She as a foxicologist and chemist and me with my material and construction might have it finished!

expertise. We work as environmental consultants, specializing in finding hazardous asbestos fibers in construction materials. We have a laboratory outside Stockholm where companies send samples for us to analyze.

I nowadays use my designing skills mainly for personal use creating furniture for our home. My spouse, Helena, and I are now also taking it one step further and realizing our dream in designing and building a plastic & chemical free house to post as a lifelong home for us, our two kids and our cat. Give me 10 more years and we might have it finished!

ADAM LEE

VP Senior Marketing & Partnerships Strategy and Planning Manager at Barclaycard



- I'm responsible for brand strategy, planning and execution of marketing partnerships and events for **Barclaycard Business Solutions** entertainment partnerships. and Barclaycard UK. That responsibility covers a wide range of strategy, brand and planning, including:
- + Strategic repositioning and re-launch of core consumer and business benefits programme with an integrated campaign including ATL, OOH, Social, customer communications, PR as well as digital innovation and development, rights holder contract negotiation and brand experience development.
- + Development, implementation and activation of the UK sponsorship strategy, specifically it's music and
- + Strategic approach and execution of proprietary and external global B2B events implementing rigor and aovernance into investment to maximise ROI whilst delivering consistent expression and experience of the brand.
- + Creation of a new marketing culture and initiative to drive colleague engagement, excellence and optimisation of marketing execution.

- + Development and extension of UK strateav into German and SEC markets in support of the market business and brand objectives.
- + Management, activation and marketina and experiential delivery of sponsorship partnerships. including the piloting and development of new technologies.
- I went direct from Middlesex University Product Design to Heart Productions, a live communications and experiential agency. Starting as Production Manager, working my way to Head of Production, then Director of Projects, developing high-profile experiences and events, such as:
- + Wireless sponsored by Barclaycard (2010) - VIP areas. front of house activations. creation of Unwind TV (Festival TV)
- + Twilight Saga (Twilight, New Moon, Eclipse) - premieres and fan events
- + UEFA Champions League Festival 2009 (Rome) before joining Barclaycard in 2015.
 - Connect with Adam on LinkedIn www.linkedin.com/in/adam-lee-2a202a13/

REDLOOP

Research-led, design and innovation centre at Middlesex University



As a 'transition space' between the 1
University and the outside world, we are able to provide students with amazing opportunities to work on real design projects with commercial clients. 1

Based in Colindale, just down the road from the Hendon campus is **redLoop**, a research-led, design and innovation centre run by the Faculty of Science and Technology at Middlesex University London. Our primary focus is to develop innovative, interdisciplinary work areas across a broad range of applied research and commercial scenarios in the product, service, interaction, user-experience and technology sectors.

Run by Dr Andy Bardill and Dr Kate Herd, our approach of innovation-led research and research-led innovation brings together expertise, social and ethical philosophies and commercial experience from across the Faculty, the University and its collaborative networks. Flexible and scalable teams of experts from across the University come together at redLoop to meet client and project demands.



The redLoop studio has been extremely busy this academic year, working on a number of high profile projects including:

Continuous Regional Analysis Device for Neonate Lung (CRADL) is a pan-European, multi-million pound research project developing real-time lung imaging technology for neonates. An amazing project with very skilled partners. At redLoop we are developing the architecture of the wearable 'patient interface', doing materials research and industrial design and innovation. We have also been developing new technology to 'measure' shape, and that work continues with our partners in Finland during the next academic year. You can watch the project video at http://cradlproject.org/ and see us at work in the redLoop studio.

Alexandra Palace. redLoop are STEM partners with Alexandra Palace. We are currently designing and building devices and demonstrators for their new visitor attraction and learning centre, opening late 2018. As the birthplace of television, we have been immersed in the design and construction of John Logie Baird televisions, TV cameras, zoetropes, phenakistoscopes and other Persistence of Vision (PoV) devices.

