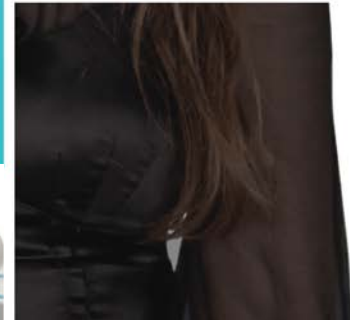


BACK TO FULL COLOUR

DEGREE SHOW 2022

BS& PRODUCT DESIGN
(Marketing & Innovation)

DEPARTMENT OF DESIGN INNOVATION





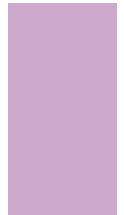
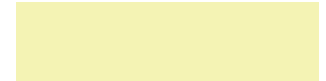
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Key:

Equine Sports Agriculture Home & Pets Wellbeing & Health Environmental & Industrial



BSc Product Design

(Marketing & Innovation)

The BSc Product Design and Innovation at Maynooth University is anchored upon human-centred problem solving, within both private and public sector contexts. Students are taught how to design products and services that are responsive to society's main challenges. Unique to our programme is its interdisciplinarity, with students developing their understanding of innovation from the perspectives of engineering, design and the social sciences, as well as a six-month, full-time work experience placement in third year. Our emphasis on project-based learning, workshops, laboratory sessions and group work combined with our interdisciplinary teaching, ensures the design of solutions that balance organisational viability, human desirability and technical feasibility.

Welcome

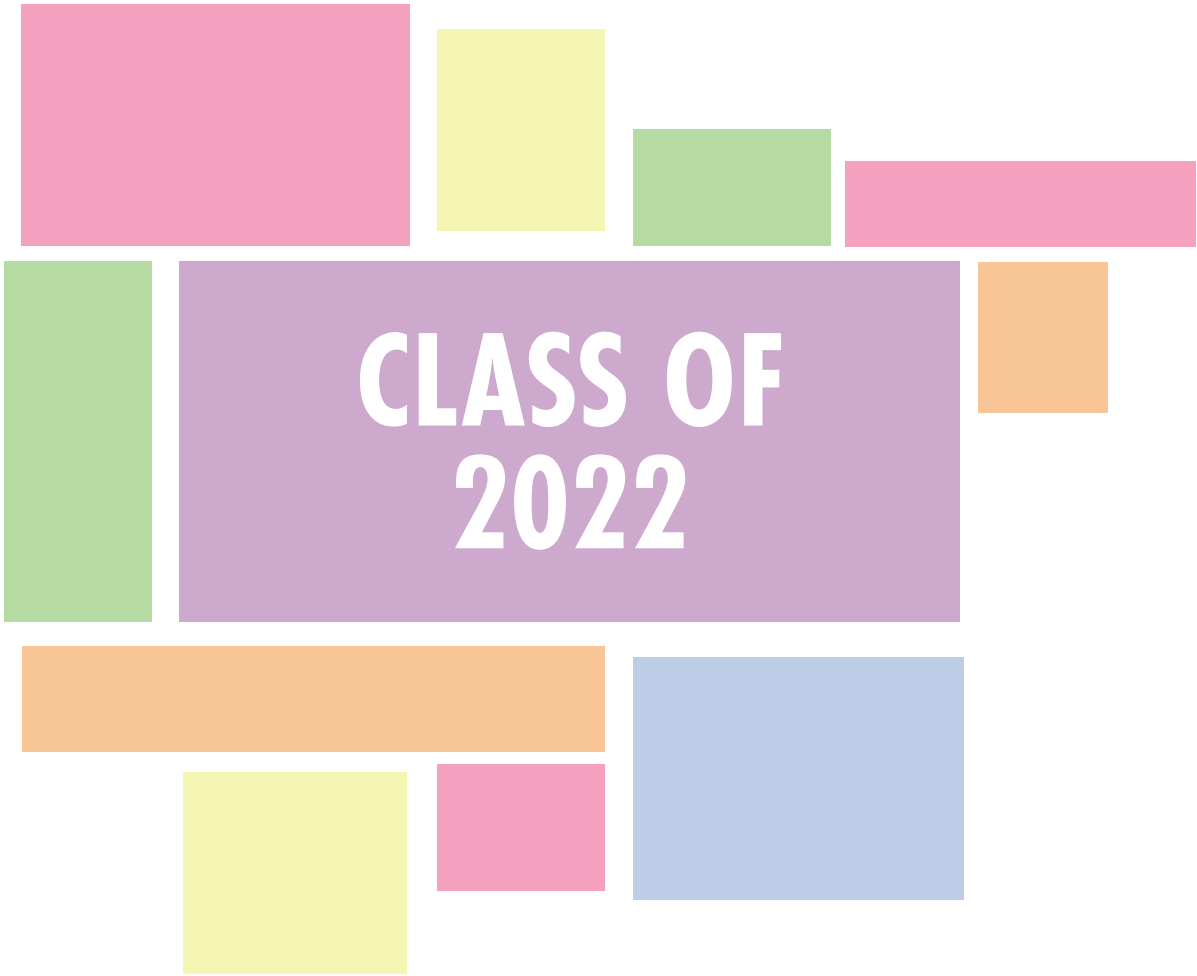
We are thrilled to be bringing our BSc Product Design & Innovation Degree Show back to campus this year. I want to congratulate our final year students for delivering projects to such a high standard, we are so excited to showcase their work. We are also very grateful to our second year students who helped in the design of the show. I want to say thanks to all of our academic, administrative and technical staff and in particular to Dr Iain Macdonald, who took the lead on this year's show. Finally, thanks to Electric Ireland for their sponsorship and continued support to our students. I hope you enjoy our 2022 Degree Show!



