

Jan Bosch

List of Publications by Year in descending order

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Version: 2024-02-01

168
papers

5,274
citations

147726

31
h-index

133188

59
g-index

173
all docs

173
docs citations

173
times ranked

2282
citing authors

#	ARTICLE	IF	CITATIONS
1	The HURRIER process for experimentation in businessâ€”business missionâ€”critical systems. Journal of Software: Evolution and Process, 2023, 35, .	1.2	1
2	Towards an AIâ€”driven business development framework: A multiâ€”case study. Journal of Software: Evolution and Process, 2023, 35, .	1.2	4
3	The use of incentives to promote technical debt management. Information and Software Technology, 2022, 142, 106740.	3.0	6
4	On Autonomous Dynamic Software Ecosystems. IEEE Transactions on Engineering Management, 2022, 69, 3633-3647.	2.4	7
5	Breaking the vicious circle: A case study on why AI for software analytics and business intelligence does not take off in practice. Journal of Systems and Software, 2022, 184, 111135.	3.3	5
6	Data management for production quality deep learning models: Challenges and solutions. Journal of Systems and Software, 2022, 191, 111359.	3.3	17
7	Controlled Continuous Deployment: A Case Study From The Telecommunications Domain. , 2022, , .		2
8	Pattern Recognition Method for Detecting Engineering Errors on Technical Drawings. , 2022, , .		3
9	Fast and curious: A model for building efficient monitoring- and decision-making frameworks based on quantitative data. Information and Software Technology, 2021, 132, 106458.	3.0	6
10	Autonomously Improving Systems in Industry: A Systematic Literature Review. Lecture Notes in Business Information Processing, 2021, , 30-45.	0.8	0
11	Digital for real: A multicase study on the digital transformation of companies in the embedded systems domain. Journal of Software: Evolution and Process, 2021, 33, e2333.	1.2	15
12	Efficient and effective exploratory testing of large-scale software systems. Journal of Systems and Software, 2021, 174, 110890.	3.3	7
13	On the Experiences of Adopting Automated Data Validation in an Industrial Machine Learning Project. , 2021, , .		10
14	An Empirical Evaluation of Algorithms for Data Labeling. , 2021, , .		0
15	An architecture for enabling A/B experiments in automotive embedded software. , 2021, , .		1
16	Engineering AI Systems. Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series, 2021, , 1-19.	0.5	59
17	Engineering Federated Learning Systems: A Literature Review. Lecture Notes in Business Information Processing, 2021, , 210-218.	0.8	2
18	Architecting AI Deployment: A Systematic Review of State-of-the-Art and State-of-Practice Literature. Lecture Notes in Business Information Processing, 2021, , 14-29.	0.8	4

#	ARTICLE	IF	CITATIONS
19	Towards MLOps: A Framework and Maturity Model. , 2021, , .		38
20	Size matters? Or not: A/B testing with limited sample in automotive embedded software. , 2021, , .		6
21	The MaLET Model â€” Maturity Levels for Exploratory Testing. , 2021, , .		1
22	Bayesian propensity score matching in automotive embedded software engineering. , 2021, , .		1
23	Going digital: Disruption and transformation in softwareâ€™intensive embedded systems ecosystems. Journal of Software: Evolution and Process, 2020, 32, e2249.	1.2	15
24	Software Logs for Machine Learning in a DevOps Environment. , 2020, , .		3
25	Breaking the Vicious Circle: Why AI for software analytics and business intelligence does not take off in practice. , 2020, , .		7
26	AI on the Edge: Architectural Alternatives. , 2020, , .		22
27	LegacyPro—A DNA-Inspired Method for Identifying Process Legacies in Software Development Organizations. IEEE Software, 2020, 37, 76-85.	2.1	1
28	Large-scale machine learning systems in real-world industrial settings: A review of challenges and solutions. Information and Software Technology, 2020, 127, 106368.	3.0	68
29	The influence of Technical Debt on software developer morale. Journal of Systems and Software, 2020, 167, 110586.	3.3	19
30	Data Labeling: An Empirical Investigation into Industrial Challenges and Mitigation Strategies. Lecture Notes in Computer Science, 2020, , 202-216.	1.0	24
31	Developing ML/DL Models. , 2020, , .		24
32	Experimentation for Business-to-Business Mission-Critical Systems. , 2020, , .		3
33	From Ad-Hoc Data Analytics to DataOps. , 2020, , .		38
34	DevOps for AI â€” Challenges in Development of AI-enabled Applications. , 2020, , .		19
35	The Five Purposes of Value Modeling. , 2020, , .		0
36	AI Deployment Architecture: Multi-Case Study for Key Factor Identification. , 2020, , .		2

