

MaDE2020 Programme

Monday 7 December 2020

8:00 AM - 8:45 AM	Registration Open		
9:00 AM - 9:30 AM	Conference Opening (Great Room 4) MIHI: Geremy Hēma (Kaiaārahi UniServices) OPENING: Prof Jim Metson (Deputy Vice Chancellor Research, The University of Auckland) Session Chair: Professor Olaf Diegel (MaDE2020 Co-Chair, The University of Auckland)		
9:30 AM - 10:00 AM	Keynote Speaker: Catherine Beard (Executive Director: BusinessNZ, Manufacturing NZ, ExportNZ) MaDE in NZ - TURBO CHARGING EFFORTS FOR AN ECONOMIC RECOVERY Session Chair: Professor Olaf Diegel (MaDE2020 Co-Chair, The University of Auckland) Room: Great Room 4		
10:00 AM - 10:30 AM	Morning Tea (Great Room 1) - sponsored by AUT Poster and Exhibition Viewing (POSTER PRESENTERS TO BE AVAILABLE AT THEIR POSTERS FOR VIEWING AND JUDGING) CONCURRENT CONFERENCE SESSION 1		
10:30 AM - 12:30 PM	Entrepreneurial Mindset and Manufacturing Session Co-Chairs: Don Cleland and Paul Woodfield Room: Great Room 2	Industry 4.0 - An Overview Session Co-Chairs: Yujian Lu and Rachael Tighe Room: Great Room 3	Additive Manufacturing - An Overview Session Co-Chairs: Simon Fraser and Juan Schutte Room: Great Room 4
	DESIGNING RESEARCH FOR IMPACT - Don Cleland, Massey University and SFTI	IOT WITHOUT INTERNET OR THINGS - Aryaman Taore, Beckhoff Automation	DEMOCRATISING MEDICAL DEVICES: 3D PRINTING AND OPEN SOURCE SYSTEMS FOR DESIGN, DEVELOPMENT AND DISTRIBUTION - Simon Fraser, Victoria University of Wellington
	RESEARCHER-INDUSTRY PARTNERSHIP TO ENABLE INNOVATIVE PROCESSES: A CASE STUDY - Pauline Calloch, Callaghan Innovation	WHAT IS INDUSTRY 4.0? DISPELLING THE COMMON MYTHS AND FEARS - Yujian Lu, The University of Auckland	DESIGNING AND 3D PRINTING A 25 KG STAINLESS STEEL BUILDING STRUCTURAL NODE - Mike Fry, TIDA
	MARKET SHAPING FOR DEEP-TECH INNOVATION - Julia Fehrer, Business School, The University of Auckland	APPLICATION OF AUGMENTED REALITY AND INDUSTRIAL INTERNET OF THINGS TECHNOLOGIES TO HIGH VALUE MANUFACTURING PROCESSES - Kevin Maret, LEAP Australia	OPTIMISED 3D PRINTED STRUCTURES: DEVELOPING A SIX-AXIS ROBOTIC SPATIAL PRINTING SYSTEM - Hamish Morgan, Victoria University of Wellington
	CAN YOU TEACH ENTREPRENEURSHIP TO UNDERGRADUATE ENGINEERS? - Nick Pickering, University of Waikato	MĀORI GEOMETRY AND INDIGENOUS COMPUTATIONAL DESIGN - A CASE STUDY FOR 3D PRINTED STRUCTURES - Derek Kawiti, Victoria University of Wellington	A HYBRID ADDITIVE MANUFACTURING STRATEGY FOR INJECTION MOULD INSERTS - Simon Chan, The University of Auckland
	THE FORM AND FUNCTION OF INTERMEDIARIES IN A SCIENCE AND TECHNOLOGY CONTEXT - Paul Woodfield, Auckland University of Technology	A PRACTICAL JOURNEY INTO INDUSTRY 4.0 - Paul Gravatt, Motion Design	ADDITIVE MANUFACTURING IN THE AVIATION INDUSTRY - Andrew Hewitt, Air New Zealand
	RESEARCH AND DEVELOPMENT FUNDING OPPORTUNITIES VIA THE REGIONAL BUSINESS PARTNER NETWORK - David Claridge, ATEED	TAILORING INSPECTION TO APPLICATION – A DOUBLE EDGED SWORD - Rachael Tighe, University of Waikato	UTILISING PARAMETRIC CUSTOMISATION TO TRANSLATE AUXETIC STRUCTURE THEORY INTO ADDITIVELY MANUFACTURED MULTIMATERIAL PERFORMATIVE GEOMETRIES - Brittany Mark, Victoria University of Wellington
