

# Frank Leymann

## List of Publications by Year in descending order

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Version: 2024-02-01

378

papers

9,488

citations

147801

31

h-index

91884

69

g-index

396

all docs

396

docs citations

396

times ranked

4223

citing authors

#	ARTICLE	IF	CITATIONS
1	Service-Oriented Computing: State of the Art and Research Challenges. Computer, 2007, 40, 38-45.	1.1	1,093
2	Restful web services vs. "big" web services. , 2008, , .		555
3	SERVICE-ORIENTED COMPUTING: A RESEARCH ROADMAP. International Journal of Cooperative Information Systems, 2008, 17, 223-255.	0.8	485
4	How to adapt applications for the Cloud environment. Computing (Vienna/New York), 2013, 95, 493-535.	4.8	212
5	Cloud Computing Patterns. , 2014, , .		187
6	A service computing manifesto. Communications of the ACM, 2017, 60, 64-72.	4.5	180
7	Faster and More Focused Control-Flow Analysis for Business Process Models Through SESE Decomposition. Lecture Notes in Computer Science, 2007, , 43-55.	1.3	155
8	OpenTOSCA – A Runtime for TOSCA-Based Cloud Applications. Lecture Notes in Computer Science, 2013, , 692-695.	1.3	133
9	Variability modeling to support customization and deployment of multi-tenant-aware Software as a Service applications. , 2009, , .		128
10	BPEL4Chor: Extending BPEL for Modeling Choreographies. , 2007, , .		126
11	TOSCA: Portable Automated Deployment and Management of Cloud Applications. , 2014, , 527-549.		125
12	Managing architectural decision models with dependency relations, integrity constraints, and production rules. Journal of Systems and Software, 2009, 82, 1249-1267.	4.5	123
13	Comparison of IoT platform architectures: A field study based on a reference architecture. , 2016, , .		104
14	Web Services and Their Composition. Lecture Notes in Computer Science, 2001, , 1-2.	1.3	100
15	The bitter truth about gate-based quantum algorithms in the NISQ era. Quantum Science and Technology, 2020, 5, 044007.	5.8	95
16	A Systematic Review of Cloud Modeling Languages. ACM Computing Surveys, 2019, 51, 1-38.	23.0	89
17	Generation of BPEL Customization Processes for SaaS Applications from Variability Descriptors. , 2008, , .		83
18	Winery – A Modeling Tool for TOSCA-Based Cloud Applications. Lecture Notes in Computer Science, 2013, , 700-704.	1.3	81

#	ARTICLE	IF	CITATIONS
19	Supporting Business Transactions via Partial Backward Recovery In Workflow Management Systems. Informatik Aktuell, 1995, , 51-70.	0.6	80
20	MOVING APPLICATIONS TO THE CLOUD: AN APPROACH BASED ON APPLICATION MODEL ENRICHMENT. International Journal of Cooperative Information Systems, 2011, 20, 307-356.	0.8	77
21	E Role-based Decomposition of Business Processes using BPEL. , 2006, , .		74
22	Defining Composite Configurable SaaS Application Packages Using SCA, Variability Descriptors and Multi-tenancy Patterns. , 2008, , .		73
23	Combining Declarative and Imperative Cloud Application Provisioning Based on TOSCA. , 2014, , .		67
24	Monitoring and Analyzing Influential Factors of Business Process Performance. , 2009, , .		63
25	Interacting services: From specification to execution. Data and Knowledge Engineering, 2009, 68, 946-972.	3.4	62
26	Towards BPEL in the Cloud: Exploiting Different Delivery Models for the Execution of Business Processes. , 2009, , .		62
27	Streamlining DevOps automation for Cloud applications using TOSCA as standardized metamodel. Future Generation Computer Systems, 2016, 56, 317-332.	7.5	61
28	Combining Different Multi-tenancy Patterns in Service-Oriented Applications. , 2009, , .		60
29	Horizontal and vertical combination of multi-tenancy patterns in service-oriented applications. Enterprise Information Systems, 2011, 5, 59-77.	4.7	56
30	Compliant Cloud Computing (C3): Architecture and Language Support for User-Driven Compliance Management in Clouds. , 2010, , .		53
31	Standards-Based DevOps Automation and Integration Using TOSCA. , 2014, , .		52
32	Identifying influential factors of business process performance using dependency analysis. Enterprise Information Systems, 2011, 5, 79-98.	4.7	48
33	Internet of things patterns. , 2016, , .		47
34	Combining Pattern Languages and Reusable Architectural Decision Models into a Comprehensive and Comprehensible Design Method. , 2008, , .		46
35	Towards Measuring Key Performance Indicators of Semantic Business Processes. Lecture Notes in Business Information Processing, 2008, , 227-238.	1.0	45
36	BPEL'n'Aspects: Adapting Service Orchestration Logic. , 2009, , .		45

#	ARTICLE	IF	CITATIONS
37	The essential deployment metamodel: a systematic review of deployment automation technologies. Software-Intensive Cyber-Physical Systems, 2020, 35, 63-75.	2.3	45
38	Reusable Architectural Decision Models for Enterprise Application Development. Lecture Notes in Computer Science, 2007, , 15-32.	1.3	45
39	Process Fragments. Lecture Notes in Computer Science, 2009, , 398-405.	1.3	45
40	Business Process Compliance through Reusable Units of Compliant Processes. Lecture Notes in Computer Science, 2010, , 325-337.	1.3	45
41	Runtime Prediction of Service Level Agreement Violations for Composite Services. Lecture Notes in Computer Science, 2010, , 176-186.	1.3	44
42	Business processes for Web Services: Principles and applications. IBM Systems Journal, 2006, 45, 425-446.	3.0	43
43	Semantic Business Process Management: Scaling Up the Management of Business Processes. , 2008, , .		42
44	Exception Handling in the BPEL4WS Language. Lecture Notes in Computer Science, 2003, , 276-290.	1.3	41
45	Business Compliance Governance in Service-Oriented Architectures. , 2009, , .		41
46	Towards Provisioning the Cloud: On the Usage of Multi-Granularity Flows and Services to Realize a Unified Provisioning Infrastructure for SaaS Applications. , 2008, , .		38
47	A Novel Approach to Decentralized Workflow Enactment. , 2008, , .		37
48	BPEL for Semantic Web Services (BPEL4SWS). Lecture Notes in Computer Science, 2007, , 179-188.	1.3	35
49	Modeling Service Choreographies Using BPMN and BPEL4Chor. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2008, , 79-93.	0.3	35
50	Aggregation of Service Level Agreements in the Context of Business Processes. , 2008, , .		35
51	BPMN4TOSCA: A Domain-Specific Language to Model Management Plans for Composite Applications. Lecture Notes in Business Information Processing, 2012, , 38-52.	1.0	35
52	Quantum in the Cloud: Application Potentials and Research Opportunities. , 2020, , .		35
53	Cross-organizational process monitoring based on service choreographies. , 2010, , .		34
54	Vino4TOSCA: A Visual Notation for Application Topologies Based on TOSCA. Lecture Notes in Computer Science, 2012, , 416-424.	1.3	34