Dr Mary Galvin
Head of Design Innovation

Proudly Supported by:





**CLASS OF
2022**

DERBHÁILE BOYLE

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SNÁV

SNAV product is a waterproof earpiece which detects the inner core temperature and heart rate of the wearer. If either are of concern then the wearer will be notified by an alarm to immediately vacate the water. If the person is in distress then the device will send a signal to the nearest lifeguard using the built in GPS tracking system.



CHLOE BRADY

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MOBI

An attachment for walking frames to prevent them from being pulled towards the user as they place their weight on the frame when standing up.



ANDREA BUCKLEY

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FUZE

Fuze is a splint that sits around the joints of the fingers of sports players. The splint provides protection by stabilising the joints, preventing serious injuries such as hyperextension and dislocations, which can often happen in sudden contact situations. The splint protects the joint by ensuring the metacarpals are held correctly in place, whilst still providing natural flexion to the fingers, ensuring the splint does not hinder the players performance, rather restoring confidence in the player.

+ FUZE



AIDEN BYRNE

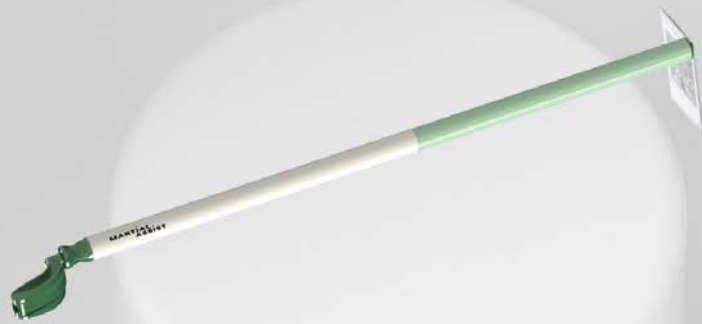
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0873382772



MARTIAL ASSIST

For card game players that suffer from impairments and deformities in their hands. Martial allows the user to play the games they love through their mouth without being inhibited by an assistant. Unlike having an assistant which isolates the user from the game and can cause illegal or improper actions when playing, Martial gives the user freedom to play and attend events by themselves, invoking a sense of freedom and independence that players with hand deformities and impairments miss out on.

MARTIAL ASSIST



HARRY CAMERON

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RWRK

RWRK is an app that connects you with a designer if/when your old clothes get damaged or just need a bit of freshening up. You will log in to the app and answer some general questions about the garment, as well as some collaboration with a designer about what you would like done. After that it's as simple as paying and sticking your garment in the post. The piece will be posted back to you revitalized and with minimum carbon footprint.

RWRK.

We revitalise
your old or
damaged clothes
into a bespoke
1 of 1 garment



JOHN CLARKE

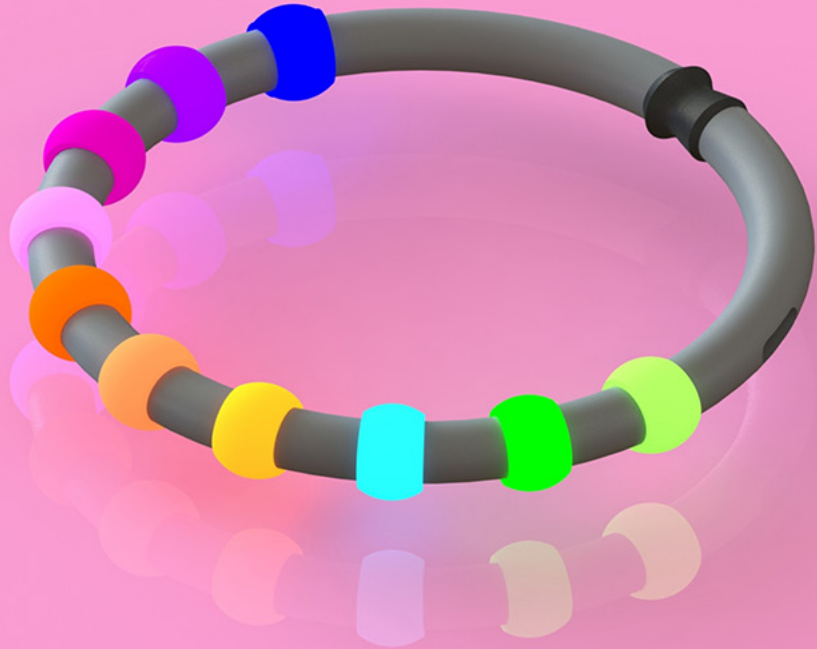
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BELLY BEAD

In total a mother should record 10 movements over a 12-hour period. This is a sign of foetal well-being in the womb. Recently there has been more emphasis in hospitals for the partner to ask about the movements during the day. This is to have the partner engage in the pregnancy but also to show the importance of counting the foetal movements during the day. My solution is a simple, smart bracelet which is inspired by an abacus. When the mother feels a movement, they simply rotate the beads which will then light up and send a notification to an app on your smartphone which can also be accessed by the partner or other family members.