	LEADTIME QUOTATION AND PRICING FOR MAKE-TO-ORDER MANUFACTURING SYSTEMS - Tava Olsen, The University of Auckland	SELF-SERVICE SILO – CUSTOMER CONVENIENCE 24/7 - Caleb Millen, Beckhoff Automation NZ, and Nikk King, NZ Controls	USING THE RIGHT TOOL FOR THE RIGHT JOB - Juan Schutte, CDAM Lab, The University of Auckland
DEVELOPING ENGINEERING DESIGN AND MANUFACTURING TALENT THROUGH THE FORMULA:SAE COMPETITION - Lizzy Grant, Department of Mechanical Engineering, The University of Auckland	APPLICATION OF RFID SENSORS IN DETECTION OF ILLICIT CONNECTIONS, SURFACE FLOWRATES, AND SEWER BLOCKAGES - Sundra Rami Reddy Tatiparthi, The University of Auckland	HIGH STRENGTH ALUMINIUM ALLOY LASER POWDER BED FUSION - Zhan Chen, Auckland University of Technology	
12:30 PM - 1:30 PM	Lunch (Great Room 1) - sponsored by Fisher & Paykel Healthcare Exhibition Viewing		
1:30 PM - 2:00 PM	Keynote Speaker: David Chuter (CEO and Managing Director, Innovative Manufacturing Cooperative Research Centre, Australia) ANZ MANUFACTURING - LEADERSHIP IN UNCERTAIN TIMES Session Chair: Professor Jim Johnston (MaDE2020 Co-Chair, Victoria University of Wellington) Room: Great Room 4		
2:00 PM - 3:30 PM	CONCURRENT CONFERENCE SESSION 2 Innovation in Manufacturing, Design and Entrepreneurship Session Co-Chairs: Jim Johnston and Bill Trompetter Room: Great Room 2	NZ and The Circular Economy Session Co-Chairs: Oliver McDermott and Ben McGuinness Room: Great Room 3	Oral Presentation (pre-recorded) AND Panel Discussion 1 Session Co-Chairs: Associate Professor Mark Battley Room: Great Room 4
	ENHANCING GEOTHERMAL ENERGY RECOVERY AND FACILITATING ENVIRONMENTAL REMEDIATION THROUGH A NEW NANOSTRUCTURED CALCIUM SILICATE TECHNOLOGY - Jim Johnston, Victoria University of Wellington	BEYOND THE CIRCULAR ECONOMY WITH THE SUSTAINABLE DEVELOPMENT GOALS – MOVING ON FROM EFFICIENT TO EFFECTIVE - Barbara Nebel, thinkstep-anz	DIGITALISING MATERIALS INSPECTION: PROCESS CONTROL AND QUALITY ASSURANCE USING SMART IN-MOULD SENSORS - Andrew Gillen, Netzsch Australia Pty Ltd (<i>Pre-recorded presentation</i>)
	INVESTIGATION OF NEW ZEALAND'S NATURAL MAGNETIC MINERALS FOR APPLICATION IN INROAD CHARGING SYSTEMS - Bill Trompetter, GNS Science	AIR-CRAFTED ARTEFACTS: ADDITIVE UPCYCLING PLASTICS WITHIN THE AVIATION TOURISM INDUSTRY - Courtney Naismith, Victoria University of Wellington	PANEL DISCUSSION 1 Room: Great Room 4 TOPIC: How can we develop our MaDE students to be industry ready?
	DESIGN: IT'S ALL IN THE DETAILS - Alistair Patterson, Blender Design Ltd	LIFE CYCLE THINKING IN PRODUCT DESIGN - Oliver McDermott, Blender Design Ltd	ADJUDICATOR: Mark Battley – Associate Professor (Engineering Science); Associate Dean Research, Faculty of Engineering; IMM Programme Lead - The University of Auckland
	MODELLING AND OPTIMISING THE FLOW PROFILE OF A GAS VALVE - John Riley, Fisher & Paykel Appliances Ltd	3D PRINTING RENEWABLE MATERIALS - Marie-joo Le Guen, Scion	PANELLISTS: • Allen Guinbert – R&D Collaboration Manager, Product Development, Fisher & Paykel Appliances • Mike Fry – CEO, Titanium Industry Development Association (TIDA) • Rahul Jangali – Doctoral Assistant (Engineering), University of Waikato • Simon Fraser – Professor, School of Design Innovation, Victoria University of Wellington • Tava Olsen – Professor and Deputy Dean, Faculty of Business and Economics, The University of Auckland
