

ICIE'2020 - FINAL PROGRAM

ICIE Conference will take place at:

**HOTEL DE GUIMARÃES**

<http://www.hotel-guimaraes.com/EN/home.html>

	June 28th	June 29th	June 30th		
	Day 1	Day 2	Day 3		
08:00	Registration	Registration	Registration	08:00	
09:00	Registration	Keynote 3 <b>Prof. Valeriy Vyatkin</b> <i>online</i>	Room "Santa Maria" PP5 <b>OPE</b> <b>OPF</b>	09:00	
09:00	Opening Session Room "Santa Maria"	Room "Santa Maria" PP3 <b>OPC</b>	tereso	09:00	
10:00	Keynote 1 <b>Profª Marina Ranga</b> <i>online</i>	Room "Santa Maria" PP4 <b>OPD</b>		10:00	
10:00	Coffee-Break	Coffee-Break	Coffee-Break	10:00	
11:00	Room "Santa Maria" PP1 <b>OPA</b>	Room "Santa Maria" PP4 <b>OPD</b>	PT1 <i>online</i>	11:00	
11:00	<i>online</i>	<i>online</i>	PT2 <i>online</i>	11:00	
12:00	PP1 <b>OPA</b>	PP4 <b>OPD</b>	PT3 <i>online</i>	12:00	
12:00			PT4 <i>hybrid</i>	12:00	
13:00	Lunch	Lunch	Lunch	13:00	
13:00	Keynote 2 <b>Prof. Hans-Georg Gemunden</b> Room "Santa Maria"	Social Activities	Keynote 4 <b>Dr. João Ribau</b> <i>online</i>	14:00	
14:00	Room "Santa Maria" PP2 <b>OPB</b>		Room "Santa Maria" <b>INDUSTRY AFTERNOON</b>	14:00	
15:00	<i>online</i>				15:00
15:00	PP2 <b>OPB</b>			<b>Closing Session</b> Room "Santa Maria"	15:00
16:00	Coffee-Break		Farewell Coffee	16:00	
16:00	Social Activities			16:00	
17:00	Social Activities			17:00	
17:00	Social Activities			17:00	
18:00	Social Activities			18:00	
18:00	Social Activities			18:00	
19:00	Social Activities			19:00	
19:00	Social Activities			19:00	
20:00	Welcome Reception	Gala Dinner		20:00	
20:00	Welcome Reception	Gala Dinner		20:00	
21:00	Welcome Reception	Gala Dinner		21:00	
21:00	Welcome Reception	Gala Dinner		21:00	
22:00	Welcome Reception	Gala Dinner		22:00	
22:00	Welcome Reception	Gala Dinner		22:00	
23:00	Welcome Reception	Gala Dinner		23:00	

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## KEYNOTE SPEECHES

<b>Session:</b> KS1	<i>Online</i> <b>June 28th, 10:00 a.m. - 10:45 a.m.</b>	<b>Chair:</b> José Carlos Teixeira, University of Minho, PT
<b>Presenter</b>	<b>Title</b>	<b>Institution</b>
Marina Ranga	Smart Specialization as an engine for innovation and technology-driven regional growth in the Industry 4.0 era	European Commission, Joint Research Centre ( <i>Spain</i> )

<b>Session:</b> KS2	<i>Room "Santa Maria"</i> <b>June 28th, 02:00 p.m. - 02:45 p.m.</b>	<b>Chair:</b> Gabriela Fernandes, University of Coimbra, PT
<b>Presenter</b>	<b>Title</b>	<b>Institution</b>
Hans-Georg Gemunden	Project organising and innovation. How can project organising contribute to innovation on the level of single projects, project portfolios and project sequences?	BI Norwegian Business School ( <i>Norway</i> )

<b>Session:</b> KS3	<i>Online</i> <b>June 29th, 08:30 a.m. - 09:15 a.m.</b>	<b>Chair:</b> Ana Luísa Fernando, New University of Lisbon, PT
<b>Presenter</b>	<b>Title</b>	<b>Institution</b>
Valeriy Vyatkin	Cyber-Physical engineering of automation systems with smart components	Aalto University & Luleå University of Technology ( <i>Finland &amp; Sweden</i> )

<b>Session:</b> KS4	<i>Online</i> <b>June 30th, 02:00 p.m. - 02:45 p.m.</b>	<b>Chair:</b> José Machado, University of Minho, PT
<b>Presenter</b>	<b>Title</b>	<b>Institution</b>
João Ribau	Getting to know Horizon Europe to boost research and innovation for Industry and digital	ANI - National Agency for Innovation ( <i>Portugal</i> )

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## NORMAL PAPER PRESENTATIONS "HYBRID"