#	ARTICLE	IF	CITATIONS
55	Automated Capturing and Systematic Usage of DevOps Knowledge for Cloud Applications. , 2015, , .		34
56	A Framework for the Structural Analysis of REST APIs. , 2017, , .		34
57	Cafe: A Generic Configurable Customizable Composite Cloud Application Framework. Lecture Notes in Computer Science, 2009, , 357-364.	1.3	33
58	A Framework for Optimized Distribution of Tenants in Cloud Applications. , 2010, , .		33
59	Process Fragment Libraries for Easier and Faster Development of Process-based Applications. Journal of Systems Integration, 0, 2, 39-55.	2.2	33
60	Choreography for the Grid: towards fitting BPEL to the resource framework. Concurrency Computation Practice and Experience, 2006, 18, 1201-1217.	2.2	32
61	DevOpSlang “Bridging the Gap between Development and Operations. Lecture Notes in Computer Science, 2014, , 108-122.	1.3	32
62	Semantic Service Bus: Architecture and Implementation of a Next Generation Middleware. , 2007, , .		31
63	Semantic Web Services, Part 1. IEEE Intelligent Systems, 2007, 22, 12-17.	4.0	31
64	Formalizing the Cloud through Enterprise Topology Graphs. , 2012, , .		31
65	Pattern-Based Development and Management of Cloud Applications. Future Internet, 2012, 4, 110-141.	3.8	31
66	The Connected Car in the Cloud: A Platform for Prototyping Telematics Services. IEEE Software, 2015, 32, 11-17.	1.8	31
67	CMotion: A framework for migration of applications into and between clouds. , 2011, , .		30
68	Supporting the Migration of Applications to the Cloud through a Decision Support System. , 2013, , .		30
69	Conventional Workflow Technology for Scientific Simulation. Computer Communications and Networks, 2011, , 323-352.	0.8	30
70	An Architecture for Managing the Lifecycle of Business Goals for Partners in a Service Network. Lecture Notes in Computer Science, 2008, , 196-207.	1.3	29
71	Towards Reference Passing in Web Service and Workflow-Based Applications. , 2009, , .		28
72	An architectural pattern language of cloud-based applications. , 2011, , .		28

#	ARTICLE	IF	CITATIONS
73	The (Service) Bus: Services Penetrate Everyday Life. Lecture Notes in Computer Science, 2005, , 12-20.	1.3	28
74	The Quantum software lifecycle. , 2020, , .		28
75	MAINTAINING DATA DEPENDENCIES ACROSS BPEL PROCESS FRAGMENTS. International Journal of Cooperative Information Systems, 2008, 17, 259-282.	0.8	26
76	ToscaMart: A method for adapting and reusing cloud applications. Journal of Systems and Software, 2016, 113, 395-406.	4.5	26
77	Towards a Pattern Language for Quantum Algorithms. Lecture Notes in Computer Science, 2019, , 218-230.	1.3	26
78	Deriving Explicit Data Links in WS-BPEL Processes. , 2008, , .		25
79	Optimal Distribution of Applications in the Cloud. Lecture Notes in Computer Science, 2014, , 75-90.	1.3	25
80	The NISQ Analyzer: Automating the Selection of Quantum Computers for Quantum Algorithms. Communications in Computer and Information Science, 2020, , 66-85.	0.5	25
81	BPELlight. Lecture Notes in Computer Science, 2007, , 214-229.	1.3	25
82	Customer-defined service level agreements for composite applications. Enterprise Information Systems, 2009, 3, 369-391.	4.7	24
83	Ensuring and Assessing Architecture Conformance to Microservice Decomposition Patterns. Lecture Notes in Computer Science, 2017, , 411-429.	1.3	24
84	An Architecture and Methodology for a Four-Phased Approach to Green Business Process Reengineering. Lecture Notes in Computer Science, 2011, , 150-164.	1.3	23
85	Expanding Data Encoding Patterns For Quantum Algorithms. , 2021, , .		23
86	Parameterized BPEL Processes: Concepts and Implementation. Lecture Notes in Computer Science, 2006, , 471-476.	1.3	23
87	Encoding patterns for quantum algorithms. IET Quantum Communication, 2021, 2, 141-152.	3.8	23
88	Process Viewing Patterns. , 2010, , .		22
89	Green business process patterns. , 2011, , .		22
90	Measuring Performance Metrics of WS-BPEL Service Compositions. , 2009, , .		21

