Umut Durak

List of Publications by Year
in descending order

90 papers	442 citations	1478505 6 h-index	1199594 12 g-index
97 all docs	97 docs citations	97 times ranked	278 citing authors

#	Article	IF	Citations
1	Distributed Simulation. Simulation Foundations, Methods and Applications, 2016, , .	0.1	42
2	Situation aware UAV mission route planning. , 2009, , .		28
3	Formal Scenario Definition Language for Aviation: Aircraft Landing Case Study. , 2016, , .		28
4	The Digital Twin Paradigm for Aircraft Review and Outlook. , 2020, , .		26
5	Model-based testing methodology using system entity structures for MATLAB/Simulink models. Simulation, 2016, 92, 729-746.	1.8	20
6	Using System Entity Structures to Model the Elements of a Scenario in a Research Flight Simulator. , 2017, , .		11
7	Graphical Specification of Flight Scenarios with Aviation Scenario Defintion Language (ASDL). , 2017, , .		11
8	A Shift from Model-Based to Simulation-Based Paradigm: Timeliness and Usefulness for Many Disciplines. International Journal of Computer & Software Engineering, 2018, 3, .	0.4	11
9	ONTOLOGY-BASED DOMAIN ENGINEERING FOR TRAJECTORY SIMULATION REUSE. International Journal of Software Engineering and Knowledge Engineering, 2009, 19, 1109-1129.	0.8	10
10	AVES SDK: Bridging the Gap between Simulator and Flight Systems Designer. , 2015, , .		10
11	Adapting Functional Mockup Units for HLA-compliant Distributed Simulation. , 2014, , .		10
12	WCET-aware parallelization of model-based applications for multi-cores: The ARGO approach. , 2017, , .		9
13	XANDAR: Exploiting the X-by-Construction Paradigm in Model-based Development of Safety-critical Systems. , 2022, , .		9
14	Scenario Development: A Model-Driven Engineering Perspective. , 2014, , .		8
15	Setting systems and simulation life cycle processes side by side. , 2016, , .		8
16	Computational Representation for a Simulation Scenario Definition Language. , 2018, , .		8
17	Enhancing Scenario-Centric Air Traffic Control Training. , 2018, , .		8
18	Guidelines and Regulatory Framework for Machine Learning in Aviation. , 2022, , .		8

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19	Towards interoperable and composable trajectory simulations: an ontology-based approach. Journal of Simulation, 2011, 5, 217-229.	1.5	7
20	The Evolution of Simulation and Its Contribution to Many Disciplines. Simulation Foundations, Methods and Applications, 2017, , 3-24.	0.1	7
21	Towards a Standardization for Simulation Scenario Development in Aviation - Panel Discussion. , 2018, , .		7
22	Advances in Aeronautical Informatics. , 2018, , .		7
23	Flight Simulator-Based Verification for Model-Based Avionics Applications on Multi-Core Targets. , 2019, , .		7
24	Integrating Safety into MBSE Processes with Formal Methods. , 2021, , .		7
25	Ontology-Based Trajectory Simulation Framework. Journal of Computing and Information Science in Engineering, 2008, 8, .	2.7	6
26	Objective Motion Cueing Test - Experiences of a New User. , 2014, , .		6
27	Model Integration Workflow for Keeping Models up to Date in a Research Simulator. , 2014, , .		6
28	Extending the Knowledge Discovery Metamodel for architecture-driven simulation modernization. Simulation, 2015, 91, 1052-1067.	1.8	6
29	Running High Level Architecture in Real-Time for Flight Simulator Integration. , 2016, , .		6
30	Formal Verification of Simulation Scenarios in Aviation Scenario Definition Language (ASDL). Aerospace, 2018, 5, 10.	2.2	5
31	Behavior Driven Development for Airborne Software Engineering. , 2021, , .		5
32	Flight 4.0: The Changing Technology Landscape of Aeronautics. , 2018, , 3-13.		5
33	An Ontology for Trajectory Simulation. , 2006, , .		4
34	Model-Based Testing for Objective Fidelity Evaluation of Engineering and Research Flight Simulators. , 2015, , .		4
35	Adapting Scenario Definition Language for Formalizing UAS Concept of Operations. , 2018, , .		4
36	Automatic Generation of Flight Simulation Scenarios with Aviation Scenario Definition Language. Journal of Aerospace Information Systems, 2018, 15, 193-202.	1.4	4

