INNOVATION VOUCHERS INITIATIVE

MUNSTER TECHNOLOGICAL UNIVERSITY CORK

DIRECTORY OF SKILLS AND EXPERTISE

College Contact Point for Innovation Voucher Enquires:

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Department/Unit	Specific services offered	Contact Name	Address	Telephone	E-Mail address
MESSO (Mechanical and Energy Systems Simulation and Optimisation)	MESSO is an academic research group primarily concerned with the advancement of knowledge in the applied mechanical and energy systems research fields. The group has expertise in mechanical, thermal and energy systems modelling and simulation, specialising in areas such as renewable energy technology, agricultural systems and building energy technologies. The group has expertise in: 1. Mechanical Design 2. Numerical modelling 3. Computational fluid dynamics (CFD)	Dr Andrew Cashman Dr Paul O Sullivan Dr Michael Murphy Paddy McGowan	MESSO, MTU, Bishopstown, Cork	021-4335069 021-4335069 021-4335069 021-4336751	messo@mtu.ie

	4. Finite element analysis (FEA) 5. Experimental validation 6. Prototype development 7. Database development and data analysis 8. Software development 9. Energy systems modelling 10. Energy system optimisation 11. Energy technology deployment 12. Field studies & energy monitoring 13. Robotics and Automation 14. Machine Design and Build				paddy.mcgowan@mtu.ie
Nimbus Centre www.nimbus.cit.ie	The Nimbus Centre is at the forefront of cyber-physical systems (CPS) and Internet of Things (IoT) research, innovation and learning. We develop technologies that address the real needs of industry, people and society. The Nimbus Technology Gateway offers end-to-end digital transformations. Our highly experienced and dedicated development team deliver innovative solutions in: 1. Hardware 2. Software 3. UI/UX	Brian Cahill	Nimbus Centre, MTU, Bishopstown, Cork	087-7824314	brian.cahill@mtu.ie

	4. Mixed Reality 5. AI & Data Analytics 6. Networks 7. Online business strategy development				
CAMMS Centre (Centre for advanced manufacturing and Management Systems) www.camms.ie	CAMMS (Centre for Advanced Manufacturing & Management Systems) is a Continuing Professional Development Centre (CPD) within MTU dedicated to providing opportunities for workforce development and personal upskilling. The centre capitalises on the extensive expertise within MTU together with external professionals to deliver up to date education and training programs in Automation and Control, Lean Sigma, Project Management and Manufacturing Engineering. CAMMS aims to provide career-focused education for the benefit of the personal, intellectual and professional development of students and to solve problems directly related to skills required by industry.	Dr Ciara Lavelle	CAMMS MTU Bishopstown Cork	021-4326264	ciara.lavelle@mtu.ie CammsCork@mtu.ie
CAPPA (Centre for Advanced Photonics & Process Analysis) www.cappa.ie	The Centre for Advanced Photonics & Process Analysis (CAPPA) is an industry focused research centre working in the fields of applied optics and photonics and is based at Cork Institute of Technology. The centre has industrial partners in various sectors including medical devices, electronics, food science and technology, pharmaceuticals and photonics. CAPPA works with a wide variety of companies from Irish start-ups and SMEs to world leading MNC's. CAPPA's facilities are co-located in MTU and the Tyndall National Institute under the MTU@Tyndall partnership. CAPPA's has expertise in	Dr. Liam Lewis	CAPPA MTU Bishopstown Cork	021-4335338	info@cappa.ie liam.lewis@mtu.ie

	Photonic Sensors LED\Laser characterisation Life science sensing applications Photonics for medical devices Spectroscopy for Pharmaceutical applications Spectroscopy for food and nutritional analysis Process analysis, automation and optimisation Infra-Red and Raman analysis Scanning Electron Microscopy and elemental analysis Contamination detection and identification Prototype development Optical design and simulation Material Characterisation Structural changes (crystalline v amorphous) Fluorescence detection of material and gases Optical imaging and inspection Ingredient tracking in production processes Failure mechanism exploration Polymer analysis Hyperspectral imaging, food, beverage, agriculture, medical device, pharma H2020 proposal preparation and consortia development				
Biological Sciences	1. Biomedical Science 2. Pharma	Dr Brigid Lucey	Dept. of Biological Sciences,	021-4335484	Brigid.lucey@mtu.ie

	3. Nutrition 4. Agri-Bioscience		MTU		
Chemistry	Analytical Chemistry application using HPLC, LC-MS/MS and ICP-MS. Analytical screening of Herbal preparations. Environmental Screening of APIs, Heavy metal detection. Food and Water Screening for chemical residues and biotoxins.	Dr Ambrose Furey	Dept. of Physical Sciences, MTU	021-4335875	ambrose.furey@mtu.ie
Process Innovation Engineering Research Group (PiERG)	1. Advanced modelling, 2. Powder processing, 3. Drug delivery, 4. Medical devices, 5. Formulation and 6. Chemical processing.	Dr Sandra Lenihan	MTU Bishopstown Cork	021 4335886	sandra.lenihan@mtu.ie
Mechanical & Manufacturing Engineering	1. Rapid Prototyping 2. Machining 3. Materials Testing 4. High Speed Imaging & Thermal Imaging 5. Automation and Mechatronics 6. Automotive Engineering	Matthew Cotterell	MTU Bishopstown Cork	021-4326274	Matt.cotterell@mtu.ie

	7. Mechanical Design & Analysis 8. Renewable Energy (including Wind, Wave and Tidal) 9. Structural Analysis 10. Mathematical Modelling 11. Fluid Flow Simulation including Computational Fluid Dynamics 12. Prototype testing 13. Design of Experiments 14. Marine Engineering 15. Composite materials and modelling 16. Material Science	Brian Hand			brian.hand@mtu.ie
Clean Technology Centre https://ctc-cork.ie/	Process optimisation, water efficiency, waste assessment and minimisation, environmental training, circular economy, carbon footprinting, energy optimisation, Environmental Programme Management, environmental management, training, R&D, technical assistance (resource use reduction), environmental audits, waste characterisation, emissions inventorying, PERs, IPPC applications, fugitive emissions estimation, cleaner production, solvent balances, material flow analysis, environmental policy development, e-learning development.	Colum Gibson	Clean Technology Centre, Munster Technological University, 53 Melbourne Road, Bishopstown, Cork, Ireland	+353 21 4344864	Colum.gibson@mtu.ie
Electrical Engineering	All aspects of Electrical Engineering and power	Martin Hill	Dept of Electrical Engineering	021-4325475	martin.hill@mtu.ie

			MTU Bishopstown Cork		
Media Communications	The Department of Media Communications is an educational provider of undergraduate and post graduate courses in visual communication, creative digital media and photography with new media, and masters programmes in public relations and elearning. Special purpose awards in TV production and digital media are also available. The Department is part of the Crawford College of Art and Design since 2010. Facilities include drawing, design and photographic/video studios, computer labs which are used for; digital imaging, desktop publishing, video editing, 2D and 3D animation, programming, VR, AR and project development.	Gwen Lettis Rose McGrath	Munster Technological University, Bishopstown, Cork, Ireland.	021 4335810	gwen.lettis@mtu.ie rose.mcgrath@mtu.ie