Belly
Head



DANIEL CROTTY

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NORDIC ASSISTANT

The Nordic Assistant helps increase strength and reduce the risk of injury within the hamstring muscle. It allows you to carry out a self-assisted Nordic Fall, further improving your power, speed, and hamstrings durability. The Nordic Assistant will allow you to enhance your performance on the field or in the gym. The compact size of the Nordic Assistant will enable you to easily tuck it away in your gear bag on the move and use it anywhere. Slide the strap under a door or any stationery object and allow the Nordic Assistant to help you assist your own goals.

ASSIST YOUR OWN GOALS



CLINT DE JESUS

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AIRIDESCENT

For Sleep Apnoea patients that choke in their sleep multiple times a night, in some cases potentially dying, Airidescent is a wireless CPAP machine that allows airflow into their airway, opening it up and stopping the choking. Unlike current CPAP machines which are heavy, bulky and keep you tethered to a massive device, Airidescent provides a wireless tether free experience, allowing the user to sleep without any sort of restraint or feeling tied down to an object.



AIRIDESCENT

ELINE DE VRIES

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EQUICAL THERAPY

A specially designed massage rug to give your horse's back the release of any muscle tension he/she may have. Five different massage points and three heat pads run along the horses back. It can be used as a post/pre-workout solution to either warm up the back muscles or give them a post workout massage time of relaxation/therapy for the horse.



RONAN DOHERTY

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COHEAR

With heavy PPE usage communication can be difficult between healthcare workers. Noisy environments with a heavy traffic of people, loud equipment, and physical barriers such as face masks, respirators, and face shields mean that hospital staff often struggle both to hear and be heard. Cohear solves this issue by removing all environmental noise pollution and connecting staff in close proximity directly to each other.



JESSICA DONOHOE MAITI

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FUTURE BREATH

Future Breath is a breathing device targeted at users who suffer with anxiety. It teaches users a variety of breathing techniques using guided lights and gentle vibrations. In times of panic Future Breath teaches users to focus on the present moment. Feel less anxious knowing you have that helping hand wherever you go. Escape your current reality for a few moments while you catch your breath.



LUKE FLEMING

0857720188

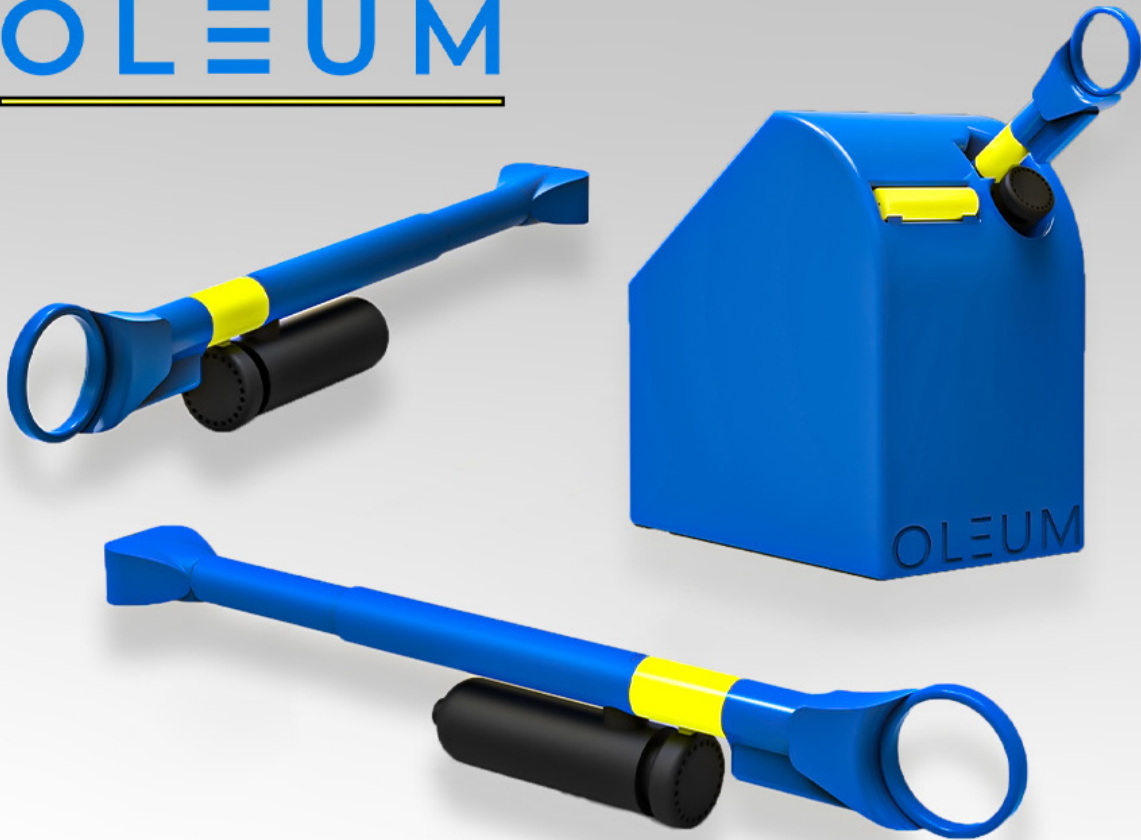
lukeflemingphotos@gmail.com



OLEUM

OLEUM is designed to soak up oil spills using hair. Hair soaks 5 times its weight in oil and has been approved by NASA. Hair is a natural, non-toxic, safe and cheap sustainable material that currently is just disposed of in landfills. My product turns hair into a solution for pollution. Paired with a service that collects the oil and hair weekly/monthly. This product can be used across any industries that use oil.