Other current projects include:

- + The industrial design and DFM for TOCAlabs for their first desktop touchable interface test robot:
- + Product design for subjective wellbeing (how to design stuff that makes you happy) with Professor Pat Jordan:
- + Design for physiological and psychological wellbeing with various partners in Middlesex from Psychology and Computer Science;
- + A range of biomedical design projects supporting the work of the research team at Middlesex University, including a bionic skin for rehabilitation robotics with partners at

UCL and in Italy, vascular graft implants, electrical stimulation and biosensing for wound healing, finger-tip sensors for detection of oral cancer tumours by dentists, plus many others.

As a 'transition space' between the University and the outside world, we are able to provide students with amazing opportunities to work on real design projects with commercial clients. During this academic year the redLoop team have worked alongside 5 placement students (four from mdx PD and one from Loughborough university) each of whom have played a key role in bringing our projects to fruition, overseen by the redLoop team.

2017-18 Placement student team:

Thomas Downey
Kane Fernandez
Laura Uribe
Guohong Xu
Thomas Massey (Loughborough University)

PLACEMENT / INTERNSHIP

If you're interested in a placement with redLoop please drop us an email:

a.bardill@mdx.ac.uk k.herd@mdx.ac.uk

You can find out more about redLoop at redloopdesign.mdx.ac.uk

Follow redLoop Design, Andy & Kate on Twitter @redloopdesign @AndyBardill @kateherdkruger

25th Anniversary of Eurobot

Third place for **Middlesex University's** Team Brainstorm at the international autonomous robotics competition





Eurobot is an international autonomous robotics competition celebrating it's 25th year anniversary o =f promoting fun, technology, creativity, education and passion. Each year the theme of the competition changes. Students, teams and societies have to design, build and program robots to score as many points as possible within a 100 second timeframe. This year the theme was "Robot Cities: Build a Better World".

Several members of staff from Product Design, Design Engineering and Computer Science organise the competition and are the National Organising Committee for the UK heats. The competition hosted teams from Imperial College London, UCL, Birmingham University, Southampton University, Kings College and Aberdeen University.

This year, team Brainstorm, comprising of 1st, 2nd and 3rd

year Computer Science students, achieved third place at the competition after winning an award for innovation from international judge Hendrik Hostombe from Dresden. The team represented the University as international guests in Serbia and in the World Finals in La Roche Sur Yon, France. Additionally in all competitions, members of Middlesex staff were invited as guest judges and technical experts.

After their experiences in the competition, team Brainstorm are keen to prepare for next year's contests and are trying to recruit students from other programmes such as Product Design and Design Engineering to share knowledge and gain expertise from a range of different degrees and programs.

Adam Jarzebak, team member of Brainstorm says "it was a great opportunity to be able to learn from a plethora of different disciplines and represent the University in international competitions. We already have ideas for new technology to use and mechanisms to develop for next year".

Brainstorm were able to build their robot from technology they have been introduced to during their time at Middlesex which enabled them to score 128 points in one match, the highest scoring match in the UK finals.

Over the last few years, the National Organising Committee have managed to get funding from Rapid Electronics, Festo, Harlequin Flooring, Oomlout and the Trophy Shop. This funding enables teams to travel to the competition, provide components for teams, pay for prizes and help with materials for the competition.

Watch the video at www.youtube.com/ watch?v=rocaSb-Pvjo

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@@granatusultys



₩ **MONUMENT**

A THEATRICAL ROTATIONAL MOLDING CHOCOLATE MACHINE

Monument is a theatrical rotational molding chocolate machine that allows the making of complex geometric chocolates.

Inspired by Mayans - the first to consume chocolate products along with its use in their ancient sacred rituals of birth, marriage and death; the design is a performance product, displayed in the shop window of an artisanal chocolatier. The artisan intrigues the viewer with a mesmerizing show of chocolate production.

The chocolate is melted and tempered before being poured into a unique, geometric two-part polycarbonate mold. This seamlessly attaches onto the mechanical rotational molding device via neodymium magnets and an innovative interchangeable mold system.