#	ARTICLE	IF	CITATIONS
91	OpenTOSCA for IoT. , 2016, , .		21
92	Modeling and execution of blockchain-aware business processes. Software-Intensive Cyber-Physical Systems, 2019, 34, 105-116.	2.3	21
93	Architectural Decisions and Patterns for Transactional Workflows in SOA. Lecture Notes in Computer Science, 2007, , 81-93.	1.3	21
94	Adaptation of Service-Based Applications Based on Process Quality Factor Analysis. Lecture Notes in Computer Science, 2010, , 395-404.	1.3	20
95	Process-Based Composition of Permissioned and Permissionless Blockchain Smart Contracts. , 2019, , .		20
96	FaaSSten your decisions: A classification framework and technology review of function-as-a-Service platforms. Journal of Systems and Software, 2021, 175, 110906.	4.5	20
97	SOEDA: A Method for Specification and Implementation of Applications on a Service-Oriented Event-Driven Architecture. Lecture Notes in Business Information Processing, 2009, , 193-204.	1.0	20
98	BPEL vs. BPMN 2.0: Should You Care?. Lecture Notes in Business Information Processing, 2010, , 8-13.	1.0	20
99	Policy4TOSCA: A Policy-Aware Cloud Service Provisioning Approach to Enable Secure Cloud Computing. Lecture Notes in Computer Science, 2013, , 360-376.	1.3	20
100	Topology Splitting and Matching for Multi-Cloud Deployments. , 2017, , .		20
101	Modeling business processes with BPEL4WS. Information Systems and E-Business Management, 2006, 4, 265-284.	3.7	19
102	Pricing web services. International Journal of Business Process Integration and Management, 2007, 2, 132.	0.0	19
103	The Differences and Commonalities between Green and Conventional Business Process Management. , 2011, , .		19
104	Towards situation-aware adaptive workflows: SitOPT &#x2014; A general purpose situation-aware workflow management system. , 2015, , .		19
105	On the Road to Benchmarking BPMN 2.0 Workflow Engines. , 2015, , .		19
106	Integrating Quantum Computing into Workflow Modeling and Execution. , 2020, , .		19
107	Smart Contract Invocation Protocol (SCIP): A Protocol for the Uniform Integration of Heterogeneous Blockchain Smart Contracts. Lecture Notes in Computer Science, 2020, , 134-149.	1.3	19
108	EAI as a Service - Combining the Power of Executable EAI Patterns and SaaS. , 2008, , .		18

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109	On Visualizing and Modelling BPEL with BPMN. , 2009, , .		18
110	On-demand Provisioning of Infrastructure, Middleware and Services for Simulation Workflows. , 2013, , .		18
111	A Conversation Based Approach for Modeling REST APIs. , 2015, , .		18
112	Analyzing BPEL4Chor: Verification and Participant Synthesis. , 2007, , 46-60.		18
113	An Integrated Solution for Runtime Compliance Governance in SOA. Lecture Notes in Computer Science, 2010, , 122-136.	1.3	18
114	A GENTL Approach for Cloud Application Topologies. Lecture Notes in Computer Science, 2014, , 148-159.	1.3	18
115	Enabling Adaptation of Pervasive Flows: Built-in Contextual Adaptation. Lecture Notes in Computer Science, 2009, , 445-454.	1.3	17
116	Process space-based scientific workflow enactment. International Journal of Business Process Integration and Management, 2010, 5, 32.	0.0	17
117	Preventing SLA Violations in Service Compositions Using Aspect-Based Fragment Substitution. Lecture Notes in Computer Science, 2010, , 365-380.	1.3	17
118	Flexible Process-Based Applications in Hybrid Clouds. , 2011, , .		17
119	Service Migration Patterns – Decision Support and Best Practices for the Migration of Existing Service-Based Applications to Cloud Environments. , 2013, , .		17
120	A Model-Driven Approach for REST Compliant Services. , 2014, , .		17
121	Modeling and Automated Deployment of Serverless Applications Using TOSCA. , 2018, , .		17
122	The OpenTOSCA Ecosystem - Concepts & Tools. , 2016, , .		17
123	A Framework for Executable Enterprise Application Integration Patterns. , 2008, , 485-497.		16
124	Dynamic Composition of Pervasive Process Fragments. , 2011, , .		16
125	Towards Green Business Process Reengineering. Lecture Notes in Computer Science, 2011, , 187-192.	1.3	16
126	Capturing Cloud Computing Knowledge and Experience in Patterns. , 2012, , .		16



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127	Cloud Computing Automation: Integrating USDL and TOSCA. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2013, , 1-16.	0.3	16
128	Middleware-Oriented Deployment Automation for Cloud Applications. IEEE Transactions on Cloud Computing, 2018, 6, 1054-1066.	4.4	16
129	BPEL Fragments for Modularized Reuse in Modeling BPEL Processes. , 2009, , .		15
130	Migrating enterprise applications to the cloud: methodology and evaluation. International Journal of Big Data Intelligence, 2014, 1, 127.	0.4	15
131	Context-sensitive Adaptive Production Processes. Procedia CIRP, 2016, 41, 147-152.	1.9	15
132	Situation recognition and handling based on executing situation templates and situation-aware workflows. Computing (Vienna/New York), 2017, 99, 163-181.	4.8	15
133	Fragmento: Advanced Process Fragment Library. , 2011, , 659-670.		15
134	Micro-Benchmarking BPMN 2.0 Workflow Management Systems with Workflow Patterns. Lecture Notes in Computer Science, 2016, , 67-82.	1.3	15
135	Maintaining Data Dependencies Across BPEL Process Fragments. Lecture Notes in Computer Science, 2007, , 207-219.	1.3	15
136	Cost-Optimal Outsourcing of Applications into the Clouds. , 2010, , .		14
137	Improving the Manageability of Enterprise Topologies Through Segmentation, Graph Transformation, and Analysis Strategies. , 2012, , .		14
138	Pattern-driven green adaptation of process-based applications and their runtime infrastructure. Computing (Vienna/New York), 2012, 94, 463-487.	4.8	14
139	Workflow ART: a framework for multidimensional workflow analysis. Enterprise Information Systems, 2013, 7, 133-166.	4.7	14
140	A process for pattern identification, authoring, and application. , 2014, , .		14
141	Workflow-Based Coordination and Cooperation in a Service World. Lecture Notes in Computer Science, 2006, , 2-16.	1.3	14
142	A Management Framework for WS-BPEL. , 2008, , .		13
143	Software service engineering: Tenets and challenges. , 2009, , .		13
144	ESB&lt;sup&gt;MT&lt;/sup&gt;; Enabling Multi-Tenancy in Enterprise Service Buses. , 2012, , .		13

