



ICDDMAP
2021

International Conference on
Direct Digital Manufacturing
And Polymers

ICDDMAP2021 PROGRAMME

SUMMARY PROGRAMME

	Morning	Afternoon	Evening
Day 1 20 th May	Session A Plenary Manufacturing	Session B Plenary Manufacturing	Tour of CDRSP
Day 2 21 st May	Session C Mathematics and Industry	Session F Bio-Manufacturing	
	Session D Direct Digital Manufacturing	Session G Direct Digital Manufacturing	
	Session E Commercial Presentations	Session H Commercial Presentations	
	Session K Materials and Manufacturing	Session L Technology and Manufacturing	
Approx. Time	10h00 – 13h00	14h00 – 18h00	18h15 – 19h15

Day 1 - 20th May | Sessions A and B

	Day 1 - 20th May	Speaker/Chair/ Resp.	Title	Institution	Country
1000	Introduction	Geoffrey Mitchell	Introduction	Polytechnic of Leiria	Portugal
1005	Opening Ceremony	Rui Pedrosa Pres. IPL	Welcome	Polytechnic of Leiria	Portugal
1010	Opening Ceremony	K.B.Gudsai VC KUD	Welcome	Karnatak University	India
1015	Session A Plenary Manufacturing				
	Session A chair	Mahadevappa Kariduraganavar		Karnatak University	India
1015	Plenary Lecture 1	Seeram Ramakrishna	Circularity and Sustainability of Plastics	National University of Singapore	Singapore
1105	Q&D PL1				
1115	Break				
1130	Keynote Lecture 1	Dan Luo	Large scale additive manufacture for construction	Queensland University	Australia
1200	Q&D KN1				
1210	Keynote Lecture 2	Marco Domingos	Bioprinting strategies for regenerative medicine and disease modelling applications	University of Manchester	UK
1240	Q&D KN 2				
1250	Lunch Break				
1400	Session B Plenary Manufacturing				
	Session B Chair	A.B.Vedamurthy		Karnatak University	India
1400	Keynote Lecture 3	Adérito Araújo	Mathematics as a driving force for innovation in industry	University of Coimbra	Portugal
1430	Q&D KN 3				
1440	Keynote Lecture 4	Artur Mateus	Big Print Laboratory	Polytechnic of Leiria	Portugal
1510	Q&D KN 4				
1520	Keynote Lecture 5	Steffen Sickinger	Benefits of higher preheating temperatures and the green wavelength laser for metal AM applications	TRUMPF	Germany
1550	Q&D KN 5				
1600	CL 1	Aamer Nazir	Improving the mechanical properties lattice structures manufactured using multijet fusion additive manufacturing technology	National Taiwan University of Science and Technology	Taiwan
1615	Q&D CL 1				
1620	Break				
1630	Keynote Lecture 6	Mahadevappa Kariduraganavar	Hybrid Membranes are the Novel Materials for Pervaporation	Karnatak University	India
1700	Q&D KN 6				
1710	Virtual interactive Tour of the Centre for Rapid and Sustainable Product Development with the accompaniment of the Polytechnic of Leiria Tuna Band				
1800	Close of Tour				
1800	Culture Interlude				