	DICHROIC COLOUR-CHANGING MATERIALS - Emma Wrigglesworth, Victoria University of Wellington	THE USE OF LIFE CYCLE ASSESSMENT IN EARLY DESIGN TO OPTIMISE THE ENVIRONMENTAL PERFORMANCE OF ACTIVE PRODUCT SYSTEMS - Mike Horrell, Massey University	
NEW ZEALAND FIRMS: REACHING FOR THE FRONTIER - Geoff Lewis and Jo Smith, New Zealand Productivity Commission	DEVELOPMENT OF A BUILDING-INTEGRATED PHOTOVOLTAIC PRODUCT FOR LONG RUN METAL ROOFING - Benjamin McGuinness, University of Waikato		
3:30 PM - 4:00 PM	Afternoon Tea (Great Room 1) Poster and Exhibition Viewing (POSTER PRESENTERS TO BE AVAILABLE AT THEIR POSTERS FOR VIEWING AND JUDGING) CONCURRENT CONFERENCE SESSION 3		
4:00 PM - 5:00 PM	4D Printing Session Co-Chairs: Tim Miller and John McDonald-Wharry Room: Great Room 2	Design for Medical Applications Session Co-Chairs: Lorenzo Garcia and George Stilwell Room: Great Room 3	Innovation in Manufacturing, Design and Entrepreneurship Session Co-Chairs: Paul Ewart and John Kennedy Room: Great Room 4
	A DESIGN-SCIENCE COLLABORATION: TAILORING BIO-MATERIALS AND 4D PRINTING FOR NEW PRODUCT OPPORTUNITIES - Tim Miller, Victoria University of Wellington	DESIGN OF A NOVEL STENT FOR HAEMORRHAGE CONTROL - Lorenzo Garcia, Auckland University of Technology	SURFACE ENGINEERING BY TITANIUM PARTICULATE INJECTION MOULDING - Paul Ewart, Waikato Institute of Technology
	POLYMERS FOR 4D PRINTING - Patrick Imrie, The University of Auckland	DESIGN AND MANUFACTURE OF A PATIENT HANDLING SYSTEM FOR A NOVEL UPRIGHT MRI SYSTEM - Christy Wells, School of Design, Victoria University of Wellington	DESIGN AND DEVELOPMENT OF AN APPLE FRUITLET THINNING END-EFFECTOR - Rahul Jangali, University of Waikato
	ADDITIVE MANUFACTURING WITH RESPONSIVE COMPOSITE MATERIALS AND BIOBASED POLYMERS - John McDonald-Wharry, University of Waikato	DEVELOPMENTS AND OPPORTUNITIES IN MEDICAL TEXTILES - Nimesh Kankariya, Centre for Materials Science and Technology, University of Otago	A REVIEW OF THE MOST RECENT DEVELOPMENT IN ADHESIVELY BONDED JOINTS FOR METAL/COMPOSITE STRUCTURAL FRAMEWORKS - Ardeshir Saniee, Auckland University of Technology
NEW OPPORTUNITIES FOR MICROFABRICATION - Andrea Bubendorfer, Callaghan Innovation	DESIGN AND DEVELOPMENT OF A QUICK RELEASE ARM BRACE FOR A PARALYMPIC CYCLIST - George Stilwell, University of Canterbury	SURFACE MODIFICATIONS AND COATINGS FOR IMPROVED ENERGY EFFICIENCY AND PERFORMANCE - John Kennedy, GNS Science	
5:00 PM - 5:30 PM	No activity planned		
5:30 PM - 7:00 PM	Student Innovation Showcase (Happy Hour) - sponsored by the University of Waikato		
6:00 PM - 7:00 PM	Pre-dinner drinks		
7:00 PM - 10:00 PM	Conference Dinner (Great Room 4) - sponsored by Beckhoff Automation Ltd. Dinner Welcome: Professor Jim Johnston (MaDE2020 Co-Chair, Victoria University of Wellington) Key Dinner Address: Brett O'Riley (CEO, Employers and Manufacturers Association)		