When the machine is switched on, the melted chocolate is rotated within the mold in a steady, mesmerizing kinetic motion. The device spins between ten and fifteen minutes, depending on the size and complexity of the mold. The viewer standing outside the shop window is drawn in to taste samples of

previously cooled and de-molded chocolate

The possibility of molds and therefore the resulting chocolate forms is limitless via the interchangeable mold system. Mold complex geometric chocolates that can be created in no other way! Break and build. Snap and share.

The device references carefully selected materials inspired by industrial machinery and architecture, manifesting a sculptural device and skilled craftsmanship. The mold is held in the centre, the jewel of the device.

"Chocolate is the best-known food that nobody knows anything about."



LUKAS SIDIKERSKIS
PRODUCT DESIGN BSc



Repurposing batteries from end of life electric vehicles

Energi is an innovative product service system dealing with the unintended consequence of the widespread addoption of hybrid and electric vehicles, and the large number of waste batteries this will bring with it when these vehicles reach the end of their lives. Energi uses these batteries from end of life hybrid and electric vehicles to store power from local renewable sources such as solar, for use on demand and extending the useful lifecycle of these batteries before being recycled/disposed

The batteries in these vehicles have shown that while capacity has been lost, they still retain sufficient capacity to serve a useful purpose after the rest of the vehicle becomes dilapidated. This is particularly the case as the loads placed on the battery in a domestic

setting will be far less intensive than the loads placed on the batteries under normal driving conditions.





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The state of the art in design always stand upright making it much easier to operate and keeps the papers safe and unfolded. Make your child a green hero with **Green Time**



MAITRI PATEL
PRODUCT DESIGN BA

#mdxpd 60 seconds

Here is an interview with MDXPD graduate **Jonathan Joanes**, a 3D Designer at **Kin Design** specialising in Product & Experience Design and a graduate of the MA Information Experience Design course, RCA



Gain as much professional experience as you can, as early as you can. Internships and Junior roles are a great way to learn how Studios function... Having experienced a real-world working environment will transform you from a student to a professional designer before you even graduate.

You are?

Jonathan Joanes. I am a 3D Designer specialising in Product & Experience Design. I am currently a designer at Kin Design, working on interactive physical content for upcoming exhibitions and gallery spaces. I have previous experience working for Paul Cocksedge, Random International, and Jason Bruges Studios. I graduated from MDXPD in 2015, which launched me into a MA Information Experience Design course at the RCA.

Why Product Design?

I wanted a career in design for one reason: To see someone enjoy using something I created. My favourite projects are the ones that make people smile and that's an element I try to inject my projects with.

What's a standard day like for you as a Designer?

A standard day is a busy day. We have often have informal meetings to ensure the studio work is always moving in the right direction. Sketching, researching, designing, prototyping & testing happens everyday. Though crucially, good coffee and an excellent Spotify playlist in the background is essential.

What's your favourite design tool?

A workshop. Filled with machines. It's a designers playground & workplace.

The expertise of knowing how to make things in invaluable. Be it a fine piece of wood carpentry, Polished Metal work or getting stuck in with moulds and resins: First hand experience will teaches you a lot. I love that feeling of ending a day with a physical prototype: something to feel, hold, use etc. The more I'm making, the more I'm learning.

What are you great at?

I believe my biggest strengths is what I can do in a workshop, and the expertise/knowledge I've gained from that.

More work by Jonathan at: www.jonathanjoanes.com

Find out about Kin Design at www.kin-design.com

Making effective prototypes that convey the core-user experience provides greater insights as to how a project needs to be pushed forward.

What do you wish you could improve upon?

I think a good designer should be able to make effective, critical design decisions. Being able to constantly make better choices with the design, interaction, communication, gesthetic etc in mind is something I'm always striving

What is a Product Designer in the 21st Century?

I believe a Product Designer should ask better questions. Well researched provocations provides a rich platform for investigation.

What's your advice for future **Product Design students?**

Gain as much professional experience as you can, as early as you can. Internships and Junior roles are a great way to learn how Studios function: From the rapid pace of project development, hitting soft and hard deadlines regularly and drinking beer on Friday evenings.

Having experienced a real-world working environment will transform you from a Student to a Professional Designer before vou even araduate.