Day 2 - 21st May | Sessions C and F

	Day 2 - 21st May	Speaker/Chair/ Resp.	Title	Institution	Country
1000	Session C Mathematics and Industry				
	Session C Chair	Paula Faria		Polytechnic of Leiria	Portugal
1005	Keynote Lecture 7	Dietmar Homberg	Industry 4.0 – mathematical concepts and new challenges	Weierstrass Institute	Germany
1035	Q&D KN 7				
1045	CL 2	Sara Valvez	Optimization of manufacturing parameters to maximize the flexural properties of 3D printed ABS	University of Beira Interior	Portugal
1100	Q&D CL 2				
1105	Break				
1130	Keynote Lecture 8	Adrian Ionescu	Digital twins for Healthcare at the Edge: challenges and opportunities	Nanolab - École Polytechnique Fédérale de Laussane	Switzerland
1200	Q&D KN 8				
1210	CL 3	Jan Marxen	Topology Optimization Applied to Bio-Scaffold Design: A Mathematical Approach to Tissue-Engineering	Instituto Superior de Engenharia de Lisboa	Portugal
1225	Q&D CL 3				
1230	CL 4	João Meneses	Bioreactor Design Challenges and Opportunities: Combining Direct Digital Manufacturing and Numerical Models	Polytechnic of Leiria	Portugal
1245	Q&D CL 4				
1250	Lunch				
1400	Session F Bio-Manufacturing				
	Session F Chair	Nuno Alves		Polytechnic of Leiria	Portugal
1400	Keynote Lecture 9	Carlos Mota	Continuous gradient scaffolds for bone tissue regeneration	Maastrich University	The Netherlands
1430	Q&D KN 9				
1440	CL 12	Manisha Divate	Bio-fabrication and characterization of copper nanoparticles and their antimicrobial studies	KLE Technological University	India
1455	Q&D CL 12				
1500	CL 13	Carolina Ferreira	Electrospun Meshes Loaded With Seaweed Phlorotannins-Bioactive Extract For Wound Healing	Polytechnic of Leiria	Portugal
1515	Q&D CL 13				
1520	CL 14	Cláudia Mouro	Electrospun Nanofibrous Membranes Containing Medicinal Plant Extracts As Natural Source Of Bioactive Compounds For Wound Dressing Applications	University of Beira Interior	Portugal
1535	Q&D CL 14				
1540	Break				
1600	Keynote Lecture 10	Xuebin Yang	Bone tissue engineering in vitro and in vivo using 3D printed scaffolds	University of Leeds	UK
1630	Q&D KN 10				
1640	CL 15	Joana Valente	Additive manufacturing: a bright future for chromatographic supports production	Polytechnic of Leiria	Portugal
1700	Q&D CL 15				
1705	CL 16	João Silva	Additive manufacturing-based biomimetic/bio-instructive scaffolds and bioreactors for bone, cartilage and osteochondral tissue engineering	Polytechnic of Leiria University of Lisbon	Portugal
1725	Q&D CL 16				
1730	CL 17	Lúcia Amorim	Production of nanofibrous materials from biopolymers and bacterial pigments	University of Beira Interior	Portugal
1750	Q&D CL 17				
1800	Close of Session				
1805	Culture Interlude				