<b>Session: PP1</b>		MECHANICAL ENGINEERING 1 <b>June 28th, 11:00 a.m. - 01:00 p.m.</b>		<b>Chairs:</b> Teresa Morgado, New University of Lisbon, PT Eliana Costa e Silva, Polytechnic of Porto, PT	
<b>6 papers</b>					
#Paper	Authors	Title	Presenter		
202	Hélder Puga, Vitor Carneiro and Manuel Vieira	Ball milled Al spheres for the manufacturing of casting-based Al-CNT composites	Hélder Puga / Vitor Carneiro		
211	Tiago E.F. Silva, Pedro A.R. Rosa, Ana R. Reis and Abílio M.P. de Jesus	Machinability of the 18Ni300 Additively Manufactured Maraging Steel Based on Orthogonal Cutting Tests	Tiago Silva		
2	Marcelin Benchea and Spiridon Cretu	An Investigation Regarding the Impact of Running-in on Rolling Contacts Lives	Marcelin Benchea		
103	Fátima Pilar, Eliana Costa E Silva and Ana Borges	A Case Study on Scheduling of Repairs in an Automobile Shop	Eliana Costa E Silva		
212	Leandro Gomes, Jorge Costa, Fernando Santos and Ana Luisa Fernando	Environmental and Socio-Economic Impact Assessment of the Switchgrass Production in Heavy Metals Contaminated Soils	Ana Luisa Fernando / Leandro Gomes		
151	Marcelin Benchea, Carmen Bujoreanu and Gelu Ianus	Acoustic Performance of Some Lined Dissipative Silencers	Marcelin Benchea		

<b>Session: PP2</b>		INDUSTRIAL ENGINEERING 1 <b>June 28th, 2:45 p.m. - 5:00 p.m.</b>		<b>Chairs:</b> Katarzyna Antosz, Rzeszów University of Technology, PL Teresa Pereira, Polytechnic of Porto, PT	
<b>8 papers</b>					
#Paper	Authors	Title	Presenter		
106	Núbio Gomes Filho, Nazaré Rego and João Claro	Supply Chains' Digitalization: boosters and barriers	Núbio Gomes Filho		
5	Katarzyna Antosz, Dariusz Mazurkiewicz, Edward Kozłowski, Jarosław Sęp and Tomasz Żabiński	Machining process time series data analysis with a decision support tool	Katarzyna Antosz		
189	Rui Gonçalves	Probability laws for Nearly Gaussian random variables and Application	Rui Gonçalves		
137	M. Teresa Pereira, Hugo Magalhães, Fernanda A. Ferreira and Alcinda Barreiros	Definition of A Decision Support Model For The Calculation Of The Economic Production Lot Size	Fernanda A. Ferreira		
82	Luís Vieira and Vasco Mano	A Generalization of the Krein Parameters of a Symmetric Association Scheme	Vasco Mano / Luís Vieira		
171	M. Teresa Pereira, Luis Ferreirinha, Fernanda A. Ferreira and Marisa Oliveira	A VRP model to support Last mile maritime containers	M. Teresa Pereira		
198	Leandro Barretiri, Bruno S. Gonçalves, Rui M. Lima and José Dinis-Carvalho	PRIORITIZING INTERNAL PRODUCTION ON MRI WAITING LIST MANAGEMENT: AN OPTIMIZATION MODEL	Rui M. Lima / Leandro Barretiri		
81	Luís Vieira and Vasco Mano	Exponential Inequalities on the Parameters of a Strongly Regular Graph	Luís Vieira		

<b>Session: PP3</b>		MECHATRONICS ENGINEERING 1 <b>June 29th, 09:15 a.m. - 10:45 a.m.</b>		<b>Chairs:</b> Vitor Carvalho, Polytechnic Institute of Cávado and Ave, PT Pedro Torres, Polytechnic Institute of Castelo Branco, PT	
<b>6 papers</b>					
#Paper	Authors	Title	Presenter		
191	Adriano A. Santos, António F. da Silva, Pessoa Magalhães and Mário de Sousa	Reliability of Replicated Distributed Control Systems Applications based on IEC61499	Adriano A. Santos		
97	Pedro Torres, Rogério Dionísio, Sérgio Malhão, Luís Neto and Gil Gonçalves	Machinery Retrofitting for Industry 4.0	Pedro Torres		
61	Humberto Teixeira, Isabel Lopes, Ana Cristina Braga, Pedro Delgado and Cristina Martins	Screwing process monitoring using MSPC in large scale smart manufacturing	Humberto Teixeira		
49	Irene Brito, Celina P. Leão and Matilde A. Rodrigues	Risk analysis and risk measures applied to furniture industry	Irene Brito		
120	M. Filomena Teodoro, Mário Simões Marques, Isabel Nunes, Gabriel Calhamonas and Marina A. P. Andrade	New Refinement of an Intelligent System Design for Naval Operations	Filomena Teodoro		