A great head start towards

your careers!

What are the big, looming challenges for designers... for society?

I once participated in a workshop for a large international financial company. The brief was "How can we re-invent the Pin?" and welcomed speculative proposals that might help shape our future interactions with money. Great brief, and I was glad to see the company had invited artists & designers to help tackle these type of challenaes.

However, this was a one-off project. When the invited artists & designers aren't around, these challenges are tackled by the in-house Innovation Team, most have the job title: 'Innovation Architects'.. What does that even mean? These were people that relied on marketing strategies, figures and statistics instead of creating valuable user-experiences and quality service/product design outputs. Where are the Designers?

Ultimately, relationships need to be built to bridge the gap between Designers and Innovation Architects.

Who are the first 5 names on your fantasy exhibition Private View invite list?

Jon Maeda - He's the designer that's pioneering 'Designers in a corporate

world'. I value his approach of almost forcina business & design to harmonise to create a "Humanist Technologist".

Don Norman & James Gibson

- Ohh what I'd give to be a fly on the wall as they discuss their theories of Affordances in Design. They both have influential literature around the psychology of design and I have questions!

Olafur Eliasson - He has a large catalogue of projects, and I'm vet to find one that I dislike. Check out his Instagram page. It provides areat insights into the research and testina his Studio conducts. Even his prototypes look amazing!

Ryoji Ikeda - I've seen and experienced a few of his projects and I feel very fortunate to have done so. I was left in a trance every time and I'll never forget his work. Incredible international artist creating memorising, fully immersive experiences.

Carrozzeria Pininfarina - An Icon that designed Icons. He turned cars into works of art, consistently. His work has stood the test of time and completely transformed the Ferrari brand. The 250 GTO is a personal favourite!

@jonathanjoanes on Twitter

SMASHfestUK - WINNER!

The Engineer Collaborate to Innovate Engagement Awards:

Devising a survival strategy for a 'disaster movie' scenario was the key to engaging the residents of a deprived community in London with engineering ideas and concepts - by Jon Excell // 18 December 2017



According to Griffths, in 11 2017 Smashfest reached a direct audience of 9,500 young people and their families, 72 per cent of whom were BMF and 62 per cent female.

To find out more about SMASHfestUK visit www.smashfestuk.com

Earlier this year, residents of Deptford in South East London one of the UK's most deprived communities – faced up to a terrifying, and, thankfully, fictional, scenario: the impending eruption of a super-volcano that threatened the very survival of humanity.

With the clock ticking, a group of young people and their families worked alongside visiting engineers, scientists and artists to plot a strategy for survival; to figure out how they might help rebuild society after this catastrophe; and to explore the role that engineering would play in this effort.

This remarkable event was the

centrepiece of SmashFestUK, a week-long STEM and arts festival hung around the concept of an impending disaster designed to show young people and their families how engineering, science and the arts underpin everything that we take for granted.

The initiative, which is now in its third year, is the brainchild of Middlesex University product design course leader Wyn Griffiths and Dr Lindsay Keith, a science broadcast specialist and research fellow at the University of Greenwich who, frustrated by talk of "hard-to-reach" groups, set about developing a new method of engagement that would resonate with aroups and communities left in the cold by

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existing initiatives. "We wanted to approach things in a way that shows people aren't 'hard to reach'," said Griffiths. "You just need to go to them and connect them with things that mean something in their lives – and suddenly there's no 'hard-to-reach' issues at all "

The storyline framework is key to achieving this. Every year the festival is framed around a 'disaster-movie' scenario (2018's version will have as its backdrop a huge flood that threatens London) and it's a format that enables the initiative to connect with people in a way that more traditional events cannot.

"This contextual framework helps break through the idea that it's a science festival or it's an engineering festival, because right from that point some people will say that's not for me and self-select out," said Griffiths. "Instead, right from the start it's a disaster-movie festival and that opens things up in terms of public perception."

