Jose Barata

List of Publications by Year in Descending Order

216 papers	1,889 citations	21 h-index	33 g-index
242 ext. papers	2,305 ext. citations	2.2 avg, IF	5.23 L-index

#	Paper	IF	Citations
216	Open Innovation Association with Feeling Economy. *IFIP Advances in Information and Communication Technology*, **2022**, 26-34	0.5	
215	Asynchronous Communication Between Modular Cyber-Physical Production Systems and Arduino Based Industrial Controllers. *IFIP Advances in Information and Communication Technology*, **2022**, 53-61	0.5	
214	Feeling Smart Industry **2021**,		1
213	Application of a Simulation-Based Digital Twin for Predicting Distributed Manufacturing Control System Performance. *Applied Sciences (Switzerland)*, **2021**, 11, 2202	2.6	6
212	Smart Manufacturing Scheduling Approaches Systematic Review and Future Directions. *Applied Sciences (Switzerland)*, **2021**, 11, 2186	2.6	5
211	Characterising the Agriculture 4.0 Landscape Emerging Trends, Challenges and Opportunities. *Agronomy*, **2021**, 11, 667	3.6	21
210	Event-Driven Interoperable Manufacturing Ecosystem for Energy Consumption Monitoring. *Energies*, **2021**, 14, 3620	3.1	3
209	Characteristics of Adaptable Control of Production Systems and the Role of Self-organization Towards Smart Manufacturing. *IFIP Advances in Information and Communication Technology*, **2021**, 39-50	0.5	0
208	Simulation-Based Data Augmentation for the Quality Inspection of Structural Adhesive With Deep Learning. *IEEE Access*, **2021**, 1-1	3.5	5
207	Integration of Cutting-Edge Interoperability Approaches in Cyber-Physical Production Systems and Industry 4.0. *Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series*, **2021**, 144-172	0.4	3
206	Predictive Manufacturing: Enabling Technologies, Frameworks and Applications. *IFIP Advances in Information and Communication Technology*, **2021**, 51-61	0.5	1
205	Mapping Industry 4.0 Enabling Technologies into United Nations Sustainability Development Goals. *Sustainability*, **2021**, 13, 2560	3.6	21
204	Generative Adversarial Networks for Data Augmentation in Structural Adhesive Inspection. *Applied Sciences (Switzerland)*, **2021**, 11, 3086	2.6	2
203	Digital twin-based optimiser for self-organised collaborative cyber-physical production systems. *Manufacturing Letters*, **2021**, 29, 79-83	4.5	1
202	Cloud Based Decision Making for Multi-agent Production Systems. *Lecture Notes in Computer Science*, **2021**, 673-686	0.9	2
201	A DIN Spec 91345 RAMI 4.0 Compliant Data Pipelining Model: An Approach to Support Data Understanding and Data Acquisition in Smart Manufacturing Environments. *IEEE Access*, **2020**, 8, 223114-223129	3.5	5
200	Industrial Artificial Intelligence in Industry 4.0 - Systematic Review, Challenges and Outlook. *IEEE Access*, **2020**, 8, 220121-220139	3.5	55