70	Tudor Claudiu Tîrnovan, Pedro Cunha, Vítor Carvalho, Filomena Soares, Camelia Avram and Adina Aștilean	Monitoring system of Taekwondo athletes' movements: first insights	Vitor Carvalho / Pedro Cunha
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<b>Session:</b> <b>PP4</b>	MECHANICAL/INDUSTRIAL ENGINEERING 2 <b>June 29th, 11:00 a.m. - 01:00 p.m.</b>	<b>Chairs:</b> <b>Ana Simões</b> , INESC TEC, PT <b>José Carlos Sá</b> , Polytechnic of Porto, PT	
<b>8 papers</b>			
<b>#Paper</b>	<b>Authors</b>	<b>Title</b>	<b>Presenter</b>
67	Martin Tichý, Miroslav Muller, Vladimir Sleger and Petr Valasek	Research of quasi-static tests and static loading on hybrid adhesive bonds	Petr Valasek, Miroslav Muller
88	Violeta Carvalho, Paulo Sousa, Vânia Pinto, Ricardo Ribeiro, Pedro Costa, Senhorinha Teixeira and Rui Lima	Hemodynamic studies in coronary artery models manufactured by 3D printing	Rui A Lima / Violeta Carvalho
83	Gilberto Santos, Pedro Ferreira, Maria João Félix, Ricardo Simoes and José Carlos Sá	Material Selection Guidelines for the Product Designer	Gilberto Santos
207	Ana Correia Simões, Joana Mendes and José Coelho Rodrigues	The Impact of Industry 4.0 paradigm on the Pharmaceutical Industry in Portugal	Ana Simões
115	Jorge Cunha, Carla Ferreira, Araújo Madalena and Bennworth Paul	From research to numbers: Role of universities in the social innovation	Carla Ferreira
73	Bruno Faria, Ana Simões and José Rodrigues	Impact of Governmental Support for the Implementation of Industry 4.0 in Portugal	Ana Simões
121	M. Filomena Teodoro, José B. Rebelo, Suzana Lampeira	Modeling Waste Management and Embarked Staff	Filomena Teodoro
99	Maria João Félix, Gilberto Santos, Ricardo Simoes and Catarina Surrador	Product design and development strategies: Construction of regional innovation systems, for new achievements brought by the academy for industry.	Gilberto Santos / Maria João Félix

<b>Session:</b> <b>PP5</b>	OUTCOMES FROM INDUSTRIAL PROJECTS <b>June 30th, 08:30 a.m. - 10:45 a.m.</b>	<b>Chairs:</b> <b>João Sarraipa</b> , New University of Lisbon, PT <b>João Pedro Mendonça</b> , University of Minho, PT	
<b>9 papers</b>			
<b>#Paper</b>	<b>Authors</b>	<b>Title</b>	<b>Presenter</b>
219	Leopoldo Silva, Eduardo Oliveira, João P. Mendonça, João Sousa	Produtech SIF: innovations in manufacture under i4.0 paradigm	João Pedro Mendonça
222	José Ferreira, Miguel Domingues	DIH4CPS: How can DIH support SMEs in their digital transformation?	José Ferreira
218	Fernando Ferreira, João Sarraipa, Majid Zamiri	Eden-hub - Have your employees the right competences?	João Sarraipa
215	Jorge Calado, João Sarraipa	INEDIT: do yourself a smart cuisine	João Sarraipa
217	Carlos Agostinho, Rubén Costa	VesselAI - Enabling Maritime Digitalization with Artificial Intelligence and Extreme-Scale Data	Carlos Agostinho
220	José Ferreira, João Sarraipa, João Sousa	ZDMP Industry with Zero Defects	João Sousa
214	Maria Marques, Ricardo Gonçalves	IoT and Occupational Health - The Smart4Health approach	Maria Marques
221	Carlos Agostinho, Ahmad Mehrbod, Negin Mehrbod, Rubén Costa	XMANAI: Explainable Manufacturing Artificial Intelligence	Rubén Costa
216	Michael Machado, João Pedro Mendonça, Raul Figueiro, João Bessa, Daniel Pinto	NEXT 3DPrinter generation	Michael Machado

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## ONLINE PAPER PRESENTATIONS