Day 2 - 21st May | Sessions D and G

	Day 2 - 21st May	Speaker/Chair/ Resp.	Title	Institution	Country
1000	Session D Direct Digital Manufacturing				
	Session D Chair	Nelson Ferreira		Polytechnic of Leiria	Portugal
1005	CL 5	Barbara Lamolinara	Economic, environmental and social indicators in cork industry: a case study	Polytechnic of Leiria	Portugal
1020	Q&D CL 5				
1025	CL 6	Miguel Silva	Digital composites produced by material Jetting: design and applications	Polytechnic of Leiria Minho University	Portugal
1040	Q&D CL 6				
1045	CL 7	Tatiana Patricio	Customised superparamagnetic bone-like substitutes	Polytechnic of Leiria	Portugal
1100	Q&D CL 7				
1105	Break				
1130	CL 8	Rachel Cordeiro	Bacterial Cellulose-Chitosan Eco-tapes	Polytechnic of Leiria	Portugal
1145	Q&D CL 8				
1150	CL 9	Miguel Belbut Gaspar	An Overview Of Algorithms And Tools For Interactive Generation And Optimization Of Conformal Channels	Polytechnic of Leiria	Portugal
1205	Q&D CL 9				
1210	CL 10	Rashmi S. Hulagurmath	Synthesis and evaluation of gas sensing properties of PPy/ZnO and PPy/CdO nanocomposites	SDM, College of Engineering and Technology	India
1225	Q&D CL 10				
1230	CL 11	Md. Umar Mulla	Development of Electrically Conductive Flexible Nanocomposite Electrode Materials by Incorporating Aniline Derivatives into Crosslinked Poly(vinyl alcohol) for Supercapacitor Applications	Karnatak University	India
1245	Q&D CL 11				
1250	Lunch				
1400	Session G Direct Digital Manufacturing				
	Session G Chair	Nelson Ferreira		Polytechnic of Leiria	Portugal
1400	Keynote Lecture 11	Jules Harings	Aligning molecular and structural dynamics in additive manufacturing by molecular engineering: towards enhanced thermoplastic weld mechanics and geometrical stability	Maastricht University	The Netherlands
1430	Q&D KN 11				
1440	CL 18	Sara Valvez	5D Printing And Its Expected Applications	University of Beira Interior	Portugal
1455	Q&D CL 18				
1500	CL 19	Sachin Nagesh Hegde	Enhancement of fuel cell performance of poly(arylene ether ketone) membrane using polystyrene sulphonic acid-co-maleic acid and sulfothalic acid	Karnatak University	India
1515	Q&D CL 19				
1520	CL 20	Miguel Belbut Gaspar	Small Scale 3D Scanning: An Assessment Of Capabilities And Limitations Of Photogrammetry Technique	Polytechnic of Leiria	Portugal
1535	Q&D CL 20				
1540	Break				
1600	Keynote Lecture 12	Alexis Maurel	Lithium-ion Battery 3D Printing	University of Texas	USA
1630	Q&D KN 12				
1640	CL 21	Juliana Dias	SpinningTNT: development of bioactive TNT by electrospinning.	Polytechnic of Leiria	Portugal
1655	Q&D CL 21				
1700	Keynote Lecture 13	Yann Rageul	Solving Supply Chain Issue with New AM Technologies for Volume Production	Stratasys	Germany
1730	Q&D KN 13				
1740	Close of Session				

Day 2 - 21st May | Sessions E and H

	Day 2 - 21st May	Speaker/Chair/ Resp.	Institution	Country
1000	Session E Commercial Presentations			
	Session E Chair	Tomás Archer de Carvalho	Polytechnic of Leiria	Portugal
1005	CP 1		Periplast	Portugal
1050	Q&D CP 1			
1105	Break			
1130	CP 2		Moldetipo	Portugal
1215	Q&D CP 2			
1230	Lunch			
1400	Session H Commercial Presentations			
	Session H Chair	Tomás Archer de Carvalho	Polytechnic of Leiria	Portugal
1400	CP 3		Moldwelt/PME fluidtec	Portugal/Germany
1445	Q&D CP 3			
1500	Close of Session			

Day 2 - 21st May | Poster Session, J

	Day 2 - 21st May	Speaker/Chair/ Resp.	Title	Institution	Country
	Session J Poster Session				
1815	PP 1	Joana Valente	coPOLY - Polymers reinforced with copper to promote antimicrobial effect	Polytechnic of Leiria	Portugal
1815	PP 2	Md. Yaseen	Synthesis, characterization and Panchromatic Light Harvesting with Co-Sensitization of Cobalt Phthalocyanine and Bithiophene-Based Organic Dye for Dye-Sensitized Solar Cells	Karnatak University	India
1815	PP 3	Sara Biscaia	Engineering new processes of direct bioprinting for skin regeneration	Polytechnic of Leiria	Portugal
1815	PP 4	Ana Rita Alves Fonseca	Turning ocean plastic waste into 3D printed thermoplastic moulds for boats and for other green maritime devices	Polytechnic of Leiria	Portugal
1815	PP 5	Carolina Ferreira	C. Orthopedics - Moulding Composites for Orthopedic Applications	Polytechnic of Leiria	Portugal
1815	PP 6	Miguel Belbut Gaspar	Workflow for creation of custom face masks for nose protection: a study in design of customized orthoses	Polytechnic of Leiria	Portugal
1815	PP 7	P. S. Rachipudi	Effect of Dibutylphthalate on sodium alginate membranes on stability and pervaporation performance of acetic acid-water mixtures.	KLES P.C. Jabin Science C India	
1815	PP 8	Olivier Gouveia	Safety4Road	Polytechnic of Leiria	Portugal
1815	PP 9	Catarina Baptista	WOWW - World of Outstanding Wood and Wool	Polytechnic of Leiria	Portugal
1815	PP 10	Daniela Trindade	SafeBiotrash.Disposal - A safe and responsible way to gather group III biological residues	Polytechnic of Leiria	Portugal
1815	PP 11	Margarida Franco	wheel's on project	Polytechnic of Leiria	Portugal
19:15	Close of Session				

