MaD For the Future 2017

Wednesday 10 May 2017

8:00 AM - 9:00AM	**Registration Opens (Level 3 Kawau 1)**		
9:00 AM - 9:20 AM	**Conference Opening (Rangitoto 1)**		
	Professor Simon Bickerton (Chair, MaD Network) | Professor Nic Smith (Dean of Engineering, The University of Auckland) | Vic Crone (CEO, Callaghan Innovation)		
9:20 AM - 10:00 AM	**Keynote Speaker: Crispin Hales - Hales & Gooch Ltd.** **WHY FOLLOW WHEN YOU CAN LEAD? ADDING VALUE TO THE NEW ZEALAND GENIUS** Session Chair: Simon Bickerton (Chair, MaD Network, The University of Auckland) Room: Rangitoto 1		
10:00 AM - 10:30 AM	**Morning Tea Break (Kawau 1)**		
10:30 AM -12:30 PM	**PARALLEL TECHNICAL SESSIONS**		
	DESIGN AND INNOVATION Session Co-Chairs: Shayne Gooch | Mike Duke Room: Rangitoto 1	DESIGN AND INNOVATION (PRODUCT ASSOCIATED CONTEXT) Session Co-Chairs: Andrew Drain | Michael Kingan Room: Rangitoto 2	PRODUCT AND PROCESS INNOVATION Session Co-Chairs: Marcel Schaefer |Alisyn Nedoma Room: Rangitoto 3
	STAIRCASING INDUSTRY ENGAGEMENT: A BOTTOM-UP PRACTICE BASED MODEL FOR INTEGRATING DESIGN RESEARCH INTO INDUSTRY - Simon Fraser, Victoria University of Wellington	THE INVERSE ROUTE: FROM INDUSTRY FOCUS TO THE ACADEMIC WORLD. WHAT ARE THE BEST PROJECTS TO WORK IN? - Lorenzo Garcia, Auckland University Of Technology	FAST NPD AND RISK; REDUCING RISK WHEN MOVING FAST. - Craig Shannon, Globex
	THE WHISPERGEN STORY. A NEW ZEALAND DESIGN AND MANUFACTURING SUCCESS? - Don Clucas, University Of Canterbury	HUMAN-CENTERED-DESIGN: AN INSIGHT INTO SOUTH-EAST ASIAN RURAL MARKETS - Andrew Drain, Massey University	COLLABORATIVE INNOVATION AT THE CENTRE FOR AUTOMATION AND ROBOTICS ENGINEERING SCIENCES - Bruce MacDonald, The University Of Auckland
	DESIGNING OUR FUTURE - Mark Battley, The University Of Auckland	THE DEVELOPMENT OF A NEW DESIGN TOOL FOR ORGANIC RANKINE CYCLES - Wei Yu, The University Of Auckland	INNOVATIVE DESIGN OF AIR COOLED HIGHLY FINNED TUBE CONDENSER - Haiam Abbas, Heavy Engineering Research Association
	HOW TO CREATE A SUCCESSFUL PRODUCT - Oliver McDermott, Blender Design Ltd	MODULAR LIGHTWEIGHT FURNITURE WITH INTEGRAL FASTENERS USING POST-TENSIONING - Hans-Christian Wilhelm, Victoria University Of Wellington	ADVANCED BIOBASED PRODUCTS - COMBINING SUSTAINABILITY WITH PERFORMANCE - Florian Graichen, Scion
	MAD PIPELINES: EMERGING METHODOLOGICAL PIPELINES FOR DESIGN AND MANUFACTURING PROCESSES - Dermott McMeel, The University Of Auckland	A CASE STUDY IN DESIGN-LED INNOVATION - Rob Heebink, Gallagher Group Limited	NEXT GENERATION SURFACE COATINGS BASED ON ZERO EMISSION AND NO WASTE MANUFACTURING APPROACH - Marcel Schaefer, Auckland University of Technology
	ON THE DESIGN OF ASSISTIVE DEVICES FOR PEOPLE WITH TETRAPLEGIA IN A NEW ZEALAND CONTEXT - Shayne Gooch, University Of Canterbury	EARTHQUAKE BENCH PROTOTYPE: A RECONCEIVED DIGITAL WORKFLOW - Tonya Sweet, Victoria University of Wellington	SOUND CONCEPTS PLATFORM: VISUALISING SOUND CONCEPTS - Natasha Perkins, Victoria University Of Wellington