Session: OPA	INDUSTRIAL ENGINEERING A June 28th, 11:00 a.m. - 01:00 p.m.	Chairs: Vitalii Ivanov, Sumy State University, UA Lorena Siguenza-Guzman, Universidad de Cuenca, EC	
#Paper	Authors	Title	Presenter
194	Toni Ahonen, Antti Rantala, Helena Kortelainen and Pasi Valkokari	Long-term history data and integrated expert knowledge in asset lifecycle management	Toni Ahonen
127	Carlos Cevallos, Mario Peña and Lorena Siguenza-Guzman	New hybrid algorithm for supply chain optimization	Lorena Siguenza-Guzman
43	José Sequeiros, Rui Silva, André Santos, João Bastos, Leonilde Varela and Ana Madureira	A Novel Discrete Particle Swarm Optimization Algorithm for the Solve Travelling Salesman Problems	L Varela/ José Sequeiros e Rui Silva
36	Adam Górný	Work environment as a factor in the conduct of manufacturing processes	Adam Górný
95	Aydin Teymourifar, Ana Maria Rodrigues, José Soeiro Ferreira, Cristina Lopes, Cristina Oliveira and Valeria Romanciuc	A Two-Stage Method to Solve Location-Routing Problems Based on Sectorization	Aydin Teymourifar
62	Marilena Stoica and Lucian Cucu	Economic analysis of a modular storage system designed for railway industry use	Marilena Stoica
63	Vijayakumar Manupati, Shukla Akash, Mlr Varela, K Illaiah and E Suresh Babu	Robust Supply Chain network design under facility disruption by consideration of risk propagation	L Varela / Vijaya Kumar Manupati
96	Valeria Romanciuc, Isabel Cristina Lopes, Aydin Teymourifar, Ana Maria Rodrigues, José Soeiro Ferreira, Cristina Oliveira and Elif Goksu Ozturk	An Integer Programming Approach to Sectorization with Compactness and Equilibrium Constraints	Aydin Teymourifar

Session: OPB	MECHATRONICS ENGINEERING A June 28th, 2:45 p.m. - 5:00 p.m.	Chairs: Frantisek Gazdos, Tomas Bata University in Zlin, CZ Guilherme Kunz, Western Paraná State University, BR	
#Paper	Authors	Title	Presenter
46	Guilherme Kunz	Optimal Preventive Maintenance Frequency in Redundant Systems Through the Stochastic Model Checker	Guilherme Kunz
68	Frantisek Gazdos and Lenka Sarmanova	Incorporating Inteco's 3D Crane into Control Engineering Curriculum	Frantisek Gazdos
87	Nuno Martins, Sónia Ralha and Ricardo Simoes	ICT4Silver: Design guidelines for the development of digital interfaces for elderly users	Nuno Martins
158	Tetiana Zhylenko, Vitalii Ivanov, Ivan Pavlenko, Nataliia Martynova, Yuri Zuban and Dmytro Samokhvalov	Mobile Applications in Engineering Using the Technology of Augmented Reality	Vitalii Ivanov
145	Lubos Spacek and Jiří Vojtěšek	Overview of Collaborative Robot YuMi in Education	Jiří Vojtěšek
157	Marek Goliński, Małgorzata Spychała and Marek Miądowicz	Model of acquiring transversal competences among students on the example of the analysis of communication competences	Małgorzata Spychała
146	Karel Perutka	Influence of Magnitude of Interaction on Control in Decentralized Adaptive Control of Two Input Two Output Systems	Karel Perutka
152	Eliseu Pereira, João Reis, Gil Gonçalves, Luís Paulo Reis and Ana Paula Rocha	Dutch Auction based approach for Task/Resource Allocation	Eliseu Pereira
69	Ivan Kuric, Matej Kandra, Jaromír Klarák, Miroslav Císar and Ivan Zajačko	Design of laser scanners data processing and their use in visual inspection system	Jaromír Klarák
47	Sahin Yildirim, Nihat Cabuk and Veli Bakircioglu	Experimental Investigation of the Effect of Mass Load on Flight Performance of an Octorotor and Dodecarotor UAV	Sahin Yildirim



<b>Session:</b> <b>OPC</b>	MECHANICAL ENGINEERING A <b>June 29th, 09:15 a.m. - 10:45 a.m.</b>	<b>Chairs:</b> <b>Erika Ottaviano</b> , University of Cassino and Southern Latium, IT <b>Rentong Chen</b> , Beihang University, CH	
<b>6 papers</b>			
<b>#Paper</b>	<b>Authors</b>	<b>Title</b>	<b>Presenter</b>
203	Vlad Cârlescu, Cezara Măriuca Oprişan, Gelu Ianuş, Dumitru N. Olaru and Bogdan Chiriac	Influence of Hand Sanitisers on The Friction Properties of The Finger Skin Amid the COVID-19 Pandemic	Bogdan Chiriac / Vlad Carlescu
25	Rentong Chen, Shaoping Wang, Chao Zhang and Mileta Tomovic	Reliability Estimation of the Solid Lubricated Bearing Based on a General Wiener Process and Its Experimental Validation	Rentong Chen
172	Teresa Morgado, Andre Pinto, Helena Navas and Suzana Lampreia	Development of a Computerized Maintenance Management Model of a laboratory testing service enterprise	Teresa Morgado / André Pinto
55	Kakarla Manojkumar, Biswajit Kar, Rajeev Agrawal, Vijayakumar Manupati and Jose Machado	Cycle time reduction in CNC turning process using six sigma methodology – A manufacturing case study	José Machado / Vijaya Kumar Manupati
112	Lubomír Macků	Possibility of reaction mixture variable composition identification in semi-batch reactor.	Lubomír Macků
206	Suzana Lampreia, Teresa Morgado, Helena Navas, Rita Cabrita and José Requeijo	An approach to Ship Equipment Maintenance Management	Teresa Morgado / Suzana Lampreia