199	Semantic Navigation Mapping from Aerial Multispectral Imagery **2019**,		5
198	Autonomous 3-D Aerial Navigation System for Precision Agriculture **2019**,		1
197	A Markov Process-Based Approach for Reliability Evaluation of the Propulsion System in Multi-rotor Drones. *IFIP Advances in Information and Communication Technology*, **2019**, 91-98	0.5	4
196	Production Scheduling Requirements to Smart Manufacturing. *IFIP Advances in Information and Communication Technology*, **2019**, 227-237	0.5	1
195	Digital transformation of manufacturing through cloud services and resource virtualization. *Computers in Industry*, **2019**, 108, 150-162	11.6	75
194	Production and Maintenance Scheduling Supported by Genetic Algorithms. *IFIP Advances in Information and Communication Technology*, **2019**, 49-59	0.5	0
193	A Potential Field Load Scheduling Approach for Self-Sustainable Electrical Microgrids **2019**,		3
192	Multistage Quality Control Using Machine Learning in the Automotive Industry. *IEEE Access*, **2019**, 7, 79908-79916	3.5	40
191	Computational Creativity to Design Cyber-Physical Systems in Industry 4.0. *IFIP Advances in Information and Communication Technology*, **2019**, 29-40	0.5	4
190	NOVAAS: A Reference Implementation of Industrie4.0 Asset Administration Shell with best-of-breed practices from IT engineering **2019**,		6
189	Agent-based Plug and Produce Cyber-Physical Production System Test Case **2019**,		6
188	Artificial immune systems based multi-agent architecture to perform distributed diagnosis. *Journal of Intelligent Manufacturing*, **2019**, 30, 2025-2037	6.7	9
187	Human-Aware Navigation for Autonomous Mobile Robots for Intra-factory Logistics. *Lecture Notes in Computer Science*, **2018**, 79-85	0.9	2
186	IDARTS Towards intelligent data analysis and real-time supervision for industry 4.0. *Computers in Industry*, **2018**, 101, 138-146	11.6	71
185	Vision-based UAV detection and tracking using motion signatures **2018**,		6
184	Improvement of Multistage Quality Control through the Integration of Decision Modeling and Cyber-Physical Production Systems **2018**,		3
183	Continuous Reinforcement Operator applied to Resilience in Disaster Rescue Networks **2018**,		1
182	GO0DMAN Data Model - Interoperability in Multistage Zero Defect Manufacturing **2018**,		7

181	Towards a Framework for Interoperable and Interconnected CPS-populated Systems for Proactive Maintenance **2018**,		1
180	Resilience Supported System for Innovative Water Monitoring Technology. *IFIP Advances in Information and Communication Technology*, **2018**, 73-80	0.5	
179	A Highly Flexible, Distributed Data Analysis Framework for Industry 4.0 Manufacturing Systems. *Studies in Computational Intelligence*, **2017**, 373-381	0.8	8
178	Data Mining of Energy Consumption in Manufacturing Environment. *Studies in Computational Intelligence*, **2017**, 157-166	0.8	
177	Environment to Simulate Distributed Agent Based Manufacturing Systems. *Studies in Computational Intelligence*, **2017**, 405-416	0.8	3
176	Dynamic Simulation for MAS-Based Data Acquisition and Pre-processing in Manufacturing Using V-REP. *IFIP Advances in Information and Communication Technology*, **2017**, 125-134	0.5	1
175	Approach to Adapt a Legacy Manufacturing System Into the IoT Paradigm. *International Journal of Interactive Mobile Technologies*, **2017**, 11, 91	1.1	8
174	Prediction Models for Short-Term Load and Production Forecasting in Smart Electrical Grids. *Lecture Notes in Computer Science*, **2017**, 186-199	0.9	2
173	A multi-agent framework for capability-based reconfiguration of industrial assembly systems. *International Journal of Production Research*, **2017**, 55, 2950-2960	7.8	17
172	**2017**,		2
171	Loosed coupled simulation of smart grid control systems **2017**,		1
170	Orchestrating loosely coupled and distributed components for product/process servitization **2017**,		1
169	Holistic Context-Sensitivity for Run-Time Optimization of Flexible Manufacturing Systems. *Sensors*, **2017**, 17,	3.8	16
168	Formal Specification of a Self-sustainable Holonic System for Smart Electrical Micro-grids. *Studies in Computational Intelligence*, **2017**, 179-190	0.8	2
167	Big Data Analysis to Ease Interconnectivity in Industry 4.0 A Smart Factory Perspective. *Studies in Computational Intelligence*, **2017**, 237-245	0.8	4
166	An Evolvable and Adaptable Agent Based Smart Grid Management A Simulation Environment. *Studies in Computational Intelligence*, **2017**, 417-426	0.8	1
165	Sign Language Support Adding a Gesture Library to the Leap Motion SDK. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2017**, 109-116	0.2	
164	Improving the Learning of Child Movements Through Games. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2017**, 15-22	0.2	