Tuesday 8 December 2020			
8:30 AM - 9:15 AM	Registration Opens		
9:15 AM - 9:30 AM	Introduction of Day (Great Room 4) Session Chair: Professor Jim Johnston (MaDE2020 Co-Chair, Victoria University of Wellington)		
9:30 AM - 10:00 AM	Keynote Speaker: Rebecca Percasky (CEO, The Better Packaging Co.) THE BETTER PACKAGING CO. FOR A ZERO WASTE WORLD Session Chair: Professor Jim Johnston (MaDE2020 Co-Chair, Victoria University of Wellington) Room: Great Room 4		
10:00 AM - 10:30 AM	Morning Tea (Great Room 1) - sponsored by Ministry of Business, Innovation and Employment Poster and Exhibition Viewing (POSTER PRESENTERS TO BE AVAILABLE AT THEIR POSTERS FOR VIEWING AND JUDGING)		
10:30 AM - 12:00 PM	CONCURRENT CONFERENCE SESSION 4		
	Innovation in Materials Manufacturing and Dynamics Session Co-Chairs: Nicholas Emerson and Kariappa Maletira Karumbalah Room: Great Room 2	Additive Manufacturing Applications Session Co-Chairs: Muhammad Asif Ali Rahmani and Josh Barnett Room: Great Room 3	Oral Presentation (pre-recorded) AND Panel Discussion 2 Session Co-Chairs: Professor Simon Bickerton Room: Great Room 4
	REALISING VALUE FROM SCIENCE - Nigel Sharplin, Infact Limited	COMPLIANT GRIPPERS - AN ADDITIVE APPROACH - Josh Barnett, University of Waikato	POTENTIAL ENERGY STORAGE IN NEW ZEALAND - Alex Slocum, Massachusetts Institute of Technology (Pre-recorded presentation)
	EFFECT OF CNC MACHINING ON PERCEIVED TACTILE PROPERTIES OF NATIVE AND NON-NATIVE TIMBERS - Nicholas Emerson, University of Canterbury	DEVELOPMENT OF HTV SILICONE WITHIN NEW ZEALAND - Charlotte Bunnett, New Zealand Artificial Limb Service	PANEL DISCUSSION 2 TOPIC: Sustainability and the Circular Economy - what does it mean for MaDE? Room: Great Room 4
	FATIGUE BEHAVIOUR OF CARBON-FIBRE EPOXY COMPOSITES WITH RESIN FLOW CHANNELS - Kariappa Maletira Karumbalah, The University of Auckland	HIGH RESOLUTION ELECTROHYDRODYNAMIC PRINTING FOR FLEXIBLE ELECTRONICS AND SENSOR FABRICATION - Muhammad Asif Ali Rahmani, Massey University	ADJUDICATOR: Simon Bickerton – Professor (Mechanical Engineering), Faculty of Engineering; Director (Centre for Advanced Composite Materials) - The University of Auckland
	FABRICS AS SENSORS: EFFECTS OF EXTERNAL FACTORS ON PERFORMANCE - Sophie Wilson, University of Otago	FABRICATION AND CHARACTERISATION OF 3D PRINTED MICROCHANNELS - Swapna Jaywant, Massey University	PANELLISTS: • Derek Kawiti – Senior Lecturer (Digital Design Communication), Victoria University of Wellington • Florian Graichen – GM, Forest to Biobased Products, Scion • Kim Pickering – Professor and Associate Dean Research (Engineering), University of Waikato • Rebecca Percasky – CEO, The Better Packaging Co.; MaDE2020 Keynote Speaker
EFFECT OF YARN ARRANGEMENT IN FABRIC ON WATER TRANSFER FROM WET TEXTILE TO VITRO-SKIN* - Sahar Abdolmaleki, University of Otago	THERMAL 3D SCREEN PRINTING OF SACRIFICIAL WAX MOULDS - Hossein Najaf Zadeh, University of Canterbury		