OLEUM



JACK GILLEN

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BRAC

An assistive device which aids senior and wheelchair users. Brac accommodates the difficulty senior & wheelchair users face, upon entering and exiting a modern day vehicle. Brac eliminates the fretfulness users face during the transferring to vehicle seating. This product was inspired from the ponderous combat my grandmother faces upon trying to complete everyday tasks such as visits to family & friends.



BRAC

MAKING YOUR JOURNEY SMOOTHER



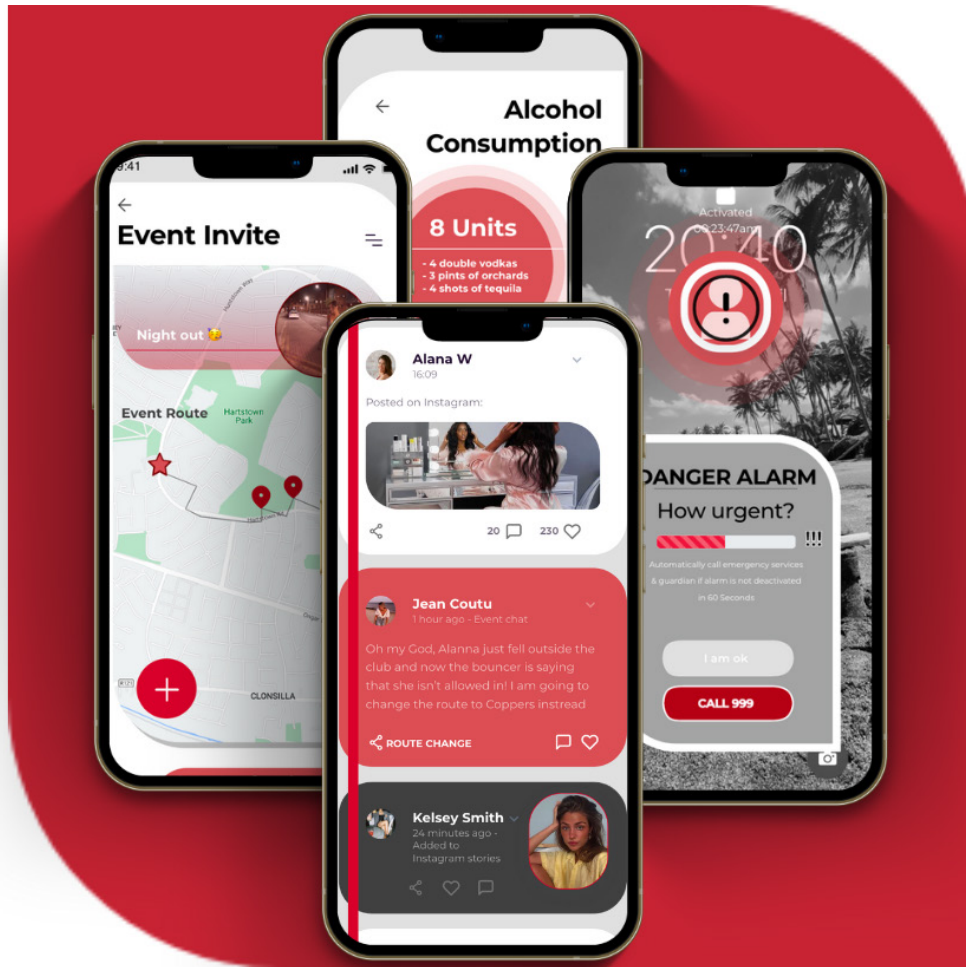
JORDAN HENDY

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0876476475



HOMESAFE X

HSX will give woman peace of mind. This app attached to a physical alarm keeps the user connected to her friends on the event and also to a guardian at home so that she is never alone while also creating a fun way to record memories of their event. HSX gathers data from connected apps and calculates your route dangers, recommended max substance use & to help the person stay within their preset safety parameters without further thought from the user.



DYLAN HENNESSY

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EATSAFE

Much of today's food packaging has small text and rarely gives a clear answer on whether their product is free of certain ingredients. The user can select their food restrictions e.g., coeliac. All suitable foods will be approved when scanned while other non-suitable foods will be flagged, and the user notified. It is an age friendly device and contains a large database of suitable and similar products on the market.