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145	Combining horizontal and vertical composition of services. Service Oriented Computing and Applications, 2012, 6, 117-130.	1.6	13
146	ChronicOnline: Implementing a mHealth solution for monitoring and early alerting in chronic obstructive pulmonary disease. Health Informatics Journal, 2017, 23, 197-207.	2.1	13
147	Pattern-Based Deployment Models and Their Automatic Execution. , 2018, , .		13
148	Facing the Unplanned Migration of Serverless Applications. , 2019, , .		13
149	Combining horizontal and vertical composition of services. , 2010, , .		12
150	Compliance Domains: A Means to Model Data-Restrictions in Cloud Environments. , 2011, , .		12
151	Dynamic Service Provisioning for the Cloud. , 2012, , .		12
152	Towards the Realization of Multi-dimensional Elasticity for Distributed Cloud Systems. Procedia Computer Science, 2016, 97, 14-23.	2.0	12
153	Native Cloud Applications: Why Monolithic Virtualization Is Not Their Foundation. Communications in Computer and Information Science, 2017, , 16-40.	0.5	12
154	Fault Handling in the Web Service Stack. Lecture Notes in Computer Science, 2010, , 303-317.	1.3	12
155	Towards Classification Criteria for Process Fragmentation Techniques. Lecture Notes in Business Information Processing, 2012, , 1-12.	1.0	12
156	TOSCA4QC: Two Modeling Styles for TOSCA to Automate the Deployment and Orchestration of Quantum Applications. , 2020, , .		12
157	TOSCA Light: Bridging the Gap between the TOSCA Specification and Production-ready Deployment Technologies. , 2020, , .		12
158	Model and infrastructure for decentralized workflow enactment. , 2008, , .		11
159	Conversational Web Services: leveraging BPELlight for expressing WSDL 2.0 message exchange patterns. Enterprise Information Systems, 2009, 3, 347-367.	4.7	11
160	Business process change management based on process model synchronization of multiple abstraction levels. , 2011, , .		11
161	Service Composition for REST. , 2014, , .		11
162	Internet of Things Patterns for Device Bootstrapping and Registration. , 2017, , .		11

#	ARTICLE	IF	CITATIONS
163	API governance support through the structural analysis of REST APIs. Computer Science - Research and Development, 2018, 33, 291-303.	2.7	11
164	Compliant Business Process Design Using Refinement Layers. Lecture Notes in Computer Science, 2010, , 114-131.	1.3	11
165	Compensation-Based vs. Convergent Deployment Automation for Services Operated in the Cloud. Lecture Notes in Computer Science, 2014, , 336-350.	1.3	11
166	About a criterion of successfully executing a circuit in the NISQ era: what does it really mean. , 2020, , .		11
167	Pattern-based Modelling, Integration, and Deployment of Microservice Architectures. , 2020, , .		11
168	A survey of the universal relation model. Data and Knowledge Engineering, 1989, 4, 305-320.	3.4	10
169	Compliance scopes: Extending the BPMN 2.0 meta model to specify compliance requirements. , 2010, , .		10
170	Process Fragment Composition Operations. , 2010, , .		10
171	Automated Discovery and Maintenance of Enterprise Topology Graphs. , 2013, , .		10
172	CloudDSF – The Cloud Decision Support Framework for Application Migration. Lecture Notes in Computer Science, 2014, , 1-16.	1.3	10
173	Enabling DevOps Collaboration and Continuous Delivery Using Diverse Application Environments. Lecture Notes in Computer Science, 2015, , 348-358.	1.3	10
174	Situation-Aware Execution and Dynamic Adaptation of Traditional Workflow Models. Lecture Notes in Computer Science, 2016, , 69-83.	1.3	10
175	Transactional properties of permissioned blockchains. Software-Intensive Cyber-Physical Systems, 2020, 35, 49-61.	2.3	10
176	Deployable Self-contained Workflow Models. Lecture Notes in Computer Science, 2020, , 85-96.	1.3	10
177	Managing Technical Processes Using Smart Workflows. Lecture Notes in Computer Science, 2008, , 287-298.	1.3	10
178	Semantic Business Process Management. , 2009, , 299-317.		10
179	The EDMM Modeling and Transformation System. Lecture Notes in Computer Science, 2020, , 294-298.	1.3	10
180	WSDL 2.0 Message Exchange Patterns: Limitations and Opportunities. , 2008, , .		9

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181	EMod: platform independent modelling, description and enactment of parameterisable EAI patterns. Enterprise Information Systems, 2009, 3, 299-317.	4.7	9
182	A self-service portal for service-based applications. , 2010, , .		9
183	A Novel Framework for Monitoring and Analyzing Quality of Data in Simulation Workflows. , 2011, , .		9
184	Enabling tenant-aware administration and management for JBI environments. , 2012, , .		9
185	Enabling Dynamic Deployment of Cloud Applications Using a Modular and Extensible PaaS Environment. , 2013, , .		9
186	Integrating Compliance Requirements across Business and IT. , 2014, , .		9
187	Characterizing and Evaluating Different Deployment Approaches for Cloud Applications. , 2014, , .		9
188	A situation-aware workflow modelling extension. , 2015, , .		9
189	Dyn Tail - Dynamically Tailored Deployment Engines for Cloud Applications. , 2015, , .		9
190	Representative BPMN 2.0 Process Model Generation from Recurring Structures. , 2016, , .		9
191	Extended provisioning, security and analysis techniques for the ECHO health data management system. Computing (Vienna/New York), 2017, 99, 183-201.	4.8	9
192	Automated Generation of Management Workflows for Applications Based on Deployment Models. , 2019, , .		9
193	Unified Integration of Smart Contracts Through Service Orientation. IEEE Software, 2020, 37, 60-66.	1.8	9
194	Automated Quantum Hardware Selection for Quantum Workflows. Electronics (Switzerland), 2021, 10, 984.	3.1	9
195	Automating the Comparison of Quantum Compilers for Quantum Circuits. Communications in Computer and Information Science, 2021, , 64-80.	0.5	9
196	Pluggable Framework for Enabling the Execution of Extended BPEL Behavior. Lecture Notes in Computer Science, 2009, , 376-387.	1.3	9
197	Model Transformations to Leverage Service Networks. Lecture Notes in Computer Science, 2009, , 103-117.	1.3	9
198	Cloud Computing Fundamentals. , 2014, , 21-78.		9