PLANAR TO WHIRLING – A RESONANT ENERGY TRANSFER PHENOMENON EXHIBITED IN LEN LYE'S KINETIC ART - Angus McGregor, University of Canterbury			
12:00 PM - 1:00 PM	Lunch (Great Room 1) - sponsored by Fisher & Paykel Appliances Exhibition Viewing		
1:00 PM - 2:00 PM	CONCURRENT CONFERENCE SESSION 5		
	Application-based Additive Manufacturing Session Co-Chairs: Conan Fee and Jonathan Stringer Room: Great Room 2	Application-based Design Session Co-Chairs: Euan Coutts and Digby Symons Room: Great Room 3	Innovation in a NZ Context Session Co-Chairs: Lizanne Gomes and Stefan Korber Room: Great Room 4
	3D-PRINTED MONOLITHIC POROUS STRUCTURES FOR BIOLOGICAL SEPARATIONS - Conan Fee, School of Product Design, University of Canterbury	MEASUREMENT OF DIAL FEEL ON APPLIANCES - Stephen Gibson, Fisher & Paykel Appliances Ltd	ENGINEERING AND MARKETING COLLABORATION AT THE FRONT END OF INNOVATION: A CASE STUDY OF A MEDICAL DEVICE COMPANY - Lizanne Gomes, The University of Auckland
	APPLICATION OF ADDITIVE MANUFACTURING FOR RAPID PRODUCT DEVELOPMENT – A CASE STUDY - Arno Ferreira, DFAM Lab, The University of Auckland	THE EXPERIENCE OF PROTOTYPING FOR DESIGN STUDENTS IN A DISTRIBUTED WORLD - Euan Coutts, University of Canterbury	KIWI INNOVATION ON THE WORLD STAGE - Ben Thomsen, Blender Design Ltd
	ENERGY ABSORPTION OF FUSED DEPOSITION MODELLING (FDM) 3D PRINTED TRIPLY PERIODIC MINIMAL SURFACES (TPMS) STRUCTURES - Ben Murton, University of Canterbury	DESIGN OF A TANDEM RACING BICYCLE - Digby Symons, University of Canterbury	FINDINGS FROM OVER 40 NZ MANUFACTURER INNOVATION DIAGNOSTIC SURVEYS - Adrian Packer, IMS-projects
INKJET PRINTING: ADDING VALUE TO TRADITIONAL MANUFACTURING - Jonathan Stringer, The University of Auckland	DEVELOPMENT OF A MAGNETIC INSPECTION TOOL FOR INSULATED PIPE INSPECTION - Joseph Bailey, Victoria University of Wellington	WHEN AN ELEPHANT WALKS INTO A ROOM FULL OF ENGINEERS: DISJOINTED INTERPRETATION OF INNOVATION IN ENGINEERING FIRMS - Stefan Korber, The University of Auckland	
2:00 PM - 3:15PM	PANEL DISCUSSION 3 TOPIC: How should MaDE be different for New Zealand post-pandemic? Room: Great Room 4 ADJUDICATOR: Olaf Diegel – Professor (Additive Manufacturing), Faculty of Engineering; Director, Creative Design and Additive Manufacturing Lab; MaDE Network Leader - The University of Auckland PANELLISTS: • Brett O'Riley - Chief Executive, Employer and Manufacturers Association • Catherine Beard – Executive Director: ManufacturingNZ, ExportNZ, BusinessNZ • Johan Potgieter – Professor (Robotics and Automation), Massey Agrifood Digital lab; Director, Massey University Centre for Additive Manufacturing • Oliver McDermott – Founding Partner, Blender Design Ltd • Rod Oram – International Business Journalist, Author and Celebrity Speaker (Entrepreneurship and Innovation)		
3:15 PM - 3:45PM	Awards and Conference Closing - sponsored by GNS Science & PDMA-NZ Session Co-Chairs: Olaf Diegel and Jim Johnston		
4:00 PM	Post-conference Cocktails - sponsored by University of Canterbury		