	ADDRESSING A WORLDWIDE GEOTHERMAL ENERGY UTILIZATION PROBLEM BY PRODUCING A NOVEL PRODUCT WITH INDUSTRIAL AND CONSUMER APPLICATIONS - Jim Johnston, Victoria University of Wellington	HIGHLY STRETCHABLE 3D-PRINTED ELECTRICAL COMPONENTS USING CARBON NANOCOMPOSITES - Tim Giffney, The University Of Auckland	INDUSTRIAL SCALE ION BEAM TECHNOLOGIES FOR NEW ZEALAND MANUFACTURING - John Kennedy, GNS Science
	AERODYNAMIC AND STRUCTURAL DESIGN OF SMALL SCALE TURBINE FOR ORGANIC RANKINE CYCLE SYSTEM - Lei Chen, Heavy Engineering Research Association	ACOUSTICAL TESTING AND DESIGN FOR ACCEPTABLE NOISE - Michael Kingan, The University Of Auckland	NANOSTRUCTURAL CONTROL IN PLASTIC ELECTRONIC FILMS - Alisyn Nedoma, The University Of Auckland
	DIBBLER CASE STUDY – A DESIGN METHODOLOGY FOR DEVELOPING SPECIALIST, AUTOMATED, AGRICULTURAL MACHINERY IN NEW ZEALAND. - Mike Duke, Waikato University		
12:30 PM - 1:20 PM	**Lunch Break (Kawau 1)** **Poster and Exhibition Viewing**		
1:20 PM - 2:00PM	**Keynote Speaker: Cather Simpson - The University of Auckland** **HIGH TECH INNOVATION IN AN INDUSTRIAL CONTEXT** Session Chair: Simon Bickerton (Chair, MaD Network, The University of Auckland) Room: Rangitoto 1		
2:00 PM - 3:00 PM	**BREAK OUT SESSION 1**		
	COLLABORATIVE MaD Session Co-Chairs: Jesse Keith (Callaghan Innovation) | Steve Wilson (Talbot Technologies Ltd) Room: Rangitoto 1	FUTURE YOUNG RESEARCHERS Session Co-Chairs: Khalid Arif (Massey University) | Shayne Gooch (University of Canterbury) Room: Rangitoto 2	
3:00 PM - 4:00 PM	**Afternoon Tea (Kawau 1)** **Poster and Exhibition Viewing**		
4:00 PM - 5:00 PM	**BREAKOUT SESSION 2**		
	IoT and INDUSTRY 4.0 Session Co-Chairs: Xun Xu (The University of Auckland) | Kevin Marett (LEAP Australia) Room: Rangitoto 1	DESIGN FOR ADDITIVE MANUFACTURING AND THE FUTURE OF COMPOSITE MANUFACTURING Session Co-Chairs: Mike Fry (TiDA Ltd) | Johan Potgieter (Massey University) Room: Rangitoto 2	
6:30 PM - 10:00 PM	**Conference Dinner (Rakino Room)**		

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Thursday 11 May 2017

8:30 AM - 9:00 AM	**Registration Opens (Level 3 Kawau 1)**		
9:00 AM - 9:10 AM	**Introduction of Day (Rangitoto 1)** Simon Bickerton (Chair, MaD Network, The University of Auckland)		
9:10 AM - 9:50 AM	**Plenary Speaker: Eberhard Klotz - Festo** **INDUSTRIE 4.0 IN ACTION** **Sponsored by Festo** Session Chair: Xun Xu (Chair, MaD Conference Committee, The University of Auckland) Room: Rangitoto 1		
9:50 AM - 10:30 AM	**Morning Tea Break (Kawau 1)**		
10:30 AM -12:30 PM	**PARALLEL TECHNICAL SESSIONS**		
	FUTURE OF MANUFACTURING TECHNOLOGY Session Co-Chairs: Kenneth Husted | Don Cleland Room: Rangitoto 1	ADDITIVE MANUFACTURING Session Co-Chairs: Jim Johnston | Khalid Arif Room: Rangitoto 2	SPECIALISED MANUFACTURING PROCESSESS Session Co-Chairs: Steven Dirven |Chris Bumby Room: Rangitoto 3