163	Using Games for the Phonetics Awareness of Children with Down Syndrome. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2017**, 1-8	0.2	
162	Semantic Model to Perform Pluggability of Heterogeneous Smart Devices into Smart City Environment. *Studies in Computational Intelligence*, **2017**, 327-335	0.8	
161	A Generic Reconfigurable and Pluggable Material Handling System Based on Genetic Algorithm. *Studies in Computational Intelligence*, **2017**, 103-113	0.8	
160	Collaborative Data Mining for Intelligent Home Appliances. *IFIP Advances in Information and Communication Technology*, **2016**, 313-323	0.5	10
159	Context Awareness for Flexible Manufacturing Systems Using Cyber Physical Approaches. *IFIP Advances in Information and Communication Technology*, **2016**, 107-115	0.5	11
158	An Approach for Implementing ISA 95-Compliant Big Data Observation, Analysis and Diagnosis Features in Industry 4.0 Vision Following Manufacturing Systems. *IFIP Advances in Information and Communication Technology*, **2016**, 116-123	0.5	1
157	An Aerial-Ground Robotic Team for Systematic Soil and Biota Sampling in Estuarine Mudflats. *Advances in Intelligent Systems and Computing*, **2016**, 15-26	0.4	3
156	A Platform to Support the Product Servitization. *International Journal of Advanced Computer Science and Applications*, **2016**, 7,	1.7	3
155	Games Social Tech Booster *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2016**, 119-126	0.2	3
154	Laser-Based Obstacle Detection at Railway Level Crossings. *Journal of Sensors*, **2016**, 2016, 1-11	2	10
153	Sediment Sampling in Estuarine Mudflats with an Aerial-Ground Robotic Team. *Sensors*, **2016**, 16,	3.8	8
152	Layout validation and re-configuration in Plug&Produce systems. *Assembly Automation*, **2016**, 36, 412-428	1.1	1
151	On the design of the ROBO-PARTNER Intra-factory logistics autonomous robot **2016**,		4
150	A cooperative multi-robot team for the surveillance of shipwreck survivors at sea **2016**,		15
149	Selection of a data exchange format for industry 4.0 manufacturing systems **2016**,		9
148	Functionalities of multi-agent systems in Programmable Logic Controllers. *IFAC-PapersOnLine*, **2016**, 49, 60-64	0.7	
147	Gaze-directed telemetry in high latency wireless communications: The case of robot teleoperation **2016**,		3
146	Specification of the PERFoRM architecture for the seamless production system reconfiguration **2016**,		17

145 Summer school on intelligent agents in automation: Hands-on educational experience on deploying industrial agents **2016**,   5

144 On Exploiting Haptic Cues for Self-Supervised Learning of Depth-Based Robot Navigation Affordances. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2015**, 80, 455-474   2.9   6

143 The Adapter module: A building block for Self-Learning Production Systems. *Robotics and Computer-Integrated Manufacturing*, **2015**, 36, 25-35   9.2   10

142 PRIME as a Generic Agent Based Framework to Support Pluggability and Reconfigurability Using Different Technologies. *IFIP Advances in Information and Communication Technology*, **2015**, 101-110   0.5   3

141 Industrial Agents for the Fast Deployment of Evolvable Assembly Systems **2015**, 301-322   11

140 Water detection from downwash-induced optical flow for a multirotor UAV **2015**,   2

139 An open-source watertight unmanned aerial vehicle for water quality monitoring **2015**,   8

138 The Migration from Conventional Manufacturing Systems for Multi-Agent Paradigm: the First Step. *IFIP Advances in Information and Communication Technology*, **2015**, 111-118   0.5   3

137 A multiagent based knowledge extraction framework to support plug and produce capabilities in manufacturing monitoring systems **2015**,   3

136 A Health and Usage Monitoring System for ROS-based service robots **2015**,   1

135 A critical survey on marsupial robotic teams for environmental monitoring of water bodies **2015**,   2

134 Hand Gesture Recognition towards Enhancing Accessibility. *Procedia Computer Science*, **2015**, 67, 419-429   1.6   5