#	ARTICLE	IF	CITATIONS
37	Principles for Re-architecting Software for Heterogeneous Platforms. , 2020, , .		0
38	Machine Learning Models for Automatic Labeling: A Systematic Literature Review. , 2020, , .		4
39	Towards a Digital Business Operating System. , 2019, , .		2
40	Technical Debt Triage in Backlog Management. , 2019, , .		10
41	Multi-armed bandits in the wild: Pitfalls and strategies in online experiments. Information and Software Technology, 2019, 113, 68-81.	3.0	13
42	Software developer productivity loss due to technical debtâ€™A replication and extension study examining developersâ€™ development work. Journal of Systems and Software, 2019, 156, 41-61.	3.3	32
43	Scaling Agile Beyond Organizational Boundaries: Coordination Challenges in Software Ecosystems. Lecture Notes in Business Information Processing, 2019, , 189-206.	0.8	3
44	A Taxonomy of Software Engineering Challenges for Machine Learning Systems: An Empirical Investigation. Lecture Notes in Business Information Processing, 2019, , 227-243.	0.8	112
45	Test activities in the continuous integration and delivery pipeline. Journal of Software: Evolution and Process, 2019, 31, e2153.	1.2	8
46	How Regulations of Safety-Critical Software Affect Technical Debt. , 2019, , .		1
47	Software Challenges in Heterogeneous Computing: A Multiple Case Study in Industry. , 2019, , .		3
48	Automated Optimization of Software Parameters in a Long Term Evolution Radio Base Station. , 2019, , .		2
49	Data Management Challenges for Deep Learning. , 2019, , .		53
50	Business as Unusual: A Model for Continuous Real-Time Business Insights Based on Low Level Metrics. , 2019, , .		6
51	Introduction to the special issue on software engineering in practice. Software - Practice and Experience, 2019, 49, 151-152.	2.5	2
52	ACE: Easy Deployment of Field Optimization Experiments. Lecture Notes in Computer Science, 2019, , 264-279.	1.0	2
53	Data Driven Development: Challenges in Online, Embedded and On-Premise Software. Lecture Notes in Computer Science, 2019, , 515-527.	1.0	5
54	Continuous Experimentation for Software Organizations with Low Control of Roadmap and a Large Distance to Users: An Exploratory Case Study. Lecture Notes in Computer Science, 2019, , 528-544.	1.0	2

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55	Excellence in Exploratory Testing: Success Factors in Large-Scale Industry Projects. Lecture Notes in Computer Science, 2019, , 299-314.	1.0	22
56	Leveraging Business Transformation with Machine Learning Experiments. Lecture Notes in Business Information Processing, 2019, , 183-191.	0.8	3
57	From Efficiency to Effectiveness: Delivering Business Value Through Software. Lecture Notes in Business Information Processing, 2019, , 3-10.	0.8	2
58	Continuous Data-driven Software Engineering - Towards a Research Agenda. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2019, 44, 60-64.	0.5	5
59	Technical Debt tracking: Current state of practice. Science of Computer Programming, 2018, 163, 42-61.	1.5	47
60	Towards a new digital business operating system: Speed, data, ecosystems, and empowerment (keynote). , 2018, , .		1
61	Enable more frequent integration of software in industry projects. Journal of Systems and Software, 2018, 142, 223-236.	3.3	26
62	Managing architectural technical debt: A unified model and systematic literature review. Journal of Systems and Software, 2018, 135, 1-16.	3.3	66
63	Cinders. , 2018, , .		0
64	Effective Online Controlled Experiment Analysis at Large Scale. , 2018, , .		10
65	Online Controlled Experimentation at Scale: An Empirical Survey on the Current State of A/B Testing. , 2018, , .		20
66	An Activity and Metric Model for Online Controlled Experiments. Lecture Notes in Computer Science, 2018, , 182-198.	1.0	8
67	Embracing Technical Debt, from a Startup Company Perspective. , 2018, , .		29
68	Singing the Praise of Empowerment: Or Paying the Cost of Chaos. , 2018, , .		2
69	Experimentation growth: Evolving trustworthy A/B testing capabilities in online software companies. Journal of Software: Evolution and Process, 2018, 30, e2113.	1.2	31
70	Software Engineering Challenges of Deep Learning. , 2018, , .		116
71	Ecosystem traps and where to find them. Journal of Software: Evolution and Process, 2018, 30, e1961.	1.2	15
72	Challenges and Strategies for Undertaking Continuous Experimentation to Embedded Systems: Industry and Research Perspectives. Lecture Notes in Business Information Processing, 2018, , 277-292.	0.8	35