<b>Session:</b> <b>OPD</b>	MECHATRONICS/MECHAN ENGINEERING B <b>June 29th, 11:00 a.m. - 01:00 p.m.</b>	<b>Chairs:</b> <b>Bogdan Gramescu</b> , Politehnica University of Bucharest, RO <b>Anabela Tereso</b> , University of Minho, PT	
<b>8 papers</b>			
<b>#Paper</b>	<b>Authors</b>	<b>Title</b>	<b>Presenter</b>
123	Marcos Rijo, Eduardo Perondi, Mário Sobczyk and Carlos Sarmanho	Parameterized State Feedback Control applied to the 1st degree of freedom of a cylindrical pneumatic robot	Eduardo Perondi
1	Philip Coanda, Mihai Avram, Victor Constantin and Bogdan Gramescu	Indoor GPS system for autonomous mobile robots used in surveillance applications	Philip Coanda / Bogdan Gramescu
71	José Rodrigues and Vinicius Delfim	Technology Foresight to Enable new R&D Collaboration Partnerships: The case of a forestry company	José Rodrigues / Vinicius Delfim
30	Marian Tanasie and Ionel Simion	Building a mobile application by combining third party platforms in order to reduce time, costs and improve functionality	Marian Tanasie
89	Bogdan Gramescu, Adrian Cartal, Ahmed Sachit Hashim and Constantin Nitu	Dynamic Analysis of a Robot Locomotion for an External Pipe Inspection and Monitoring	Bogdan Gramescu
163	Eugenia Carla Cosima Chiara, Eddy Alexandra Arguello Bastos and Arturo Dell'Acqua Bellavitis	Chalala: Conscious fashion towards the re-innovation of Santander's weaving tradition	Eugenia Chiara
108	Bernardo Providência and Daniel Vieira	Design methodology for the research and development of polygonal artefacts	Bernardo Providência / Daniel Vieira
213	Gabriela Fernandes, Marlene Capitão, Anabela Tereso and Eduardo B. Pinto	Stakeholder Management in University-Industry Collaboration Programs: A Case Study	Anabela Tereso

<b>Session:</b> <b>OPE</b>	INDUSTRIAL ENGINEERING B <b>June 30th, 08:30 a.m. - 10:45 a.m.</b>	<b>Chairs:</b> <b>Maciej Szafranski, Magda Graczyk-Kucharska</b> , Poznan Univ of Tech, PL <b>Ana Borges</b> , Polytechnic of Porto, PT	
<b>9 papers</b>			
<b>#Paper</b>	<b>Authors</b>	<b>Title</b>	<b>Presenter</b>
102	Małgorzata Spychała, Emanuel Said and Agata Branowska	Model of academic teachers communication competencies management	Emanuel Said / Małgorzata Spychała
116	Marta Santos, Borges Ana, Carneiro Davide and Ferreira Flora	Time Series Analysis for Anomaly Detection of Water Consumption: a case study	Ana Borges
18	Liliana Alves and Ana Dias Daniel	University-Industry Partnerships in the Development of the Academic Patents: Factors for Building Trust	Liliana Alves
128	Maciej Szafranski, Selma Gütmen, Magdalena Graczyk-Kucharska and Gerhard Wilhelm Weber	Modelling IT specialists competency in the era of Industry 4.0	Magdalena Graczyk-Kucharska / Maciej Szafranski
110	José Dinis-Carvalho, Ana Lima, Ana Machado, Bárbara Santos, Daniela Almeida, Eva Correia, Maria Moniz, Rita Ferraz, Sara Machado, Susana Lage and Tatiana Guimarães	The impact of women's absenteeism on an electric components' industry	José Dinis-Carvalho / Sofia Cunha