133 An agent based monitoring architecture for plug and produce based manufacturing systems **2015**,   14

132 Towards a Capability-based Framework for Reconfiguring Industrial Production Systems. *IFAC-PapersOnLine*, **2015**, 48, 2077-2082   0.7   7

131 Collaborative routing of products using a self-organizing mechatronic agent framework—A simulation study. *Computers in Industry*, **2015**, 68, 27-39   11.6   21

130 A Cloud-Based Infrastructure to Support Manufacturing Resources Composition. *IFIP Advances in Information and Communication Technology*, **2015**, 82-89   0.5   2

129 A Framework for Evaluation of Resilience of Disaster Rescue Networks. *IFIP Advances in Information and Communication Technology*, **2015**, 146-158   0.5   5

128 Context Classifier for Service Robots. *IFIP Advances in Information and Communication Technology*, **2015**, 196-203   0.5   1

127	Exploring reconfiguration alternatives in self-organising evolvable production systems through simulation **2014**,		4
126	Self-supervised learning of depth-based navigation affordances from haptic cues **2014**,		3
125	A Vision-Based Approach to Fire Detection. *International Journal of Advanced Robotic Systems*, **2014**, 11, 149	1.4	19
124	An autonomous surface-aerial marsupial robotic team for riverine environmental monitoring: Benefiting from coordinated aerial, underwater, and surface level perception **2014**,		13
123	Saliency-based cooperative landing of a multirotor aerial vehicle on an autonomous surface vehicle **2014**,		3
122	A volumetric representation for obstacle detection in vegetated terrain **2014**,		1
121	An agent based framework to support plug and produce **2014**,		24
120	Performance Assessment in Self-organising Mechatronic Systems: A First Step towards Understanding the Topology Influence in Complex Behaviours. *IFIP Advances in Information and Communication Technology*, **2014**, 75-84	0.5	1
119	**2014**,		6
118	The impact of cloud manufacturing on supply chain agility **2014**,		5
117	Challenges and Properties for Bio-inspiration in Manufacturing. *IFIP Advances in Information and Communication Technology*, **2014**, 139-148	0.5	5
116	On the Design of a Robotic System Composed of an Unmanned Surface Vehicle and a Piggybacked VTOL. *IFIP Advances in Information and Communication Technology*, **2014**, 193-200	0.5	13
115	The Distributed Generation as an Important Contribution to Energy Development in Angola and Other Developing African Countries. *IFIP Advances in Information and Communication Technology*, **2014**, 269-276	0.5	1
114	The ProFlex Methodology: Agile Manufacturing in Practice. *IFIP Advances in Information and Communication Technology*, **2014**, 149-156	0.5	
113	A Multi Agent Architecture to Support Self-organizing Material Handling. *IFIP Advances in Information and Communication Technology*, **2014**, 93-100	0.5	1
112	Tracking natural trails with swarm-based visual saliency. *Journal of Field Robotics*, **2013**, 30, 64-86	6.7	22
111	Neural-swarm visual saliency for path following. *Applied Soft Computing Journal*, **2013**, 13, 3021-3032	7.5	4
110	Online self-reconfigurable robot navigation in heterogeneous environments **2013**,		4

109	Self-organizing multiagent mechatronic systems in perspective **2013**,		4
108	Enhancing device exchange agility in Service-oriented industrial automation **2013**,		4
107	Context Awareness for Self-adaptive and Highly Available Production Systems. *IFIP Advances in Information and Communication Technology*, **2013**, 210-217	0.5	4
106	Control System Software Design Methodology for Automotive Industry **2013**,		1
105	Energy Efficiency in Machine Tools - A Self-Learning Approach **2013**,		2
104	Reliable Self-Learning Production Systems Based on Context Aware Services **2013**,		6
103	Multiagent Mechatronic Systems with Simulation on the Loop **2013**,		2
102	Bio-inspired self-organised mechatronic-agent interactions to support product emergence **2013**,		1
101	Prospection of Methods to Support Design and Configuration of Self-Organizing Mechatronic Systems **2013**,		1
100	Kelpie: A ROS-Based Multi-robot Simulator for Water Surface and Aerial Vehicles **2013**,		6
99	Self-Learning Production Systems (SLPS) Energy management application for machine tools **2013**,		3
98	Self-Learning Production Systems (SLPS) - Optimization of manufacturing process parameters for the shoe industry **2013**,		3
97	Self-Learning approach to support lifecycle optimization of Manufacturing processes **2013**,		2
96	A study of JADE's messaging RTT performance using distinct message exchange patterns **2013**,		2
95	Bio-inspired Self-Organising Methodologies for Production Emergence **2013**,		1
94	Self-Learning Production Systems: Adapter Reference Architecture. *Lecture Notes in Mechanical Engineering*, **2013**, 681-693	0.4	1
93	On Collaborative Aerial and Surface Robots for Environmental Monitoring of Water Bodies. *IFIP Advances in Information and Communication Technology*, **2013**, 183-191	0.5	3
92	Deployment of Multiagent Mechatronic Systems. *Lecture Notes in Computer Science*, **2013**, 71-82	0.9	5