Poster Presentations	
02. Innovation, design, product development and manufacturing in a green, energy efficient environment	ATV TYRE ROLLING RESISTANCE IN AGRICULTURE - Tim Petterson, University of Canterbury
02. Innovation, design, product development and manufacturing in a green, energy efficient environment	DEVELOPMENT OF INNOVATIVE CROSS-DISCIPLINARY ENGINEERING SHOWCASE - Jai Khanna, Waikato Institute of Technology
02. Innovation, design, product development and manufacturing in a green, energy efficient environment	AUTOMATED BANDSAWN PLYWOOD CLADDING PRIME AND PAINT MACHINE - Mohammad Al-Rawi, CEID/Waikato Institute of Technology
02. Innovation, design, product development and manufacturing in a green, energy efficient environment	GLASS REINFORCED EPOXY LAMINATE ELECTRODES FOR SENSING APPLICATIONS - Kartikay Lal, Massey University
04. Additive Manufacturing – including specialist products and mass customisation	FOSSILS FROM THE FUTURE - Jessica Salter, School of Design, Victoria University of Wellington
04. Additive Manufacturing – including specialist products and mass customisation	CONTINUOUS, HIGH SPEED RESIN 3D PRINTING BY INTERFACE TEMPERATURE CONTROL - Jason Collingwood, Massey University
04. Additive Manufacturing – including specialist products and mass customisation	IN-SITU LOW POWER LASER RE-MELTING OF DIRECT METAL PRINTED SPECIMENS FOR IMPROVED SURFACE FINISH - Tarisha Pereira, Massey University
04. Additive Manufacturing – including specialist products and mass customisation	TOPOLOGY OPTIMIZATION AND GENERATIVE DESIGN OF PRODUCTS UTILIZING SELECTIVE LASER MELTING - Daniel Song, The University of Auckland
04. Additive Manufacturing – including specialist products and mass customisation	DESIGN AND TOPOLOGY OPTIMIZATION OF AN AUTONOMOUS DRIVING SHUTTLE BODY FOR ADDITIVE MANUFACTURING - Benedictus Notoprodjo, Massey University
04. Additive Manufacturing – including specialist products and mass customisation	MANUFACTURING HYBRID COMPOSITE PARTS USING 3D PRINTED CONTINUOUS FIBRE REINFORCED POLYMERS - Hamed Abdoli, The University of Auckland
04. Additive Manufacturing – including specialist products and mass customisation	HIGH PERFORMANCE CONTINUOUS FIBRE COMPOSITE 3D PRINTING: A PROCESS SCIENCE-BASED APPROACH - Joshua Hares, The University of Auckland
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	NOVEL POLYMER MATERIAL FOR WIRELESS IMPLANTABLE SENSORS - Simon Blue, University of Canterbury
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	MICRO-CONTACT PRINTED, SELF-ASSEMBLED PATTERN-BASED ARSENIC DETECTION - Swapna Jaywant, Massey University
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	INFLUENCES OF AMBIENT TEMPERATURE ON SINTERING OF BIODEGRADABLE POLYLACTIC ACID (PLA) USED IN FUSED DEPOSITION MODELLING (FDM) - Adel Ameer, University of Waikato