Day 3- 22nd May | Sessions K and L

	Day 3 - 22nd May	Speaker/Chair/ Resp.	Title	Institution	Country
1000	Session K Materials and Manufacturing				
	Session K chair	R.R.Kamble		Karnatak University	India
1005	Keynote Lecture 14	Anthony Thuault	Fast manufacturing of ceramics by additive manufacturing (stereolithography) shaping and microwave sintering	Université Polytechnique Hauts-de-France	France
1035	Q&D KN 14				
1045	CL 23	Ludmila Vago	Printing Performance Evaluation of Cement Based Materials	Polytechnic of Leiria	Portugal
1100	Q&D CL 23				
1105	Break				
1130	Keynote Lecture 15	A. B. Vedamurthy	Green synthesis, Characterization and Cytotoxic Evaluation of nanoparticles from selected plants of Western Ghats of India	Karnatak University	India
1200	Q&D KN 15				
1210	CL 24	Daniel Silva	An anti-counterfeiting solution using RFID/NFC and optical encryption for in-mold labeled parts	Polytechnic of Leiria	Portugal
1225	Q&D CL 24				
1230	Plenary Lecture 2	Sanjeeva Murthy	Fabrication of Hybrid and Hierarchical Scaffolds for Tissue Engineering by 3D Printing, Airbrushing and Electrospinning	Rugers University	USA
1310	Q&D PL 2				
1320	Lunch				
1400	Session L Technology and Manufacturing				
	Session L chair	Artur Mateus		Polytechnic of Leiria	Portugal
1400	Keynote Lecture 16	Nir Dvir	Photopolymerisation Extrusion	Massivit 3D Printing Technologies Ltd	Israel
1430	Q&D KN 16				
1440	CL 25	Miguel Belbut Gaspar	Optimization of hybrid additive-subtractive manufacture: machinability and minimization of tool changes	Polytechnic of Leiria	Portugal
1455	Q&D CL 25				
1500	CL 26	Tiago Santos	Temperature simulation and validation of FDM processes	Polytechnic of Leiria	Portugal
1515	Q&D CL26				
1520	CL 27	Henning Einloth	Use Of Polymer-Based Magnetic Composites In 4D Printing	Offenburg University	Germany
1535	Q&D CL 27				
1540	Break				
1610	CL 28	Tiago Santos	3D printed ceramics innovative firing technique	Polytechnic of Leiria	Portugal
1625	Q&D CL 28				
1630	CL 29	Shreenivas Chavan	Modification of highly brittle polystyrene sulfonic acid-co-maleic acid crosslinked sodium alginate membrane into flexible membranes by the incorporation of dibutyl phthalate as a plasticizer for pervaporation separation	Karnatak University	India
1645	Q&D CL 29				
1650	CL 30	Muhammed Hisham	Properties and Shape Morphing Behaviour of DLP 3D Printed Functionally Graded Polyethylene Glycol Diacrylate Hydrogels	Indian Institute of Technology Madras	India
1705	Q&D CL 30				
1710	CL 31	Nelson Ferreira	Mathematical Structures Applied to 3D-Printing	Polytechnic of Leiria	Portugal
1725	Q&D CL 31				
1730	CL 32	Geoffrey Mitchell	Changing The Paradigm - Direct Digital Manufacturing Of Properties	Polytechnic of Leiria	Portugal
1745	Q&D CL 32				
1750	Close of Session				
1755	Closing Ceremony				
1800	Culture Interlude				
1815	Close of Conference				