19	Cristiano Jesus and Rui M. Lima	Study of the Portuguese challenges in the context of European Union to identify adaptation strategies for the Industry 4.0	Rui M. Lima / Cristiano Jesus
131	Akshay Patidar, Anbesh Jamwal, Monica Sharma and Rajeev Agrawal, Manuela Gonçalves	Sustainable Supply Chain Research and key enabling technologies: A systematic literature review and future research implications	Manuela Gonçalves / Akshay Patidar
138	Ana Borges, Conceição Nogueira, Fábio Duarte, Isabel Cristina Lopes, Leonel Vicente, Manuel Cruz and Carlos Poço	Essay on the Contribution of Companies to Social Security based on Added Value	Ana Borges
199	José Dinis-Carvalho, Elisa Vieira, Rui M. Lima and Bruno S. Gonçalves	Reducing waiting time for Orthopedic Consultation through a continuous improvement approach	José Dinis-Carvalho / Elisa Vieira

<b>Session:</b> <b>OPF</b>	MECHATRONICS ENGINEERING C <b>June 30th, 08:30 a.m. - 10:45 a.m.</b>		<b>Chairs:</b> <b>Olena Hrybiuk</b> , International Scientific and Technical University, UA <b>Leonilde Varela</b> , University of Minho, PT
<b>7 papers</b>			
<b>#Paper</b>	<b>Authors</b>	<b>Title</b>	<b>Presenter</b>
26	Pedro Ferreira, Silvia Bonilla and José Sacomano	Selection and development of technologies for the Education of Engineers in the context of Industry 4.0	Pedro Ferreira
32	Olena Hrybiuk	Experience in Implementing Computer-Oriented Methodological Systems of Natural Science and Mathematics Research Learning in Ukrainian Educational Institutions	Olena Hrybiuk
124	Bernardo Providência and Rute Silva	An exploratory approach with EEG – electroencephalography in Design as a research and development tool	Bernardo Providência / Rute Silva
174	Maria Leonor Ribeiro, Adriana Vilaça, Mariana Pires, Cândida Vilarinho and Ana Olival	Portable bathing system for bedridden people	Cândida Vilarinho / Maria Leonor Ribeiro
205	Anna Kellssya Leite Filgueira, Isabella Diniz Gallardo, Ketinly Yasmyne Nascimento Martins, Rodolfo Ramos Castelo Branco, Karolina Celi Tavares Bezerra and Misael de Moraes	Manufacture of facial orthosis in ABS by the Additive Manufacturing process: A customized application in high performance sports.	Misael Elias de Moraes / Anna Leite Filgueira
153	Hugo Lopes, Vítor Carvalho and Cristina Sylla	MOBEYBOU - Tangible Interfaces for Cognitive Development	Hugo Lopes
42	Veerababu Ramakurthi, Vijayakumar Manupati, M L R Varela and Goran Putnik	A Novel Integrated Framework approach for TEBC technologies in Distributed Manufacturing systems: A systematic review and opportunities	L Varela / Veerababu Ramakurthi

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## ONLINE POSTER PRESENTATIONS

Session: PT1	Poster session 1 <b>June 30th, 11:00 a.m. - 11:30 a.m.</b>	<b>Chairs:</b> Maryna Ivanova, Nat. Tech. Univ. "Kharkiv Polytechnic Institute", UA Izabela Rojek, Kazimierz Wielki University, PL	
#Paper	Authors	Title	Presenter
144	João Sousa, João Mendonça Da Silva and José Machado	Metrology information in cyber-physical systems	João Sousa
76	Mykhaylo Stepanov, Maryna S. Ivanova, Petro Litovchenko, Larysa Ivanova and Yurii Havryliuk	Study of Heat Transfer Conditions in the Cutting Zone when Grinding	Maryna Ivanova
93	Olena Avdieieva, Oleksandr Usatyi and Iryna Mykhailova	Optimization of the Flowing Part of the Turbine K-310-240 Based on the Object-Oriented Approach	Olena Avdieieva
10	Jan Hošek	Stainless steel deep hole drilling with EDM	Jan Hošek
16	Yuriy Kharlamov, Volodymyr Sokolov, Oleg Krol and Oleksiy Romanchenko	Experimental Research of the Tribological Properties of D-gun Sprayed WC – Co Coatings	Oleg Krol
31	Izabela Rojek, Marek Macko, Jakub Kopowski and Dariusz Mikołajewski	Reverse engineering as a way to save environment within patient-tailored production of assistive technology devices - based on own hand exoskeleton case study	Izabela Rojek
35	Alexandru - Mihai Cismilianu, Iulian Chirita, Alexandru Persinaru, Alexandru Marin, Camelia Elena Munteanu, Ana-Maria Neculaescu and Cornel Dragoman	Re-entry vehicle structural optimization for mass minimization	Alexandru - Mihai Cismilianu
173	Filipe Pereira, Eduardo Leite Oliveira, Gustavo Guedes Ferreira, Filipe Sousa, Pedro Caldas	Textile Yarn Winding and Unwinding System	Filipe Pereira
17	Yuriy Kharlamov, Volodymyr Sokolov, Oleg Krol and Oleksiy Romanchenko	Examination of Adhesion Strength of D-Gun Sprayed Coatings Based on Tungsten and Chromium Carbides	Oleg Krol
15	Izabela Rojek, Ewa Dostatni and Piotr Kotlarz	Comparison of neural networks aiding material compatibility assessment	Izabela Rojek
197	Filip Górski, Paweł Buń and Kaja Stefańska	Use of virtual mirror in design of individualized orthopedic supplies	Filip Górski