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	CHARACTERISATION OF THE RELATIONSHIP BETWEEN HYDROGEL PROPERTIES AND 3D-PRINTING PARAMETERS - Melissa Ishii, University of Canterbury
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	PROTEIN-BASED BIOMATERIALS FOR 3D & 4D PRINTING - Heiana Agnieray, The University of Auckland
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	ASSESSING THE DESIGN OF BONE INTERFACING ADDITIVE MANUFACTURED TITANIUM MEDICAL DEVICES VIA IMAGING - Kenzie Baer, University of Otago, Christchurch
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	ELECTROSPINNING OF PROTEIN NANOFIBERS - Qun Chen, The University of Auckland
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	DEVELOPMENT OF A SHEEP KNEE FINITE ELEMENT MODEL TO OPTIMISE THE DESIGN OF ADDITIVE MANUFACTURED IMPLANTS - Josephine Shum, University of Otago, Christchurch
05. Advanced and functional materials in product design and manufacturing including additive manufacturing	ADHESIVELY BONDED METAL-COMPOSITE STRUCTURES FOR AIRCRAFT INTERIOR APPLICATIONS - Shuo Xu, Auckland University of Technology
07. Industry 4.0 and Data Driven Design and Innovation	A SMART MONITORING PLATFORM FOR MACHINERY HEALTH MANAGEMENT IN THE FRAMEWORK OF INDUSTRY 4.0 - Madhurjya Dev Choudhury, The University of Auckland
07. Industry 4.0 and Data Driven Design and Innovation	AUGMENTED REALITY-ENABLED MACHINE MAINTENANCE FOR CYBER-PHYSICAL MACHINE TOOLS - Zexuan Zhu, The University of Auckland
07. Industry 4.0 and Data Driven Design and Innovation	RETROFITTING STRATEGY OF MANUFACTURING SYSTEMS TO INDUSTRY 4.0 STANDARD - Dylan Luther Malvar, Auckland University of Technology
07. Industry 4.0 and Data Driven Design and Innovation	INNOVATING IN THE AGE OF AI, AN EXPLORATION OF HUMAN-AI COOPERATION IN INTERNATIONAL BUSINESS - Jitao Yan, The University of Auckland
07. Industry 4.0 and Data Driven Design and Innovation	DEVELOPMENT OF AN OPERATION MANAGEMENT SYSTEM (CP-OMS) FOR SMART FACTORIES - Reza Hamzeh, The University of Auckland
07. Industry 4.0 and Data Driven Design and Innovation	COMFlex DESIGNER: PHYSICAL INTERACTION AND IMMERSIVE VISUALISATION WITH VIRTUAL PRODUCTS - Annabelle Ritchie, University of Canterbury
08. Digital tools for manufacturing, automation and control including robotics and automation	RECONDITIONING FESTO MANUFACTURING MACHINES FOR USE WITH ROCKWELL AUTOMATION EQUIPMENT - Praneel Chand, Waikato Institute of Technology
15. Human Capability Development	HUMAN CAPITAL 4.0: COMPETENCES AND SKILLS FOR DISRUPTIVE CHALLENGES - Emmanuel Flores, The University of Auckland
16. Other	MINIMISING CONSTRUCTION AND DEMOLITION WASTE TO ADVOCATE SUSTAINABLE CONSTRUCTION IN RESIDENTIAL BUILDING PROJECTS - Rohit Gade, Auckland University of Technology