91	A vision-based system for early fire detection **2012**,		10
90	Service-oriented infrastructure at device level to implement agile factories **2012**,		2
89	ARES-III: A versatile multi-purpose all-terrain robot **2012**,		2
88	IMS 10Validation of a co-evolving diagnostic algorithm for evolvable production systems. *Engineering Applications of Artificial Intelligence*, **2012**, 25, 1142-1160	7.2	2
87	Water detection with segmentation guided dynamic texture recognition **2012**,		13
86	Visualization tool to support multi-agent mechatronic based systems **2012**,		3
85	A product handling technical architecture for multiagent-based mechatronic systems **2012**,		1
84	A structural analysis of emerging production systems **2012**,		4
83	Context extraction for self-learning production systems **2012**,		13
82	The IDEAS project: plug & produce at shop-floor level. *Assembly Automation*, **2012**, 32, 124-134	2.1	77
81	A Symbiotic Lenticular Airship for WiSAR Missions. *Lecture Notes in Computer Science*, **2012**, 475-483	0.9	0
80	Adapter for Self-Learning Production Systems. *International Federation for Information Processing*, **2012**, 171-178		2
79	High Maneuverability Lenticular Airship. *International Federation for Information Processing*, **2012**, 207-216		
78	Service-Oriented Infrastructure to Support the Deployment of Evolvable Production Systems. *IEEE Transactions on Industrial Informatics*, **2011**, 7, 759-767	11.9	99
77	Re-thinking diagnosis for future automation systems: An analysis of current diagnostic practices and their applicability in emerging IT based production paradigms. *Computers in Industry*, **2011**, 62, 639-659	11.6	45
76	Stereo-based all-terrain obstacle detection using visual saliency. *Journal of Field Robotics*, **2011**, 28, 241-263		16
75	A standard-based software infrastructure to support energy efficiency using renewable energy sources **2011**,		6
74	Self-learning embedded services for integration of complex, flexible production systems **2011**,		15

73	Where evolvable production systems meet complexity science **2011**,	5
72	Self-organization in automation - the IDEAS pre-demonstrator **2011**,	15
71	Service oriented computing to Self-Learning production system **2011**,	5
70	IT support of mechatronic networks: A brief survey **2011**,	5
69	DPWS as Specific Communication Service Mapping for IEC 61850 **2011**,	6
68	Context and implications of learning in Evolvable Production Systems **2011**,	1
67	Diagnosis in Networks of Mechatronic Agents: Validation of a Fault Propagation Model and Performance Assessment. *International Federation for Information Processing*, **2011**, 205-214	1
66	Service-oriented Architecture at device level to support Evolvable Production Systems **2010**,	2
65	A saliency-based approach to boost trail detection **2010**,	4
64	An agent-based interaction-oriented shop floor to support emergent diagnosis **2010**,	10
63	Emergent diagnosis for Evolvable Production Systems **2010**,	4
62	A saliency-based solution for robust off-road obstacle detection **2010**,	6
61	Swarm-based visual saliency for trail detection **2010**,	10
60	Implementing self-organisation and self-management in evolvable assembly systems **2010**,	7
59	Evolvable Production Systems: New domains within mechatronic production equipment **2010**,	13
58	Global Vs Local: A Comparison of Two Approaches to Perform Diagnosis in Networks of Mechatronic Agents **2010**,	1
57	Semantic SOA approach to support agile reengineering at device level. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 156-161	
56	Outlook report on the future of European assembly automation. *Assembly Automation*, **2010**, 30, 7-31	2.1	18