Session: PT2	Poster session 2 <b>June 30th, 11:30 a.m. - 12:00 p.m.</b>	<b>Chairs:</b> Camelia Avram, Technical University of Cluj-Napoca, RO Teresa Malheiro, University of Minho, PT	
#Paper	Authors	Title	Presenter
162	Pedro Santos, Vinícius Silva, João Sena Esteves, Ana Paula Pereira and Filomena Soares	HiZeca: A serious game for emotions recognition	João Sena Esteves
149	Pierluigi Rea, Erika Ottaviano, Fernando J. Castillo-García and Antonio Gonzalez-Rodríguez	Inspection Robotic System: Design and Simulation for Indoor and Outdoor Surveys	Erika Ottaviano
182	Irfanullah Arfeen, Adil Ali Shah and Dimitrios Sarantis	E-Health in IDPs Health Projects in Pakistan	Irfanullah Arfeen / Dimitrios Sarantis
143	Luís Silva, José Meireles, Mário Pinhão, Manuela Gonçalves and M.T. Malheiro	Pick-Up & Placement Improvement: An Industrial Case Study	Teresa Malheiro / Luís Silva
78	Camelia Avram, Mihai Modoranu, Dan Radu and Adina Astilean	Smart packages tracking system	Camelia Avram
156	Daniele Catelani, Leonardo Di Paola, Mauro Linari, Erika Ottaviano and Pierluigi Rea	On the methodology for the simulation driven design for the analysis of grasping of two-finger grippers	Erika Ottaviano
92	Dmitriy Volontsevich, Sergii Strimovskyi, Ievgenii Veretennikov, Dmytro Sivykh and Vadym Karpov	Choice of the electric energy storage device type for hybrid power drive of military wheeled vehicles	Dmitriy Volontsevich
179	Nuno Fernandes, Ana Rita Amorim, Bárbara Silva, Joana Freitas and João Pedro Mendonça	TAB-med: Automated pill dispenser in residential environments	João Pedro Mendonça / Nuno Fernandes
20	Edward Kozłowski, Anna Borucka, Yiliu Liu and Dariusz Mazurkiewicz	Conveyor belts joints remaining life time forecasting with the use of monitoring data and mathematical modelling	Anna Borucka
187	Jorge Ramos, André Teixeira, Carlos Arantes, Sérgio Lopes and João Sena Esteves	Environmental parameters monitoring mobile system with an application interface for smartphone	João Sena Esteves



188	Erika Ottaviano, Pierluigi Rea, Massimo Cavacece and Giorgio Figliolini	Mechatronic design of a wall-climbing drone for the inspection of structures and infrastructure	Pierluigi Rea
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<b>Session: PT3</b>	Poster session 3 <b>June 30th, 12:00 p.m. - 00:30 p.m.</b>	<b>Chairs:</b> Joana Cunha, University of Minho, PT Cristina Broega, University of Minho, PT	
<b>12 papers</b>			
<b>#Paper</b>	<b>Authors</b>	<b>Title</b>	<b>Presenter</b>
196	Paulina Rewers, Anna Karwasz and Marta Czaja	Changeover time and priority rules versus timely execution of customer orders	Anna Karwasz
190	Teresa Dieguez, Nguyen Thi Ly, Luis Pinto Ferreira and Francisco Silva	Digital Customer Network Strategy Influences on Hotel Business	Luis Pinto Ferreira
142	Viktor Petrenko, Alla Polyanska, Lesya Verbovska and Galyna Bodnar	A VIEW ON HARMONIZATION OF INTERACTION OF BUSINESS ENTITIES IN CONDITIONS OF CHANGE	Lesya Verbovska
22	Małgorzata Grzelak, Anna Borucka and Patrycja Guzanek	Application of linear regression for evaluation of production processes effectiveness	Małgorzata Grzelak
3	Edward Kozłowski, Dariusz Mazurkiewicz, Jarosław Sępa and Tomasz Żabiński	The use of principal component analysis and logistic regression for cutter state identification	Dariusz Mazurkiewicz
48	Lukasz Sobaszek, Arkadiusz Gola and Antoni Świć	The Algorithms for Robust Scheduling of Production Jobs under Machine Failure and Variable Technological Operation Times	Lukasz Sobaszek
109	Amanda E. Bobsin, Ricardo A. Cassel, Nuno Octávio G. Fernandes and Paulo Jorge D. Torres	Improvements in ELVs Components Locating Process in a Dismantling Company	Amanda E. Bobsin
192	Damian Grajewski, Filip Górski and Paweł Buń	Assessment of Mixed-Reality devices for production engineering	Paweł Buń
184	Jéssica Sá, Luís Pinto Ferreira, Teresa Dieguez, José Carlos Sá and Francisco Silva	Industry 4.0 in the Wine Sector – Development of a decision support system based on simulation models	Luis Pinto Ferreira
98	Nelson Oliveira, Hélder Carvalho and Joana Cunha	Collaborative Mass Customization of Footwear: conceptualization of a three-stage holistic model	Nelson Oliveira / Joana Cunha
125	Regis Puppim and Cristina Broega	An innovative textile product proposal based on Sustain-ability: Recycling wastes from the Wool Industry	Regis Puppim / Cristina Broega
201	João Veiga, Carlos Ventura and João Pedro Mendonça	Stapler anvil groove profile optimization	João Veiga