#	ARTICLE	IF	CITATIONS
199	Internet of Things Out of the Box: Using TOSCA for Automating the Deployment of IoT Environments. , 2017, , .		9
200	Native Cloud Applications - Why Virtual Machines, Images and Containers Miss the Point!. , 2016, , .		9
201	Hybrid Quantum Applications Need Two Orchestrations in Superposition: A Software Architecture Perspective. , 2021, , .		9
202	Towards the STEP neutral repository. Computer Standards and Interfaces, 1994, 16, 299-319.	5.4	8
203	PerFlows for the computers of the 21st century. , 2009, , .		8
204	A Taxonomy for Cloud Data Hosting Solutions. , 2011, , .		8
205	Unifying Compliance Management in Adaptive Environments through Variability Descriptors (Short) Tj ETQq1 1 0.784314 rgBT /Overl		8
206	Bootstrapping Complex Workflow Middleware Systems into the Cloud. , 2015, , .		8
207	Modeling and Automated Execution of Application Deployment Tests. , 2018, , .		8
208	Internet of Things Patterns for Communication and Management. Lecture Notes in Computer Science, 2019, , 139-182.	1.3	8
209	Quantum humanities: a vision for quantum computing in digital humanities. Software-Intensive Cyber-Physical Systems, 2020, 35, 153-158.	2.3	8
210	On Decision Support for Quantum Application Developers: Categorization, Comparison, and Analysis of Existing Technologies. Lecture Notes in Computer Science, 2021, , 127-141.	1.3	8
211	QProv: A provenance system for quantum computing. IET Quantum Communication, 2021, 2, 171-181.	3.8	8
212	Implementation and Evaluation of a Multi-tenant Open-Source ESB. Lecture Notes in Computer Science, 2013, , 79-93.	1.3	8
213	Automating the Deployment of Multi-Cloud Applications in Federated Cloud Environments. , 2017, , .		8
214	Formalising Message Exchange Patterns using BPEL Light. , 2008, , .		7
215	Towards choreography-based process distribution in the cloud. , 2011, , .		7
216	A pattern language for costumes in films. , 2012, , .		7

#	ARTICLE	IF	CITATIONS
217	Coordination for fragmented loops and scopes in a distributed business process. Information Systems, 2012, 37, 593-610.	3.6	7
218	Service Selection for On-Demand Provisioned Services. , 2014, , .		7
219	Your Coffee Shop Uses Cloud Computing. IEEE Internet Computing, 2014, 18, 52-59.	3.3	7
220	Informal Process Essentials. , 2014, , .		7
221	On-demand provisioning of workflow middleware and services into the cloud: an overview. Computing (Vienna/New York), 2017, 99, 147-162.	4.8	7
222	Collaborative gathering and continuous delivery of DevOps solutions through repositories. Computer Science - Research and Development, 2017, 32, 281-290.	2.7	7
223	Developing, deploying, and operating twelve-factor applications with TOSCA. , 2017, , .		7
224	Utility-Based Decision Making for Migrating Cloud-Based Applications. ACM Transactions on Internet Technology, 2018, 18, 1-22.	4.4	7
225	Modeling and execution of data-aware choreographies: an overview. Computer Science - Research and Development, 2018, 33, 329-340.	2.7	7
226	An approach to automatically detect problems in restructured deployment models based on formalizing architecture and design patterns. Software-Intensive Cyber-Physical Systems, 2019, 34, 85-97.	2.3	7
227	Patterns for Hybrid Quantum Algorithms. Communications in Computer and Information Science, 2021, , 34-51.	0.5	7
228	Business Grid: Combining Web Services and the Grid. Lecture Notes in Computer Science, 2009, , 136-151.	1.3	7
229	Maintaining Compliance in Customizable Process Models. Lecture Notes in Computer Science, 2009, , 60-75.	1.3	7
230	Process Views to Support Compliance Management in Business Processes. Lecture Notes in Business Information Processing, 2010, , 131-142.	1.0	7
231	Linked Compute Units and Linked Experiments: Using Topology and Orchestration Technology for Flexible Support of Scientific Applications. Lecture Notes in Computer Science, 2012, , 71-80.	1.3	7
232	Revisiting the Behavior of Fault and Compensation Handlers in WS-BPEL. Lecture Notes in Computer Science, 2009, , 286-303.	1.3	7
233	Cloud-native Deploy-ability: An Analysis of Required Features of Deployment Technologies to Deploy Arbitrary Cloud-native Applications. , 2020, , .		7
234	Optimal Stratification of Transactions. , 2009, , .		6