#	ARTICLE	IF	CITATIONS
73	Optimization Experiments in the Continuous Space. Lecture Notes in Computer Science, 2018, , 293-308.	1.0	1
74	The continuity of continuous integration: Correlations and consequences. Journal of Systems and Software, 2017, 127, 150-167.	3.3	21
75	From ad hoc to strategic ecosystem management: the "Three-Layer Ecosystem Strategy Model" (TeLESM). Journal of Software: Evolution and Process, 2017, 29, e1876.	1.2	8
76	Continuous Integration Impediments in Large-Scale Industry Projects. , 2017, , .		12
77	Cinders: The continuous integration and delivery architecture framework. Information and Software Technology, 2017, 83, 76-93.	3.0	32
78	The Evolution of Continuous Experimentation in Software Product Development: From Data to a Data-Driven Organization at Scale. , 2017, , .		93
79	Exploratory Testing of Large-Scale Systems " Testing in the Continuous Integration and Delivery Pipeline. Lecture Notes in Computer Science, 2017, , 368-384.	1.0	24
80	Revealing Social Debt with the CAFFEA Framework: An Antidote to Architectural Debt. , 2017, , .		5
81	Achieving traceability in large scale continuous integration and delivery deployment, usage and validation of the eiffel framework. Empirical Software Engineering, 2017, 22, 967-995.	3.0	40
82	Toward Evidence-Based Organizations: Lessons from Embedded Systems, Online Games, and the Internet of Things. IEEE Software, 2017, 34, 60-66.	2.1	10
83	Your System Gets Better Every Day You Use It: Towards Automated Continuous Experimentation. , 2017, , .		14
84	The Benefits of Controlled Experimentation at Scale. , 2017, , .		35
85	Continuous practices and devops: beyond the buzz, what does it all mean?. , 2017, , .		62
86	Looking for Peace of Mind? Manage Your (Technical) Debt: An Exploratory Field Study. , 2017, , .		5
87	Impact of Architectural Technical Debt on Daily Software Development Work " A Survey of Software Practitioners. , 2017, , .		4
88	Industry application of continuous integration modeling. , 2016, , .		32
89	The Introduction of Technical Debt Tracking in Large Companies. , 2016, , .		30
90	A Systematic Literature Review and a Unified Model of ATD. , 2016, , .		34

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91	Architectural Technical Debt in Embedded Systems. IncoSE International Symposium, 2016, 26, 1029-1043.	0.2	6
92	Time to Say 'Good Bye': Feature Lifecycle. , 2016, , .		25
93	The Lack of Sharing of Customer Data in Large Software Organizations: Challenges and Implications. Lecture Notes in Business Information Processing, 2016, , 39-52.	0.8	29
94	Tutorial summary for speed, data and ecosystems: The future of software engineering. , 2016, , .		0
95	A Multiple Case Study of Continuous Architecting in Large Agile Companies: Current Gaps and the CAFFEA Framework. , 2016, , .		29
96	Continuous Integration and Delivery Traceability in Industry: Needs and Practices. , 2016, , .		8
97	Collaborative Innovation: A Model for Selecting the Optimal Ecosystem Innovation Strategy. , 2016, , .		8
98	Towards a multi-criteria decision support method for consumer electronics software ecosystems. Journal of Software: Evolution and Process, 2016, 28, 460-482.	1.2	2
99	Data-driven continuous evolution of smart systems. , 2016, , .		12
100	A multiple case study on the inter-group interaction speed in large, embedded software companies employing agile. Journal of Software: Evolution and Process, 2016, 28, 4-26.	1.2	9
101	Towards DevOps in the Embedded Systems Domain: Why is It So Hard?. , 2016, , .		64
102	Speed, Data, and Ecosystems: The Future of Software Engineering. IEEE Software, 2016, 33, 82-88.	2.1	77
103	Improving usual care after sudden death in the young with focus on inherited cardiac diseases (the) TJ ETQq1 1 0.784314 rgBT/Overl 0,7 29		29
104	Continuous Integration Applied to Software-Intensive Embedded Systems – Problems and Experiences. Lecture Notes in Computer Science, 2016, , 448-457.	1.0	9
105	Architecting to Ensure Requirement Relevance: Keynote TwinPeaks Workshop. , 2015, , .		0
106	Accelerating Change in the Nordic Software Intensive Industry: Keynote Software Engineering Research and Industrial Practice Workshop. , 2015, , .		0
107	Towards Customer-Centric Software Development: A Multiple-Case Study. , 2015, , .		15
108	The Danger of Architectural Technical Debt: Contagious Debt and Vicious Circles. , 2015, , .		65