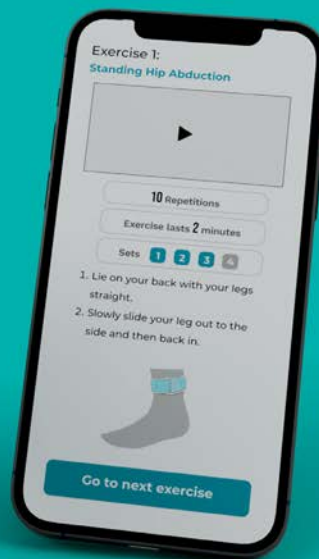
EVE HYLAND MARTIN

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HIP-HLPR

A wearable movement tracking device worn on the ankle or foot, paired with an app to aid older adults on their journey to recover from hip surgery. A mobile application provides information, encouragement, and feedback to patients to guide them through recovery from hip surgery and help them regain confidence in their mobility outside a hospital setting.



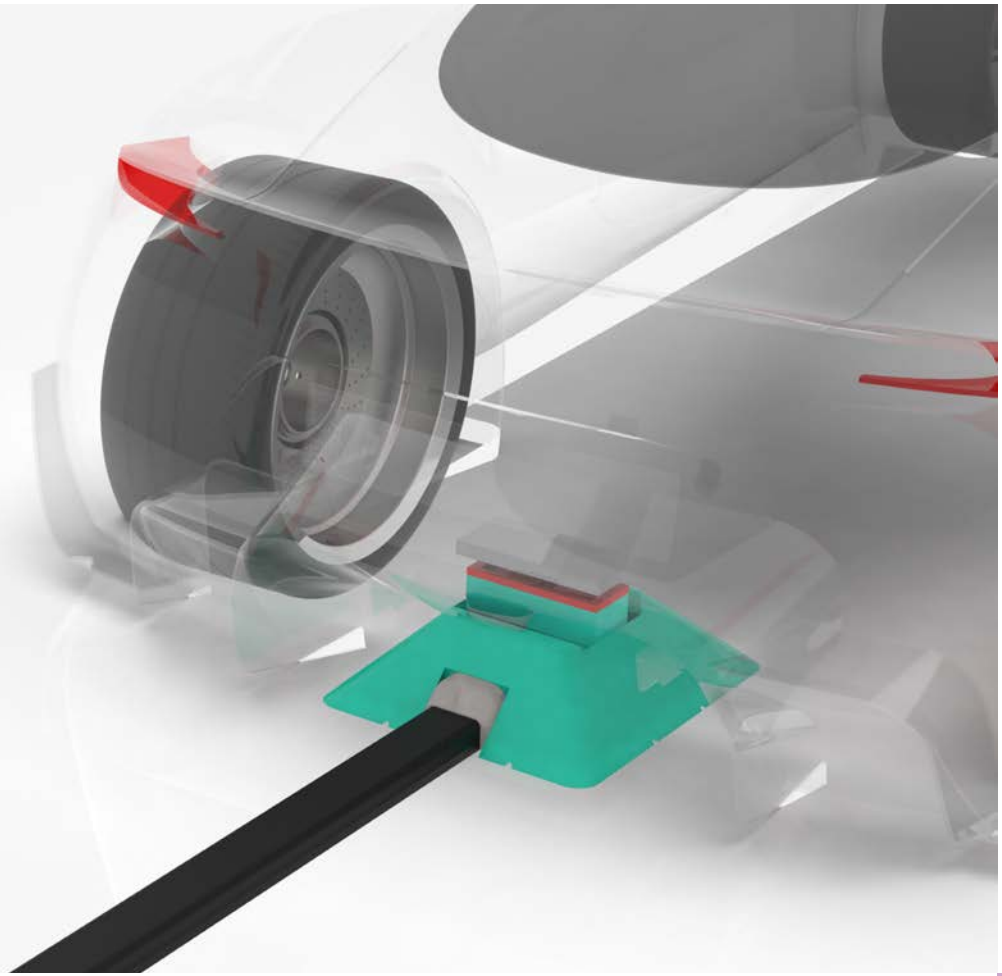
CIAN KAVANAGH

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0871352348



RE VOLT

ReVolt is an EV charging accessory that utilises magnets to charge your electric car seamlessly. Plug your standard EV charger you have at home into ReVolt and place the device where you normally park your car. Once you have a compatible car or retrofitted an adapter, you will never have to think about recharging your car again. Taking the major pain-point out of EV ownership.



NIALL KEANE

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0871092442



SOMNA

Somna is a product that helps alert users to keep to their regular sleeping pattern using visual reminders from the desk lamp. Along with the accompanying app, which keeps the user up-to-date with their sleep hygiene, track their daily moods and log other factors that may affect their sleep so they may have a record on factors that may influence their sleep quality.