#	ARTICLE	IF	CITATIONS
235	Virtualizing Services and Resources with ProBus: The WS-Policy-Aware Service and Resource Bus. , 2009, , .		6
236	An approach to combine data-related and control-flow-related compliance rules. , 2011, , .		6
237	Green Business Process Patterns – Part II (Short Paper). , 2013, , .		6
238	Determining Power Consumption of Business Processes and Their Activities to Enable Green Business Process Reengineering. , 2013, , .		6
239	Streamlining Cloud Management Automation by Unifying the Invocation of Scripts and Services Based on TOSCA. International Journal of Organizational and Collective Intelligence, 2014, 4, 45-63.	0.3	6
240	Dynamic Tailoring and Cloud-Based Deployment of Containerized Service Middleware. , 2015, , .		6
241	Generic driver injection for automated IoT application deployments. , 2017, , .		6
242	From Serverful to Serverless: A Spectrum of Patterns for Hosting Application Components. , 2021, , .		6
243	Automating the Deployment of Distributed Applications by Combining Multiple Deployment Technologies. , 2021, , .		6
244	Coordinate BPEL Scopes and Processes by Extending the WS-Business Activity Framework. , 2007, , 336-352.		6
245	Views on Scientific Workflows. Lecture Notes in Business Information Processing, 2011, , 321-335.	1.0	6
246	Standards-based modeling and deployment of serverless function orchestrations using BPMN and TOSCA. Software - Practice and Experience, 2022, 52, 1454-1495.	3.6	6
247	Query Structural Information of BPEL Processes. , 2009, , .		5
248	Tuplespace middleware for Petri net-based workflow execution. International Journal of Web and Grid Services, 2010, 6, 35.	0.5	5
249	Towards a service composition language for heterogeneous service environments. , 2011, , .		5
250	SOA-enabled compliance management: instrumenting, assessing, and analyzing service-based business processes. Service Oriented Computing and Applications, 2013, 7, 275-292.	1.6	5
251	An Integrated mHealth Solution for Enhancing Patientsâ€™ Health Online. IFMBE Proceedings, 2015, , 695-698.	0.3	5
252	Design Support for Performance Aware Dynamic Application (Re-)Distribution in the Cloud. IEEE Transactions on Services Computing, 2015, 8, 225-239.	4.6	5

#	ARTICLE	IF	CITATIONS
253	OpenTOSCA for the 4th Industrial Revolution. , 2016, , .		5
254	Pattern research in the digital humanities: how data mining techniques support the identification of costume patterns. Computer Science - Research and Development, 2017, 32, 311-321.	2.7	5
255	The vision for MUSE4Music. Computer Science - Research and Development, 2017, 32, 323-328.	2.7	5
256	Standards-Based Function Shipping - How to Use TOSCA for Shipping and Executing Data Analytics Software in Remote Manufacturing Environments. , 2017, , .		5
257	Deployment of Distributed Applications Across Public and Private Networks. , 2019, , .		5
258	Freezing and defrosting cloud applications: automated saving and restoring of running applications. Software-Intensive Cyber-Physical Systems, 2020, 35, 101-114.	2.3	5
259	Decentralized Cross-organizational Application Deployment Automation: An Approach for Generating Deployment Choreographies Based on Declarative Deployment Models. Lecture Notes in Computer Science, 2020, , 20-35.	1.3	5
260	Data-Aware Service Choreographies Through Transparent Data Exchange. Lecture Notes in Computer Science, 2016, , 357-364.	1.3	5
261	Facilitating Complex Web Service Interactions through a Tuplespace Binding. Lecture Notes in Computer Science, 2008, , 275-280.	1.3	5
262	From Modelling to Execution of Enterprise Integration Scenarios: The GENIUS Tool. Informatik Aktuell, 2009, , 241-252.	0.6	5
263	Anything to Topology - A Method and System Architecture to Topologize Technology-specific Application Deployment Artifacts. , 2017, , .		5
264	Web Service Choreography Configurations for BPMN. Lecture Notes in Computer Science, 2009, , 401-412.	1.3	5
265	Selection and Optimization of Hyperparameters in Warm-Started Quantum Optimization for the MaxCut Problem. Electronics (Switzerland), 2022, 11, 1033.	3.1	5
266	UDH: A universal relation system. Data and Knowledge Engineering, 1990, 5, 21-38.	3.4	4
267	WSMO/X in the context of business processes: improvement recommendations. International Journal of Web Information Systems, 2007, 3, 89-103.	2.4	4
268	The role of business processes in service oriented architectures (Editorial). International Journal of Business Process Integration and Management, 2007, 2, 75.	0.0	4
269	An EAI Pattern-Based Comparison of Spaces and Messaging. , 2007, , .		4
270	Extending BPellight for Expressing Multi-Partner Message Exchange Patterns. , 2008, , .		4



#	ARTICLE	IF	CITATIONS
271	Synchronizing control flow in a tuplespace-based, distributed workflow management system. , 2008, ,		4
272	BPELscript: A Simplified Script Syntax for WS-BPEL 2.0. , 2009, , .		4
273	Cost-based prevention of violations of service level agreements in composed services using self-adaptation. , 2012, , .		4
274	Performance Optimizations for Interacting Business Processes*. , 2013, , .		4
275	Towards Dynamic Application Distribution Support for Performance Optimization in the Cloud. , 2014, , .		4
276	Deployment Aggregates - A Generic Deployment Automation Approach for Applications Operated in the Cloud. , 2014, , .		4
277	Evaluating Caching Strategies for Cloud Data Access Using an Enterprise Service Bus. , 2014, , .		4
278	Application of Sub-Graph Isomorphism to Extract Reoccurring Structures from BPMN 2.0 Process Models. , 2015, , .		4
279	Application Threat Modeling and Automated VNF Selection for Mitigation using TOSCA. , 2019, , .		4
280	Dynamic Data Routing Decisions for Compliant Data Handling in Service-and Cloud-Based Architectures: A Performance Analysis. , 2019, , .		4
281	Method, formalization, and algorithms to split topology models for distributed cloud application deployments. Computing (Vienna/New York), 2020, 102, 343-363.	4.8	4
282	TOSCA Lightning: An Integrated Toolchain for Transforming TOSCA Light into Production-Ready Deployment Technologies. Lecture Notes in Business Information Processing, 2020, , 138-146.	1.0	4
283	TraDE - A Transparent Data Exchange Middleware for Service Choreographies. Lecture Notes in Computer Science, 2017, , 252-270.	1.3	4
284	The Influence of an External Transaction on a BPEL Scope. Lecture Notes in Computer Science, 2009, , 381-388.	1.3	4
285	A Framework of Views on Service Networks Models. Lecture Notes in Business Information Processing, 2011, , 21-34.	1.0	4
286	A TOSCA-based Programming Model for Interacting Components of Automatically Deployed Cloud and IoT Applications. , 2017, , .		4
287	The SePaDe System: Packaging Entire XaaS Layers for Automatically Deploying and Managing Applications. , 2017, , .		4
288	An Execution Engine for Semantic Business Processes. Lecture Notes in Computer Science, 2009, , 200-211.	1.3	4