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109	User Involvement throughout the Innovation Process in High-Tech Industries. Journal of Product Innovation Management, 2015, 32, 793-807.	5.2	114
110	Investigating Architectural Technical Debt accumulation and refactoring over time: A multiple-case study. Information and Software Technology, 2015, 67, 237-253.	3.0	97
111	Customer Feedback and Data Collection Techniques in Software R&D: A Literature Review. Lecture Notes in Business Information Processing, 2015, , 139-153.	0.8	60
112	Plays nice with others? Multiple ecosystems, various roles and divergent engagement models. Technology Analysis and Strategic Management, 2015, 27, 960-974.	2.0	32
113	Strategic Ecosystem Management: A Multi-case Study on Challenges and Strategies for Different Ecosystem Types. , 2015, , .		9
114	Towards Continuous Customer Validation: A Conceptual Model for Combining Qualitative Customer Feedback with Quantitative Customer Observation. Lecture Notes in Business Information Processing, 2015, , 154-166.	0.8	58
115	Towards Agile and Beyond: An Empirical Account on the Challenges Involved When Advancing Software Development Practices. Lecture Notes in Business Information Processing, 2014, , 327-335.	0.8	5
116	Architecture Technical Debt: Understanding Causes and a Qualitative Model. , 2014, , .		55
117	From Opinions to Data-Driven Software R&D: A Multi-case Study on How to Close the 'Open Loop' Problem. , 2014, , .		74
118	Automated software integration flows in industry: a multiple-case study. , 2014, , .		22
119	Architecture Decisions. , 2014, , 113-136.		5
120	Modeling continuous integration practice differences in industry software development. Journal of Systems and Software, 2014, 87, 48-59.	3.3	164
121	An overview of Dynamic Software Product Line architectures and techniques: Observations from research and industry. Journal of Systems and Software, 2014, 91, 3-23.	3.3	139
122	Special issue editorial: Understanding software ecosystems. Information and Software Technology, 2014, 56, 1421-1422.	3.0	4
123	Architecture for embedded open software ecosystems. Journal of Systems and Software, 2014, 92, 128-142.	3.3	36
124	Orchestrate Your Platform: Architectural Challenges for Different Types of Ecosystems for Mobile Devices. Lecture Notes in Business Information Processing, 2014, , 163-178.	0.8	3
125	The HYPEX Model: From Opinions to Data-Driven Software Development. , 2014, , 155-164.		44
126	Role of Architects in Agile Organizations. , 2014, , 39-50.		6