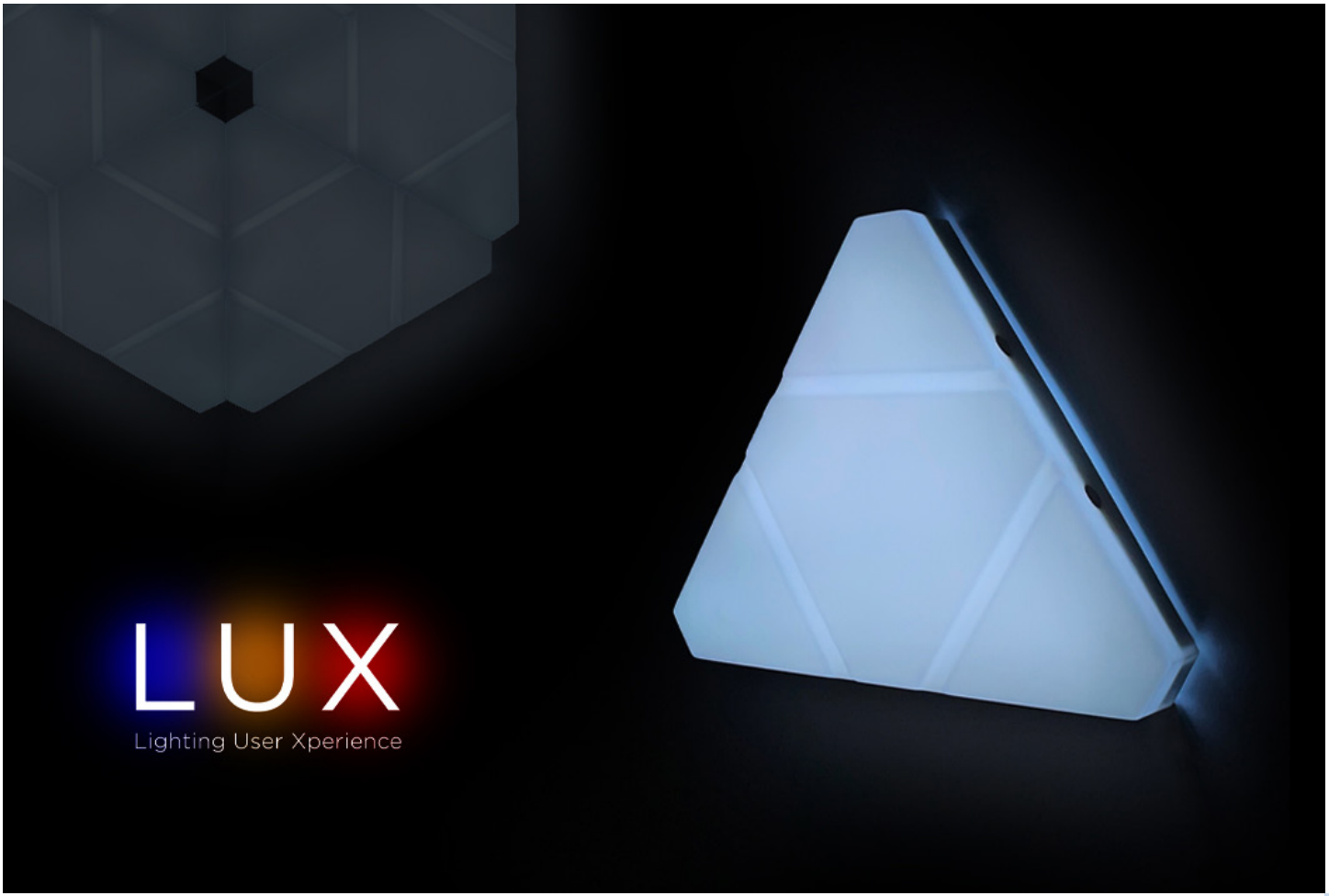
GARY KELLY

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0833047809



LUX

Created to help ease the long term effects that sedentary behaviour can have on office workers, without compromising their focus or creative rhythm while also increasing social interaction after the COVID-19 pandemic. Uses light psychology.



LUX

Lighting User Xperience

CHRISTIAN LAPITAN

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THE CAMOUKO

Most home gyms build the room for their equipment. The Camouko Bench revolutionises the home gym equipment industry by providing a unique piece of home equipment specially designed to blend with your modern housing furniture while also providing storage for your workout accessories.



CAMOUKO BENCH

Seamless Exercise

EVITA MALASKEVICIUTE

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ROOM MATE

Currently, our generation is predicted to be renting for the rest of our lives, meaning, that people various ages will be stuck living in rented accommodation with strangers, it may be difficult to agree on certain ground rules, therefore, RoomMate will detect noise and smell levels and notify each occupant via mobile application which would make living with strangers easier.

RoomMate

Living together made easy



AARON MCGEE

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TRI-BALE

This bale lifter has a hydraulic clamping arm that clamps down onto the top of the bale to hold it into the lower two pipes to prevent bales falling off during transport, while climbing up hills or travelling across rough terrain the arm stops the bale bouncing out of the bale lifter. This is going to stop unnecessary accidents related to bales falling or rolling, leaving anything in its path in danger from people to machinery and buildings.



THOMAS McGUINNESS

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ANTICYCLE

The 'Anticycle' was designed to reduce wastage in the 3D printing FDM sector allowing users to prevent almost all material going to waste. This product allows the user to undo failed prints and turn them back into plastic filament which can then be loaded into the next project preventing the user from losing out on material and money. Its aim is to reduce wastage in the manufacturing industry and to promote an ideal circular economy situation.

The AntiCycle



BEN McINTOSH

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BIA BUDDY

A digital cooking assistant designed for children and adolescents, which assists in the preparation of meals and baking by making cooking fun. Its purpose is to give children and adolescents the practice and confidence they need to begin cooking at an early age, so that they can continue to learn about nutrition and culinary practices through life.