#	ARTICLE	IF	CITATIONS
289	Smart Contract Locator (SCL) and Smart Contract Description Language (SCDL). Lecture Notes in Computer Science, 2020, , 195-210.	1.3	4
290	MODULO: Modeling, Transformation, and Deployment of Quantum Workflows. , 2021, , .		4
291	Executing Pipes-and-Filters with Workflows. , 2010, , .		3
292	Transactional Process Fragments - Recovery Strategies for Flexible Workflows with Process Fragments. , 2010, , .		3
293	Bone remodelling: A combined biomechanical and systems-biological challenge. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 99-100.	0.2	3
294	TIMED PRIVACY-AWARE BUSINESS PROTOCOLS. International Journal of Cooperative Information Systems, 2012, 21, 85-109.	0.8	3
295	Unified Execution of Service Compositions (Short Paper). , 2013, , .		3
296	Lego4TOSCA: Composable Building Blocks for Cloud Applications. , 2014, , .		3
297	Development and Evaluation of a Multi-tenant Service Middleware PaaS Solution. , 2014, , .		3
298	Compensation and Convergence â€” Comparing and Combining Deployment Automation Approaches. International Journal of Cooperative Information Systems, 2015, 24, 1541001.	0.8	3
299	Executing informal processes. , 2015, , .		3
300	A Management Life Cycle for Data-Aware Service Choreographies. , 2016, , .		3
301	Quantum Humanities: A First Use Case for Quantum-ML in Media Science. Digitale Welt, 2020, 4, 102-103.	0.3	3
302	Automated Generation of Management Workflows for Running Applications by Deriving and Enriching Instance Models. , 2021, , .		3
303	Transforming Collaboration Structures into Deployable Informal Processes. Lecture Notes in Computer Science, 2015, , 231-250.	1.3	3
304	An Universal Approach for Compliance Management Using Compliance Descriptors. Communications in Computer and Information Science, 2017, , 209-231.	0.5	3
305	Integrating Perfective and Corrective Adaptation of Service-based Applications. , 2011, , 137-169.		3
306	Cloud Application Architecture Patterns. , 2014, , 151-238.		3

#	ARTICLE	IF	CITATIONS
307	Interaction Choreography Models in BPEL: Choreographies on the Enterprise Service Bus. Communications in Computer and Information Science, 2011, , 36-53.	0.5	3
308	RoSE: Reoccurring Structures Detection in BPMN 2.0 Process Model Collections. Lecture Notes in Computer Science, 2016, , 263-281.	1.3	3
309	Performance Comparison Between BPMN 2.0 Workflow Management Systems Versions. Lecture Notes in Business Information Processing, 2017, , 103-118.	1.0	3
310	Situation-Aware Updates for Cyber-Physical Systems. Communications in Computer and Information Science, 2020, , 12-32.	0.5	3
311	Technology-Agnostic Declarative Deployment Automation of Cloud Applications. Lecture Notes in Computer Science, 2020, , 97-112.	1.3	3
312	SEAPORT: Assessing the Portability of Serverless Applications. , 2020, , .		3
313	Self-contained Service Deployment Packages. , 2020, , .		3
314	Continued Fractions and Probability Estimations in Shor's Algorithm: A Detailed and Self-Contained Treatise. AppliedMath, 2022, 2, 393-432.	0.6	3
315	Methods for Conserving Privacy in Workflow Controlled Smart Environments. , 2009, , .		2
316	Enforcement from the Inside: Improving Quality of Business in Process Management. , 2009, , .		2
317	Applicability of Process Viewing Patterns in Business Process Management. , 2010, , .		2
318	Synchronization of Adaptive Process Models Using Levels of Abstraction. , 2011, , .		2
319	Flexible information design for business process visualizations. , 2012, , .		2
320	Design Support for Cost-Efficient Application Distribution in the Cloud. , 2014, , .		2
321	Migration of enterprise applications to the cloud. IT - Information Technology, 2014, 56, .	0.9	2
322	SCE <sup>MT</sup> : A Multi-tenant Service Composition Engine. , 2014, , .		2
323	A Middleware-Centric Optimization Approach for the Automated Provisioning of Services in the Cloud. , 2015, , .		2
324	Streamlining APIfication by Generating APIs for Diverse Executables Using Any2API. Communications in Computer and Information Science, 2016, , 216-238.	0.5	2

#	ARTICLE	IF	CITATIONS
325	Performance and Cost Trade-Off in IaaS Environments: A Scientific Workflow Simulation Environment Case Study. Communications in Computer and Information Science, 2016, , 153-170.	0.5	2
326	Integrating IoT Devices Based on Automatically Generated Scale-Out Plans. , 2017, , .		2
327	Automating the Provisioning and Integration of Analytics Tools with Data Resources in Industrial Environments Using OpenTOSCA. , 2017, , .		2
328	Modeling Data Transformations in Data-Aware Service Choreographies. , 2018, , .		2
329	On the algebraic properties of concrete solution aggregation. Software-Intensive Cyber-Physical Systems, 2019, 34, 117-128.	2.3	2
330	Serverless Parachutes: Preparing Chosen Functionalities for Exceptional Workloads. , 2019, , .		2
331	Where to begin: on pattern language entry points. Software-Intensive Cyber-Physical Systems, 2020, 35, 127-139.	2.3	2
332	Pattern-based rewrite and refinement of architectures using graph theory. Software-Intensive Cyber-Physical Systems, 2020, 35, 115-126.	2.3	2
333	Data Flow Dependent Component Placement of Data Processing Cloud Applications. , 2020, , .		2
334	SiDD: The Situation-Aware Distributed Deployment System. Lecture Notes in Computer Science, 2021, , 72-76.	1.3	2
335	Hybrid TOSCA Provisioning Plans: Integrating Declarative and Imperative Cloud Application Provisioning Technologies. Communications in Computer and Information Science, 2016, , 239-262.	0.5	2
336	Bringing Middleware to Everyday Programmers with Ballerina. Lecture Notes in Computer Science, 2018, , 12-27.	1.3	2
337	MC-Cube: Mastering Customizable Compliance in the Cloud. Lecture Notes in Computer Science, 2009, , 592-606.	1.3	2
338	Making Scientific Applications on the Grid Reliable Through Flexibility Approaches Borrowed from Service Compositions. , 2010, , 635-656.		2
339	Coordination for Fragmented Loops and Scopes in a Distributed Business Process. Lecture Notes in Computer Science, 2010, , 178-194.	1.3	2
340	Retry Scopes to Enable Robust Workflow Execution in Pervasive Environments. Lecture Notes in Computer Science, 2010, , 358-369.	1.3	2
341	Business Process Management. Lecture Notes in Computer Science, 2010, , 27-54.	1.3	2
342	Legally Sustainable Solutions for Privacy Issues in Collaborative Fraud Detection. Advances in Information Security, 2010, , 139-171.	1.2	2