This also helps avoid what Griffiths scathingly terms the "jumble-sale approach" of some other initiatives. "You'll see lots of events and there'll be an explosion here and an explosion there, and you'll go from explosion to explosion. That's great. They'll be really cool explosions. But it doesn't connect in any way to your background or your life." The narrative approach, he said, immediately aets people askina auestions such as: how can we prepare? How can we survive?

How can we rebuild if we do survive? What is meaningful in our lives?"

Another key element is location. It's vital, said Griffiths, that activities are easily accessible to the local community, and that potential participants aren't put off by the "invisible barriers" unintentionally erected by other more mainstream initiatives, "Large institutions such as the Science Museum can do somethina auite amazina sometimes," he said, "but the people who access the Science Museum are people who have already aot the drive and interest to go to South Kensington. There's a big gap with communities outside; those without science capital don't have access to those kind of experiences."

Deptford has proved phenomenally successful and the team has since applied the same principles to a number of smaller one-day events. A recent event in Colindale, North London, provides an example of how the most effective locations are identified. Scouting for a venue, the team was repeatedly warned to steer clear of the area's Graham Park Estate, a deprived area with a high crime rate. "We knew that was exactly where we needed to go, so we did it there," said Griffiths.

Putting the event at the heart of the local community also increases the chances of multiple family members taking part, a key factor if the enthusiasm triggered by Smashfest is to have a good chance of triggering a sustained interest. "You can build science capital in kids in schools but if they go home and the understanding of what's inspiring them and the directions they might go in isn't supported by the family you can end up with accidental discouragement."

It's perhaps too early to gauge its longer-term impact but so far the statistics paint a hugely positive picture. According to Griffths, in 2017 Smashfest reached a direct audience of 9,500 young people and their families, 72 per cent of whom were BME and 62 per cent female.

The group already has a number of key relationships, with Middlesex University, The Refinery (a science and engineering film company) and the University of Greenwich, and is now looking for more partnerships and funding to help it replicate the Smashfest model across the UK.

Read the article and watch the video at www.theengineer.co.uk/disaster-movie-stem/

Collaborate To Innovate 2017

Category: Young innovator engagement

SmashfestUK Survival Village & Young Explainer Programme

Partners: SmashfestUK; Middlesex University; University of Greenwich; The Refinery

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Motion Driven eXperience

Pneumatic Motion Platform for VR Experiences // Ajay Parmar



This experience blends virtual reality motion simulation with replicated physical movement. The motion platform uses a configuration called a **Stewart platform**. It has a fixed base and a moving platform connected with six pneumatic actuators. Adjusting the lengths of the actuators moves the platform in six degrees of freedom (front / back, leff / right, up/down, roll, pitch and yaw).

The pneumatic actuator lengths are controlled using Festo precision industrial pressure valves. Software written in Python receives motion information from a roller coaster simulator, calculates the six actuator lengths for the platform to match the simulator orientation, and then sends messages to the six valves to move the platform.

The mathematical process to calculate actuator lengths is called **inverse kinematics**, a fundamental technique to robotics, 3D drawing and animation.

Michael Margolis 6

Ajay Parmar & Denis Tsetkov – Graduate Academic Assistants in Middlesex University, Faculty of Science and Technology report on the build of the two new motion driven chairs.

"Denis and I were given the task of designing and making two new simulation chairs which would be exhibited at the New Scientist Exhibition for Middlesex University.

The simulator chairs are an inverted stewart platform, where the actuators pull instead of push the moving plane. Actuation is done via pneumatics, using components from Festo - six pneumatic muscles, controlled by a Festo PLC and six proportional directional valves. Operating pressure is limited to 6 bars.

The previous version of the simulator wasn't mathematically

correct, thus movement was limited and not accurate. The chair was actuated by 600mm long muscles, which hindered its movement. Setup and transport of the chair was also a problem, since it was much wider than a standard double door - requiring multiple people and heavy lifting.

With the new chairs we set our max width to 1250mm; this way we could be able to get through most modern double doors. We also used 800mm muscles as opposed to 600mm, which allowed us to achieve a far greater range of motion.

This project was a great opportunity and gave us the opportunity to collaborate with experts from other departments such as Computer Science, Design Engineering and Mathematics."





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