BiaBuddy



CONAN McLUCAS

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0863456778



CHIRP CHIRP

A toggleable device which uses the motion of the bicycle wheel to create a percussion sound similar to that of a xylophone. As this sound occurs at a regular interval, it is perfect for urban commutes as it alerts pedestrians who may not be seen by the cyclist such as those crossing the street in stopped traffic. This also allows the cyclist to focus on the road without worrying about reaching for a bell when it is often too late to be effective.



MILANA MOLEVA

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0852360789



THREEGUARD

ThreeGuard is a 3 in 1 protecting garment aimed at weightlifters. The upper piece can be worn anytime while correcting your posture with an adjustable lever so you can improve your posture in increments. Connect the spine piece and lower back belt to have a three in one garment which protects your shoulders, back curvature and lower back.



ROSS MOORE HESLIN

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PLUMB

“Plumb” ensures that a scaffold has been set up correctly and warns if and where there is any hazardous movement. This software can help to prove that scaffolders have done their job correctly and can highlight areas of the scaffold that may require more attention.

Plumb



CIAN MORAN

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FILU

Each washing machine cycle can release as many as 700,000 microplastics into the environment, FiluW aims to stop this by capture these microplastics for recycling. The aim of the project is to meet this goal in the most sustainable and user-friendly way possible. The Filao uses metal mesh filter and an innovative centripetal force cleaning method, meaning the user never needs to replace the filter.



CARL MURRAY

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PAW.PAD

An innovative smart toy which allows pet parents to play and interact with their dog in real time while away from the home. Various games and challenges are also programmed into the paw.pad such that dogs can play and learn by themselves.



 paw.pad

SEAN O'REILLY

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HABITUS

A wearable posture corrector that takes into account your focus and flow during times of work. The device intuitively corrects posture when it begins to slip during long seated periods and inflates a bag at the lumbar section of the spine pushing the spine into its natural 'S' curve. The shirt is to be worn under clothes as a discreet option for posture correction.



HABITUS

Correcting your posture
during your busiest hours.

CONOR RALEIGH

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0879101901



ACE

This machine has a robotic ball collector which retrieves the balls using photoelectric sensors. This prevents the user from potential lower back pain from picking up the balls. This collector then returns to its housing where it releases the balls into the firing mechanism where they proceed to be fired across the net to the user. This solution can hold up to 30 tennis balls and can be easily transported to and from the court.



OLIVIA RAMPERSAUD

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MOZARCH

A stimulation device for dysphagia as a symptom of dementia, syncing upper back stimulation pulses to the beat of a song, Mozarch allows users to treat their swallowing difficulties associated with memory loss in a holistic way. By allowing users the opportunity to associate memories associated with proper swallowing techniques (thanks to the stimulation) in the portion of the brain associated with musical memories, the opportunity for long and short scale rehabilitation are possible.



MOZARCH

DAVID SCULLY

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BREATHE

This device will track the users heart rate that will create a low frequency vibration when the heart rate has spiked to a high rate. It will only create a vibration when the user has slowed down or fully stopped. This way the user is reminded by the vibration to calm or control their breathing down while they have the chance to. The device will be secured in a compression sleeve on the upper arm during any sports under their jersey.




BREATHE

OISIN SHEIL

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RHINO PINCH

Rhino Pinch relinquishes the user from their past ordeals with nosebleeds, by taking the first aid procedure out of their hands, allowing them to remain calm & stress free while the device manages the bleed for them. Its universal ergonomic design provides a tight fit no matter the size or shape of your nose, ensuring effective treatment of the nosebleed



LUCY SMITH

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ILLUMIRUN

A wearable smart ring for runners that once activated, shares its location with chosen contacts, enabling the runner to feel connected to their trusted community, allowing them to exercise more confidently and safely.



HUDSON SOUZA SANTOS

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HIDEAWAY

The Hideaway suitcase is a collapsible suitcase that helps frequent travellers living in small spaces maximize space both when packing and when storing their suitcase away at home. Hideaway has an integrated weighing scale system that allows the user to weigh their suitcase wherever they are. The suitcase also has a vacuum bag that allows the user to vacuum down the clothing items. It uses a mini built-in vacuum motor, this increases the storage space within the suitcase.

hide. away

*Keep it simple.
Pack more. Store less.*



DANNY TUIE

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GLUCO VIZ

A full glucometer kit that can be easily and independently used by visually impaired diabetics. It provides audible results, and includes an integrated multi lancet lancing device, a high contrast touch screen, a finger guide for test strips, a robust hard case, and an integrated test strip container.

Gluco-VIZ



EDEL WHYTE

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FLEXI LIMB

A product that corrects contracted flexural limb deformities in new-born foals, using a tested method of correction in a more user-friendly way. The reusable product fits all foals and corrects angular limb deformities in an effective manner. FlexiLimb is an easy to apply solution, reducing effort for professionals and owners while providing maximum comfort for the animal.