#	ARTICLE	IF	CITATIONS
343	CAP-Oriented Design for Cloud-Native Applications. Communications in Computer and Information Science, 2013, , 215-229.	0.5	2
344	ANY2API “ Automated APIfication - Generating APIs for Executables to Ease their Integration and Orchestration for Cloud Application Deployment Automation. , 2015, , .		2
345	A Method and Programming Model for Developing Interacting Cloud Applications Based on the TOSCA Standard. Lecture Notes in Business Information Processing, 2018, , 265-290.	1.0	2
346	Analysis and Rewrite of Quantum Workflows: Improving the Execution of Hybrid Quantum Algorithms. , 2022, , .		2
347	On Unifying the Compliance Management of Applications Based on IaC Automation. , 2022, , .		2
348	Replicability of Dynamically Provisioned Scientific Experiments. , 2014, , .		1
349	Context-Aware Provisioning and Management of Cloud Applications. Communications in Computer and Information Science, 2015, , 151-168.	0.5	1
350	A Flexible Engine for the Unified Execution of Service Compositions. , 2015, , .		1
351	Blockchain-Based Collaborative Development of Application Deployment Models. Lecture Notes in Computer Science, 2018, , 40-60.	1.3	1
352	1st Workshop on Quantum Software Architecture (QSA). , 2021, , .		1
353	Defining the Behaviour of BPELlight Interaction Activities Using Message Exchange Patterns. Lecture Notes in Computer Science, 2008, , 275-286.	1.3	1
354	CAGE: Customizable Large-Scale SOA Testbeds in the Cloud. Lecture Notes in Computer Science, 2011, , 76-87.	1.3	1
355	A Model-Driven Approach to Implementing Coordination Protocols in BPEL. Lecture Notes in Business Information Processing, 2009, , 188-199.	1.0	1
356	External and Internal Events in EPCs: e2EPCs. Lecture Notes in Business Information Processing, 2010, , 381-392.	1.0	1
357	Combining Enforcement Strategies in Service Oriented Architectures. Lecture Notes in Computer Science, 2010, , 288-302.	1.3	1
358	On Analyzing Quality of Data Influences on Performance of Finite Elements Driven Computational Simulations. Lecture Notes in Computer Science, 2012, , 793-804.	1.3	1
359	Choreography-based Consolidation of Interacting Processes Having Activity-based Loops. , 2015, , .		1
360	Streamlining Cloud Management Automation by Unifying the Invocation of Scripts and Services Based on TOSCA. , 2015, , 2240-2261.		1

#	ARTICLE	IF	CITATIONS
361	Fostering the Reuse of TOSCA-based Applications by Merging BPEL Management Plans. Communications in Computer and Information Science, 2017, , 232-254.	0.5	1
362	An Approach to Determine & Apply Solutions to Solve Detected Problems in Restructured Deployment Models using First-order Logic. , 2019, , .		1
363	Automated detection of design patterns in declarative deployment models. , 2021, , .		1
364	Refinement of enquiries in retrieval systems based on the universal relation model. Information Systems, 1993, 18, 129-139.	3.6	0
365	Composing services on the grid using BPEL4SWS. Multiagent and Grid Systems, 2009, 5, 287-309.	0.9	0
366	Extending choreography spheres to improve simulations. , 2010, , .		0
367	An event-model for constraint-based person-centric flows. , 2010, , .		0
368	Special Issue on BPM 2009 Workshops. Journal of Software: Evolution and Process, 2011, 23, 203-203.	1.1	0
369	IT-Centric Process Automation: Study About the Performance of BPMN 2.0 Engines. , 2019, , 167-197.		0
370	Using tuplespaces to enact petri net-based workflow definitions. , 2008, , .		0
371	Dynamic Message Routing Using Processes. Informatik Aktuell, 2009, , 117-128.	0.6	0
372	From Pipes-and-Filters to Workflows. , 2010, , 255-264.		0
373	Composite Process View Transformation. Lecture Notes in Business Information Processing, 2011, , 52-63.	1.0	0
374	Making Scientific Applications on the Grid Reliable Through Flexibility Approaches Borrowed from Service Compositions. , 2012, , 799-820.		0
375	Identifying Relevant Resources and Relevant Capabilities of Informal Processes. , 2017, , .		0
376	Transparent Execution of Data Transformations in Data-Aware Service Choreographies. Lecture Notes in Computer Science, 2018, , 117-137.	1.3	0
377	Monitoring Behavioral Compliance with Architectural Patterns Based onÂComplex Event Processing. Lecture Notes in Computer Science, 2020, , 125-140.	1.3	0
378	An EAI Pattern-Based Comparison of Spaces and Messaging. 2006 10th IEEE International Enterprise Distributed Object Computing Conference (EDOC'06), 2007, , .	0.0	0