Student Innovation Showcase

HIGH RESOLUTION CONDUCTIVE PRINTING ON CURVED SURFACES

- Muhammad Asif Ali Rehmani, Massey University

DEVELOPMENT IN SHEEP/ GOAT MILKING CUPS

- Alasdair Campbell, University of Waikato

A DATA-BASED DIAGNOSTIC PLATFORM FOR MACHINERY HEALTH MANAGEMENT

- Madhuriya Choudhury, The University of Auckland

CONTINUOUS, HIGH SPEED RESIN 3D PRINTING BY INTERFACE TEMPERATURE CONTROL

- Jason Collingwood, Massey University

MAARATECH PLATFORM

- Catherine Downes, University of Waikato

AUTOMATED VINE PRUNING END EFFECTOR

- Scott Harvey, University of Waikato

3D PRINTER WASTE RECOVERY - FILAMENT EXTRUDER

- Sam Hewlett, University of Waikato

DEVELOPMENT OF AN APPLE FRUITLET THINNING ROBOT

- Rahul Jangali, University of Waikato

PEDIATRIC LAPAROSCOPIC INSTRUMENT (PROTOTYPE)

- Sana Khan Azmi, AUT

PORTABLE HAND SANITISER DISPENSER

- Izaak Knegt, Massey University

3D PRINTER WASTE RECOVERY - FILAMENT FUSER

- Sam Knox, University of Waikato

ATMOSPHERIC PLASMA JET PRINTING: CONTROLLED AND TAILORED THIN FILMS

- Taniela Lolohea, The University of Auckland

RETROFITTING STRATEGY OF MANUFACTURING SYSTEM TO INDUSTRY 4.0 STANDARD

- Dylan Luther Malvar, AUT

DFAM: A CONCEPTUAL MONITOR ARM FOR AIR NZ

- Vincent McQueen, Victoria University of Wellington

LOW-COST FABRICATION OF PERIODICALLY STRUCTURED TITANIUM PARTS FROM RECYCLED Ti64

- Thomas Milliken, University of Canterbury

OPTIMISED 3D PRINTED STRUCTURES

- Hamish Morgan, Victoria University of Wellington

AIR-CRAFTED ARTEFACTS

- Courtney Naismith, Victoria University of Wellington

FROM LINE TO LOOP. A CIRCULAR 3D-PRINTING INITIATIVE FOR UP-CYCLING COMMERCIAL FISHING PLASTIC

- Matthew O'Hagan, Victoria University of Wellington

IN-SITU MACHINE-LEARNING DIGITAL AND THERMAL CAMERA VISION FOR AN INERTED DIRECT METAL PRINTER

- Tanisha Pereira, Massey University

MODELLING AND OPTIMISING THE FLOW PROFILE OF A GAS VALVE

- John Riley, Fisher & Paykel Appliances

COMFlex DESIGNER

- Annabelle Ritchie, University of Canterbury

FOSSILS FROM THE FUTURE

- Jessica Salter, Victoria University of Wellington

COST-EFFECTIVE FIBRE REINFORCED POLYMER COMPOSITE-METAL JOINT STRUCTURAL FRAMEWORKS

- Ardeshir Saniee, AUT

A PORTABLE MULTI-MODAL MICRO-IMAGING SYSTEM FOR AUTOMATED SCANNING

- Ayesha Shaikat, Massey University

ROCK MELON HARVESTER

- Sheau Lan (Alicia) Sim, University of Waikato

AUTOMATION OF 3D PRINTING

- Nathan Vockerodt, Massey University