37	MAS and SOA: A Case Study Exploring Principles and Technologies to Support Self-Properties in Assembly Systems **2008**,		12
36	An architecture for a fault tolerant highly reconfigurable shop floor **2008**,		5
35	A generic communication interface for DPWS-based web services **2008**,		16
34	Shared control of a pan-tilt camera on an all-terrain mobile robot **2008**,		1
33	Cross-country obstacle detection: Space-variant resolution and outliers removal **2008**,		9
32	OWL Ontology to Support Evolvable Assembly Systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 290-295		6
31	A multiagent-based control system applied to an educational shop floor. *Robotics and Computer-Integrated Manufacturing*, **2008**, 24, 597-605	9.2	29
30	The Ares Robot: Case Study of an Affordable Service Robot **2008**, 33-42		5
29	Evolvable Assembly Systems: From Evaluation to Application **2008**, 205-214		5
28	MAS and SOA: Complementary Automation Paradigms **2008**, 259-268		40
27	**2007**,		14
26	Evolvable Assembly Systems: Towards User Friendly Manufacturing **2007**,		7
25	Diagnosis on Evolvable Production Systems **2007**,		13
24	Sustainable Robots for Humanitarian Demining. *International Journal of Advanced Robotic Systems*, **2007**, 4, 23	1.4	11
23	A MULTIAGENT BASED CONTROL SYSTEM FOR AN ASSEMBLY CELL. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 116-121		
22	Diagnosis using Service Oriented Architectures (SOA) **2007**,		16
21	A Multiagent Control System for Shop Floor Assembly. *Lecture Notes in Computer Science*, **2007**, 293-302	0.9	30
20	A Motion Controller for Compliant Four-Wheel-Steering Robots **2006**,		5

19	Evolvable Assembly and Exploiting Emergent Behaviour **2006**,		4
18	Evolvable Assembly Systems - On the role of design frameworks and supporting ontologies **2006**,		11
17	A Multiagent Based Control System Applied to an Educational Shop Floor **2006**, 119-128		6
16	Evolvable Assembly Systems Basic Principles **2006**, 317-328		29
15	Multiagents Applied to Humanitarian Demining. *Lecture Notes in Computer Science*, **2005**, 649-652	0.9	1
14	Emerging Collaborative Forms **2004**, 41-64		2
13	A Methodology for Shop Floor Reengineering Based on Multiagents **2004**, 117-128		1
12	Coalitions of manufacturing components for shop floor agility - the CoBASA architecture. *International Journal of Networking and Virtual Organisations*, **2003**, 2, 50	0.4	58
11	Contract Management in Agile Manufacturing Systems. *IFIP Advances in Information and Communication Technology*, **2002**, 109-122	0.5	2
10	Contract-Based Approach For Shop-Floor Re-Engineering. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2001**, 34, 132-139		
9	Trends in Agile and Co-Operative Manufacturing. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2001**, 34, 140-149		6
8	Shop Floor Reengineering to Support Agility in Virtual Enterprise Environments. *IFIP Advances in Information and Communication Technology*, **2001**, 381-394	0.5	
7	Precision X-Y robotic object handling using a dual GMR bridge sensor. *IEEE Transactions on Magnetics*, **2000**, 36, 2782-2784	2	5
6	Integration and learning in supervision of flexible assembly systems. *IEEE Transactions on Automation Science and Engineering*, **1996**, 12, 202-219		23
5	Towards a taxonomy of CIM activities. *International Journal of Computer Integrated Manufacturing*, **1995**, 8, 160-176	4.3	9
4	An architecture development approach for evolvable assembly systems		18
3	A multiagent based control approach for evolvable assembly systems		18
2	European assembly: opportunities or threats?		4