 FlexiLimb







Award Winning Students

Student Entrepreneur of the Year- Top 50 Shortlist

Edel Whyte
Daniel Tuite
Olivia Rampersaud
Clint De Jesus

HSE Spark Scholarship – Design for the Frontline

Oisin Sheil
Eve Hyland Martin

GradIreland – Undergraduate of the Year for Innovation Finalist

Gary Kelly

MU Business Soc Innovation Challenge Winner

Andrea Buckley



The Department

Head of Department

Dr Mary Galvin

Administration

Emer Fitzpatrick

Academic Staff

Dr Aldo Valencia

Dr Frank Devitt

Dr Iain Macdonald

Dr Linzi Ryan

Martin Ryan

Trevor Vaughn

Technical Officer

Anthony Cleary

Associated Staff

Dr Shane Keaveney

Aidan Mc Dermott

Alan Harrison

Barry Ryan

Ben Millett

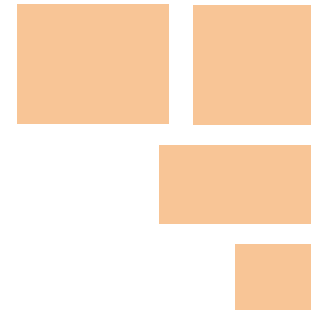
Enda O'Dowd

Harry French

Lydia Ward

Mike O'Keeffe

Nick Barker



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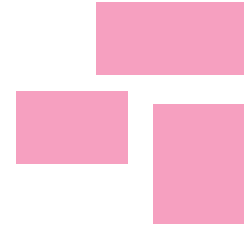


BSc Product Design Programme Overview

YEAR 1	Semester 1	 PD155 Physics & Mathematics 7.5 credits	 EE151 Electronic systems prototyping 7.5 credits	 PD151 Design sketching 7.5 credits	 PD157 Creative thinking theory & methods 7.5 credits	
	Semester 2	 PD156 Material science 7.5 credits	 PD154 Electronic systems project 7.5 credits	 PD152 Design Modeling: material and virtual 7.5 credits	 PD158 Visual Thinking and project 7.5 credits Sponsored	
YEAR 2	Semester 1	 AC210 Finance, Economics, Accounting 7.5 credits	 PD207 Manufacturing Processes 1 5 credits	 PD262 Societal Challenges & service innovation 1 5 credits	 PD209A Universal Design Project 5 credits	 PD216 Visual communication and portfolio 10 credits
	Semester 2	 PD201 Design History and Culture 5 credits	 PD215 Usability, Ergonomics & Aesthetics 10 credits	 PD206 Computer Aided Design & Visualisation 5 credits	 MN203 Marketing Management 5 Credits	 PD263 Societal Challenges & service innovation 2 5 credits
YEAR 3	Semester 1	 PD301 Ethnography and Anthropology for Design 5 credits	 PD311 Competitive Landscapes & Intellectual Property 5 credits	 PD309 Human-computer Interaction 5 credits	 PD304A Design for Environment & Sustainability 5 credits	 PD307 Design Process and Projects 10 credits Sponsored
	Semester 2	 PD399x Industrial Work Experience 30 credits Sponsored				
YEAR 4	Semester 1	 PD303 Advanced Materials and Design for Manufacture 5 credits	 PD401 Group Design Project 15 credits Sponsored		 PD402C Final Year Individual Project Proposal 10 credits	
	Semester 2	 PD401 Final Year Individual Project 20 credits Sponsored		 PD401 Innovation Management 5 credits	 PD401 Systematic Design Methods for innovation 5 credits	

Sponsored Modules that have been sponsored by external Organisations or are available for sponsorship

The Department of Design Innovation



Design Innovation at Maynooth University is a department of interdisciplinary expertise that combines industrial, entrepreneurial and academic excellence in Design. We are focussed on developing research and user-centred, applied practitioners that create impact through design innovation in industries across Ireland and Europe. We distinguish ourselves from other design courses by placing an emphasis on research methods, user-experience, marketing, business models and the commercial justification of new product and service proposals, as well as core social science and engineering subjects. The Department is recognised as a unique centre of excellence in Ireland and has been an active member

of Institute of Designers in Ireland. Our industry network covers many sectors: health and medicine, sport, agri-tech, consumer products, financial services and food. Both our undergraduate and postgraduate programmes have collaboration projects and placements with many leading companies such as: Accenture, ESB innovation Lab, Genesys, SAP, Cook medical, Glanbia, Salesforce, Pramerica, Hewlett Packard and St James's Hospital.





MSc Design Innovation

The MSc in Design Innovation is the first of its kind in Europe, combining theory & practice, to provide students with the ability to develop smart, novel & innovative solutions. Within the program, students work directly on projects that resolve problems for companies such as Toyota, The DAA, ESB & Mastercard. As a result, our graduates have gone on to create significant impact within industry in the areas of innovation leadership, innovation management, product management, strategic marketing, market research, design strategy & new product or service development in a wide variety of sectors such as design, manufacturing, innovation management, new product development, media & all areas of the public services.

The MSc in Design Innovation is available in both a full & part-time basis, with a limited number of places still available for our 2022 program. We welcome participants from various disciplinary backgrounds, including graduates of Social Sciences, Anthropology, Design, Business, Computer Science or Engineering. Graduates of other disciplines are also invited to apply. It is also possible for candidates with significant industry/ relevant sector experience but without a primary degree to be considered. If you are interested in applying, you can find more information through the Maynooth University website, or you can contact Dr Linzi Ryan through her information below.

Dr. Linzi Ryan
Director of Postgraduate Studies,
Department of Design Innovation
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