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## NORMAL POSTER PRESENTATIONS "HYBRID"

Session: PT4	Poster session 4 June 30th, 00:30 p.m. - 01:00 p.m.	Chairs: Alejandro Pereira, University of Vigo, ES Eurico Seabra, University of Minho, PT	
#Paper	Authors	Title	Presenter
129	Gheorghe Gheorghe, Badea Sorin Ionut, Despa Veronica and Ilie Iulian	Is Romania Ready for the Development of Smart Industry (4.0)?	Gheorghe Gheorghe
209	Lauriston Medeiros Paixão, Misael Elias de Morais, Frederico Moreira Bublitz, Karolina Celi Tavares Bezerra and Carlúcia Ithamar Fernandes Franco	The use of smart insoles for gait analysis: a systematic review	Misael Elias de Morais
180	Rita Pereira, Amanda Carvalho, Vania Costa, Joel Galvão and Ana Matos	The damping system in crutches: development of new model.	Joel Galvão / Rita Pereira
54	Arminda Pata, José Carlos Sá, Gilbero Santos, Francisco J. G. Silva, Luís P. Ferreira and Luís Barreto	Mathematical model to monitor exposure of people to occupational risk in manual assembly processes	José Carlos Sá
74	Nuno Peixinho and Pedro Resende	Simulation of crashworthiness performance of thin-walled structures with adapted trigger design	Nuno Peixinho
28	Alejandro Pereira, Teresa Prado Cerqueira, Maria Fenollera, Michal Wieczorowski and Thomas G. Thomas	Study of thermostable polyurethane material produced by Robotic Milling Machining.	Alejandro Pereira
75	Bárbara Silva, Ana Rita Amorim, Valdemar Leiras, Eurico Seabra, Luís F. Silva, Ana Cristina Braga and Rui Viana	Performance evaluation of the BioBall device for wrist rehabilitation in adults and young adults	Eurico Seabra
210	Luis Freitas, Rui Oliveira, Teresa Malheiro, A. Manuela Gonçalves, José Vicente, Paula Monteiro and Pedro Ribeiro	Conceptual Design of a Positioning System for Systematic Production of Needle Beds	Luis Freitas
160	Filipe Pereira, Filomena Soares, Vítor Carvalho and Rosa Vasconcelos	A review in the use of artificial intelligence in textile industry	Filomena Soares / Filipe Pereira
133	Gheorghe Gheorghe, Badea Sorin-Ionut, Despa Veronica and Ilie Iulian	Original constructive solutions for the Development of Industry 4.0 in Romania	Gheorghe Gheorghe
177	Marco Ferreira, Miguel Rodrigues and Caetano Monteiro	Automatic Warehouse for Workshop Tools	Caetano Monteiro
136	Helena Lopes, Susana P. Silva and José Machado	Modelling of thermal properties and temperature evolution of cork composites during moulding process: model development	Helena Lopes
53	Arminda Pata, José Carlos Sá, Francisco José Gomes Silva, Gilberto Santos, Luís Barreto and Luís Carlos Pinto Ferreira	Conceptual model of production engineers' actions to monitor workers' exposure to occupational risks	José Carlos Sá

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## INDUSTRY AFTERNOON

Session Industry	<b>June 30th, 02:45 p.m. - 04:30 p.m.</b>	
4 R&D Projects	<b>Chairs:</b> Raúl Figueiro, University of Minho, PT Margarida Gonçalves, New University of Lisbon, PT	
	Title	Presenter
A ELÉCTRICA, LDA	A Eléctrica presents Torr4Bio	Carlos Correia
CONTROLAR	Machines of the Future on the Factory Floor	Pedro Vieira
BOSCH	Pick & Placement Improvement	Luís Silva
H2020 ICT	Zero Defects Manufacturing Platform	Ricardo Gonçalves