	INDUSTRY 4.0 - WHAT'S IN IT FOR US? - Dieter Adam, NZMEA	ADDITIVE MANUFACTURING AND INTERNET OF THINGS: ACCELERATING RESEARCH AND DEVELOPMENT THROUGH A CASE STUDY APPROACH - Stephen Wilson, Talbot Technologies Ltd	FLUX PUMP BRUSHLESS EXCITERS FOR SUPERCONDUCTING GENERATORS - Chris Bumby, Victoria University Of Wellington
	INDUSTRY 4.0 SMART MANUFACTURING SYSTEMS LABORATORY - Xun Xu, The University Of Auckland	FREEFORM 3D PRINTING: TOWARDS A NEW PARADIGM IN MANUFACTURING - Tim Miller, Victoira University of Wellington	ENHANCED LASER ABLATION OF BONE TISSUE USING ULTRAFAST PULSED BESSEL BEAMS FOR APPLICATIONS IN LASSOS - Simon Ashforth, The University Of Auckland
	POLYMER COMPOSITE MANUFACTURING TECHNOLOGIES FOR THE FUTURE - Simon Bickerton, The University Of Auckland	THE USE OF COMPUTER AIDED ENGINEERING AND 3D PRINTING IN THE DEVELOPMENT OF A ROBOTIC KIWIFRUIT HARVESTING GRIPPER. - Mike Duke, Waikato University	DEVELOPMENT OF CONTINUOUS REEL-REEL PILOT MANUFACTURING PROCESSES FOR PRODUCTION OF SUPERCONDUCTING ROEBEL CABLE - Kent Hamilton, Victoria University Of Wellington
	INDUSTRY 4.0 EASILY IMPLEMENTED WITH BECKHOFF - Steven Sischy, Beckhoff Automation Limited	MASSEY UNIVERSITY CENTRE FOR ADDITIVE MANUFACTURING: A REVOLUTION IN DESIGN ENGINEERING - Johan Potgieter, Massey University	NATURAL FIBRE AND NATURAL FIBRE COMPOSITES: SURFACE MODIFICATION, PROCESSING AND FUNCTIONALIZATION - Xiaowen Yuan, Massey University
	GIVING MACHINES EYES: HOW COGNITIVE COMPUTING CAN DETECT DEFECTS IN REAL TIME - Elinor Swery, IBM	EFFECTS OF LASER POWER ON GRAIN GROWTH DURING SELECTIVE LASER MELTING OF METALLIC ALLOYS: DIRECTION AND CELL SIZE - Zhan Chen, Auckland University Of Technology	FUNCTIONALISED POLYMERS FOR MORE EFFICIENT NANOSECOND UV LASER MICROMACHINING - Hong Kang, The University Of Auckland
	EXPLOITING DIGITAL TECHNOLOGIES TO INNOVATE IN MANUFACTURING - Mehdi Shahbazpour, Fletcher Building	HYBRID ADDITIVE MANUFACTURING: INTEGRATION OF MULTIPLE ADDITIVE MANUFACTURING TECHNIQUES TO ACHIEVE HIGH VALUE MULTIFUNCTIONAL OBJECTS - Jonathan Stringer, The University Of Auckland	HIGH ACCURACY PERSONALISED MANUFACTURING TO ASSESS BALLISTIC DAMAGE TO THE HUMAN CRANIUM - Eryn Kwon, The University Of Auckland
	INTERNET OF THINGS (IOT) ENABLED SMART MANUFACTURING FOR SMES - Ray Y. Zhong, The University Of Auckland	AUT PROCESS AND MATERIAL ALTERNATIVES FOR ADDITIVE MANUFACTURING; THE ANOMALIES - Sarat Singamneni, Auckland University Of Technology	PRESTRESS AND PRETORSION OF ELASTOMER COMPOSITES FOR - Steven Dirven, Massey University
	MANUFACTURING IN A WORLD OF DISRUPTIVE TECHNOLOGIES - Kevin Marett, LEAP Australia	INVESTIGATION OF THE TEMPORAL SPACING EFFECT ON FUSED DEPOSITION MODELLED PART PROPERTIES - Arno Ferreira, Massey University	DEVELOPING A 3D PRINTER FOR THE MANUFACTURE OF CELLULOSE HYDROGELS - Tim Huber, University Of Canterbury