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127	Climbing the "Stairway to Heaven": Evolving From Agile Development to Continuous Deployment of Software. , 2014, , 15-27.		12
128	Archetypical Approaches of Fast Software Development and Slow Embedded Projects. , 2013, , .		3
129	Achieving Simplicity with the Three-Layer Product Model. Computer, 2013, 46, 34-39.	1.2	23
130	Customer-Specific Teams for Agile Evolution of Large-Scale Embedded Systems. , 2013, , .		7
131	Social Networking Meets Software Development: Perspectives from GitHub, MSDN, Stack Exchange, and TopCoder. IEEE Software, 2013, 30, 52-66.	2.1	157
132	Bridging Software Communities through Social Networking. IEEE Software, 2013, 30, 26-28.	2.1	11
133	Improving Businesses Success by Managing Interactions among Agile Teams in Large Organizations. Lecture Notes in Business Information Processing, 2013, , 60-72.	0.8	7
134	Experienced Benefits of Continuous Integration in Industry Software Product Development: A Case Study. , 2013, , .		27
135	Climbing the "Stairway to Heaven"; -- A Multiple-Case Study Exploring Barriers in the Transition from Agile Development towards Continuous Deployment of Software. , 2012, , .		151
136	Dynamic Variability in Software-Intensive Embedded System Families. Computer, 2012, 45, 28-35.	1.2	37
137	Building Products as Innovation Experiment Systems. Lecture Notes in Business Information Processing, 2012, , 27-39.	0.8	86
138	The changing industry structure of software development for consumer electronics and its consequences for software architectures. Journal of Systems and Software, 2012, 85, 178-192.	3.3	15
139	Software ecosystems: Taking software development beyond the boundaries of the organization. Journal of Systems and Software, 2012, 85, 1453-1454.	3.3	26
140	Eternal Embedded Software: Towards Innovation Experiment Systems. Lecture Notes in Computer Science, 2012, , 19-31.	1.0	50
141	Achieving Speed in Legacy Systems. , 2011, , .		0
142	Software Ecosystems -- Implications for Strategy, Business Model and Architecture. , 2011, , .		5
143	The Promise and Challenge of Runtime Variability. Computer, 2011, 44, 93-95.	1.2	24
144	Introducing agile customer-centered development in a legacy software product line. Software - Practice and Experience, 2011, 41, 871-882.	2.5	30

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145	From integration to composition: On the impact of software product lines, global development and ecosystems. <i>Journal of Systems and Software</i> , 2010, 83, 67-76.	3.3	194
146	Toward Compositional Software Product Lines. <i>IEEE Software</i> , 2010, 27, 29-34.	2.1	22
147	Coordination Between Global Agile Teams: From Process to Architecture. , 2010, , 217-233.		8
148	Variability assessment in software product families. <i>Information and Software Technology</i> , 2009, 51, 195-218.	3.0	28
149	Documenting after the fact: Recovering architectural design decisions. <i>Journal of Systems and Software</i> , 2008, 81, 536-557.	3.3	79
150	Service Orientation in the Enterprise. <i>Computer</i> , 2007, 40, 51-56.	1.2	12
151	Bridging patterns: An approach to bridge gaps between SE and HCI. <i>Information and Software Technology</i> , 2006, 48, 69-89.	3.0	54
152	Product derivation in software product families: a case study. <i>Journal of Systems and Software</i> , 2005, 74, 173-194.	3.3	168
153	A taxonomy of variability realization techniques. <i>Software - Practice and Experience</i> , 2005, 35, 705-754.	2.5	240
154	Software variability: process and management. <i>Software Process Improvement and Practice</i> , 2005, 10, 3-5.	1.1	0
155	Staged adoption of software product families. <i>Software Process Improvement and Practice</i> , 2005, 10, 125-142.	1.1	4
156	Software Product Family Evaluation. <i>Lecture Notes in Computer Science</i> , 2004, , 110-129.	1.0	70
157	Architecting for usability: a survey. <i>Journal of Systems and Software</i> , 2004, 70, 61-78.	3.3	181
158	Architecture-level modifiability analysis (ALMA). <i>Journal of Systems and Software</i> , 2004, 69, 129-147.	3.3	169
159	Software architecture – Engineering quality attributes. <i>Journal of Systems and Software</i> , 2003, 66, 183-186.	3.3	7
160	A framework for capturing the relationship between usability and software architecture. <i>Software Process Improvement and Practice</i> , 2003, 8, 67-87.	1.1	52
161	Experiences with ALMA: Architecture-Level Modifiability Analysis. <i>Journal of Systems and Software</i> , 2002, 61, 47-57.	3.3	58
162	Design erosion: problems and causes. <i>Journal of Systems and Software</i> , 2002, 61, 105-119.	3.3	168

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163	Stability assessment of evolving industrial object-oriented frameworks. Journal of Software: Evolution and Process, 2000, 12, 79-102.	0.5	11
164	An experiment on creating scenario profiles for software change. Annals of Software Engineering, 2000, 9, 59-78.	0.5	22
165	Evolution in software product lines: two cases. Journal of Software: Evolution and Process, 1999, 11, 391-422.	0.5	84
166	Object acquaintance selection and binding. Theory and Practice of Object Systems, 1998, 4, 151-168.	0.8	2
167	Load Balanced Mapping of Distributed Objects to Minimize Network Communication. Journal of Parallel and Distributed Computing, 1996, 34, 117-136.	2.7	9
168	Speed, Data, and Ecosystems. , 0, , .		29