	THE KEY ROLE OF TRADITIONAL INDUSTRIES FOR CREATING HIGH-TECH GROWTH - Kenneth Husted, The University Of Auckland	CHARACTERISATION OF 3D PRINTED, RUBBER-LIKE MATERIAL FOR PRODUCT DESIGN AND FABRICATION - Frazer Noble, Massey University	
	INTEROPERABLE EXECUTION ON HETEROGENEOUS PLATFORMS IN MODERN INDUSTRIAL ENVIRONMENTS - Zoran Salcic, The University Of Auckland	DEVELOPING THE 3D PRINTING ECOSYSTEM IN NEW ZEALAND - Jim Collins, Fuji Xerox New Zealand	
12:30 - 1:20 PM	**Lunch Break (Kawau 1)** **Poster and Exhibition Viewing**		
1:20 PM - 2:00 PM	**Plenary Speaker: Ross Stevens - Victoria University of Wellington** **3D and 4D PRINTING PIONEERS** Session Chair: Simon Fraser (Professor of Industrial Design, School of Design, Victoria University of Wellington) Room: Rangitoto 1		
2:00 PM - 3:00 PM	**PANEL DISCUSSIONS**		
	Industry 4.0: A Step-change for New Zealand Manufacturing Lead Panellist: Dieter Adam (NZMEA) Room: Rangitoto 1	NZ High Value-added Manufacturing and Design - Status Quo and into the Future Lead Pannellist: Catherine Beard (ManufacturingNZ & ExportNZ) Room: Rangitoto 2	Design Innovations and Innovation for Design Lead Panellist: Simon Fraser Victoria University of Wellington) Room: Rangitoto 3
	Panellists to include	*Panellists to include*	*Panellists to include*
	Eberhard Klotz (Festo)	Kim Campbell (EMA)	Crispin Hales (Hales & Gooch Ltd)
	Nathan Stantiall (Callaghan Innovation)	Kenneth Husted (The University of Auckland)	Ross Stevens (Victoria University of Wellington)
	Sayuj Nath (National Instruments)	Steve Wilson (Talbot Technologies)	Jesse Keith (Callaghan Innnovation)
3:00 PM - 4:00 PM	**Afternoon Tea (Kawau 1)** **Poster and Exhibition Viewing** **MaD CoRE Meeting (Rangitoto 3)**		
4:00 PM - 5:00 PM	**Awards and Conference Closing (Rangitoto 1)** **Awards Sponsored by UniServices**		
Post Closing	**Networking Cocktails (Marvel Grill)** **Sponsored by the MaD Network**		

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Poster Presentations	
High Value Manufacturing	MINIMISING DEFECTS AND IMPROVING MANUFACTURING PROCESSES OF COMPOSITE STRUCTURES PRODUCED VIA LIQUID MOULDING - Sam van Oosterom, The University Of Auckland
Industry 4.0	PC-BASED AUTOMATION PROVIDES A SOLID TECHNOLOGICAL FOUNDATION FOR INDUSTRY 4.0 ARCHITECTURES - Neil Pearce, Beckhoff Automation Limited
Industry 4.0	AUGMENTED REALITY-ASSISTED INTELLIGENT WINDOW FOR CYBER-PHYSICAL MACHINE TOOLS - Chao Liu, The University Of Auckland
Industry 4.0	CLOUD-BASED MANUFACTURING SERVICES FOR SMART FACTORIES - Khamdi Mubarok, The University Of Auckland
Industry 4.0	CYBER-PHYSICAL 3D PRINTING SYSTEM - Yuanbin Wang, The University Of Auckland
Manufacturing Processing	IMPROVING THE RATE OF CRYSTALLIZATION OF POLYLACTIC ACID (PLA) ON OPEN SOURCE 3D PRINTERS - Muhammad Harris, Massey University
Manufacturing Processing	ABLATION RATE DEPENDENCE ON MATERIAL BANDGAP AND PULSED TIME DELAY FOR ULTRASHORT PULSED DUAL WAVELENGTH MACHINING - Thomas Ward, The University Of Auckland
Manufacturing Processing	SUPPORT STRUCTURES FOR 3D PRINTING - Jingchao Jiang, The University Of Auckland
Manufacturing Technologies	DEVELOPMENT OF A LOW COST INKJET 3D PRINTER - Blair Dixon, Massey University
Manufacturing Technologies	LARGE SCALE PRINTING IN THE DAIRY INDUSTRY - Kevin Silver, Massey University
Manufacturing Technologies	RETROFITMENT AND OPTIMIZATION OF A LEGACY FDM SYSTEM FOR BIOPOLYMER 3D PRINTING - Hayden Wilson, Massey University
Manufacturing Technologies	DEVELOPMENT OF 3D PRINTING TECHNOLOGY FOR FLEXIBLE SUPERCAPACITORS - Hayden Wilson, Massey University
Manufacturing Technologies	CHARACTERIZATION OF SLS COMPOSITE POWDER PROPERTIES - Cameron Mearns, Massey University
Manufacturing Technologies	MARKER-LESS REGISTRATION IN MIXED PROTOTYPING PROCESS - Yuan Lin, The University Of Auckland
Manufacturing Systems	STRESS REDUCTION THROUGH DIGITAL TECHNOLOGY IN MANUFACTURING. - Purushothaman Mahesh Babu, Auckland University of Technology
Advanced Materials Manufacturing	FABRICATION PROCESS OF CARBON FIBRE COMPOSITE MATERIALS FOR ADDITIVE MANUFACTURING - Andrew Kvalsvig, Massey University
Advanced Materials Manufacturing	EXTRUSION SYSTEM FOR 3D PRINTING FROM BIOPOLYMER PELLETS - Sean Whyman, Massey University
Advanced Materials Manufacturing	SUPER-HYDROPHOBICITY OF CASTED PDMS SURFACES - Ellen Jose, The University Of Auckland
Advanced Materials Manufacturing	ENHANCING THE QUALITY OF CARBON FIBRE REINFORCED PLASTICS WITH NOVEL NON-DESTRUCTIVE TESTING - Tino Hermann, The University Of Auckland
Advanced Materials Manufacturing	ADDITIVE MANUFACTURING USING SUGAR IN CARAMEL FORM - Hossein Najaf Zadeh, The University of Canterbury
Advanced Materials Manufacturing	TEXTILE SIMULATIONS FOR VIRTUAL COMPOSITE MATERIALS MANUFACTURING - Willsen Wijaya, The University Of Auckland
Industrial Design / Product Design	STIRLING ENGINE DESIGN AND EMPIRICAL OPTIMISATION. - Jose Egas, The University of Canterbury
Design Innovation	EXPLORING THE CAPABILITY BUILDING FOR DOING FRUGAL INNOVATION WITHIN DEVELOPED MARKET FIRMS - Fasiha Subhan, The University Of Auckland
Design Innovation	EMOTIONAL QUALITIES OF PARAMETRICALLY DESIGNED SURFACES - Jeongbin Ok, Victoria University Of Wellington
Smart Product Development	PRODUCT CONFIGURATION FOR THE PERSONALIZATION OF SMART PRODUCTS - Shiqiang Yu, The University Of Auckland
Smart Product Development	SMART WEARABLES WITH CLOUD-BASED AUTOMATED MONITORING: A CASE STUDY - Pai Zheng, The University Of Auckland
Collaborative Innovation	FACTORS AFFECTING KNOWLEDGE SHARING BEHAVIOUR IN COLLABORATIVE INNOVATION - Dana Cumin, The University Of Auckland
High Performing Work Systems and Industry 4.0	DECENTRALISED OR CENTRALISED; WHICH ONE IS BETTER AT MANAGING CHANGE IN PD? - Janaka Rajapaksha Mudiyanselage, The University Of Auckland
Open Innovation and Industry 4.0	REVEALING REVEALED – HOW INNOVATIVE FIRMS OPENLY SHARE KNOWLEDGE - Saumya Amarasinghe, The University Of Auckland

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