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37	Worst-Case Execution-Time-Aware Parallelization of Model-Based Avionics Applications. Journal of Aerospace Information Systems, 2019, 16, 521-533.	1.4	4
38	High Level Architecture. Simulation Foundations, Methods and Applications, 2016, , 39-66.	0.1	4
39	An Exercise In Ontology Driven Trajectory Simulation With MATLAB SIMULINKÂ®. , 2007, , .		4
40	XANDAR: X-by-Construction Design framework for Engineering Autonomous & Distributed Real-time Embedded Software Systems. , 2021, , .		4
41	From Operational Scenarios to Synthetic Data: Simulation-Based Data Generation for AI-Based Airborne Systems. , 2022, , .		4
42	Pragmatic model transformations for refactoring in Scilab/Xcos. International Journal of Modeling, Simulation, and Scientific Computing, 2016, 07, 1541004.	1.4	3
43	DO-330/ED-215 Overlay to the IEEE Recommended Practice for Distributed Simulation Engineering and Execution Process. Journal of Aerospace Information Systems, 2018, 15, 696-705.	1.4	3
44	Advances in Software Engineering and Aeronautics. , 2018, , 87-102.		3
45	Simulation Based Development and Verification of Drogue Detection Algorithms for Autonomous Air to Air Refuelling. , 2020, , .		3
46	Ontology for Objective Flight Simulator Fidelity Evaluation. SNE Simulation Notes Europe, 2014, 24, 69-78.	0.3	3
47	Streamlining the Airborne Systems Certification. , 2021, , .		3
48	Flight Simulator Model Integration for Supporting Pilot-in-the-Loop Testing in Model-Based Rotorcraft Design. , 2016, , .		2
49	Model Driven Engineering. Simulation Foundations, Methods and Applications, 2016, , 23-38.	0.1	2
50	Simulating the Unexpected: Challenge-Centric Simulator Scenario Design for Advanced Flight Crew Training. , 2018, , .		2
51	Scenario-Based Development of DSL Models using Domain-Specific Scenario (DoSS) Framework. , 2019, , .		2
52	Formally Bounding UAS Behavior to Concept of Operation with Operation-Specific Scenario Description Language. , 2019, , .		2
53	Applying IEEE Recommended Practice for Distributed Simulation Engineering and Execution Process for Modeling and Simulation Based Airborne Systems Engineering. , 2020, , .		2
54	RESTful Software Architecture for ROS-based Onboard Mission System for Drones. , 2020, , .		2

#	Article	IF	Citations
55	Designing a Virtual Iron Bird as a Digital Twin. , 2021, , .		2
56	Tracking Light Aircraft with Smartphones at Low Altitudes. Information (Switzerland), 2021, 12, 105.	2.9	2
57	Mapping and Scheduling Hard Real Time Applications on Multicore Systems - The ARGO Approach. Lecture Notes in Computer Science, 2018, , 700-711.	1.3	2
58	Special issue on modeling and simulation in the era of big data and cloud computing: theory, framework and tools. Simulation, 2017, 93, 271-272.	1.8	1
59	Usability evaluation of a web-based ontology browser: the case of TSONT. Turkish Journal of Electrical Engineering and Computer Sciences, 2018, 26, 1115-1128.	1.4	1
60	Conformance testing of FMI calling sequence for simulation environments. International Journal of Modeling, Simulation, and Scientific Computing, 2019, 10, 1950008.	1.4	1
61	Quality Assessment and Quality Improvement in Model Engineering. , 2019, , 209-231.		1
62	Modeling and Simulation of Versatile Technical Systems Using an Extended System Entity Structure/Model Base Infrastructure. , 2019, , 393-418.		1
63	Tools for Scenario Development Using System Entity Structures. , 2019, , .		1
64	Redesign and evaluation of an equation-based model reduction method in OpenModelica. International Journal of Engineering Systems Modelling and Simulation, 2019, 11, 91.	0.2	1
65	Introduction to Special Issue on Multi-Core Architectures in Avionics Systems. Journal of Aerospace Information Systems, 2019, 16, 441-441.	1.4	1
66	Rethinking Simulation Engineering Process for MSaaS. , 2020, , .		1
67	How to Define SES Trees for Variability Modeling. SNE Simulation Notes Europe, 2019, 29, 117-126.	0.3	1
68	DDS based MIL-STD-1553B Data Bus interface simulation. Journal of Defense Modeling and Simulation, 2015, 12, 179-188.	1.7	0
69	Conceptual Modeling. Simulation Foundations, Methods and Applications, 2016, , 87-107.	0.1	0
70	Implementation, Integration, and Testing. Simulation Foundations, Methods and Applications, 2016, , 203-230.	0.1	0
71	Synergies of MDE, Simulation, and Agent Technology. Simulation Foundations, Methods and Applications, 2016, , 251-270.	0.1	0
72	Enhanced Functions for a Parallel Multicore Ground Proximity Warning System. , 2018, , .		0

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73	50 Summers of Computer Simulation. Simulation Foundations, Methods and Applications, 2019, , 1-24.	0.1	0
74	Inhalt Tagungsband ASIM Workshop STS/GMMS/EDU 2021. , 0, , .		0
75	Tool support for transformation from an OWL ontology to an HLA Object Model. , 2010, , .		0
76	Process Models. Simulation Foundations, Methods and Applications, 2016, , 69-84.	0.1	0
77	Scenario Management. Simulation Foundations, Methods and Applications, 2016, , 173-199.	0.1	0
78	Federate Architecture: Simulation Member Design. Simulation Foundations, Methods and Applications, 2016, , 149-171.	0.1	0
79	Federation Architecture: Simulation Environment Design. Simulation Foundations, Methods and Applications, 2016, , 109-148.	0.1	0
80	Automatic Layout of Scilab/Xcos Diagrams. SNE Simulation Notes Europe, 2017, 27, 143-151.	0.3	0
81	Variability Modeling for Engineering Applications. SNE Simulation Notes Europe, 2017, 27, 167-176.	0.3	0
82	Extending the CMMI Engineering Process Areas for Simulation Systems Engineering. Communications in Computer and Information Science, 2018, , 193-207.	0.5	0
83	A Framework for the Metamodeling of Multivariant Systems and Reactive Simulation Model Generation and Execution. SNE Simulation Notes Europe, 2018, 28, 11-18.	0.3	0
84	Modeling and Simulation-based Development of Autonomy Features for Drones. SNE Simulation Notes Europe, 2018, 28, 55-60.	0.3	0
85	Simulating Variable System Structures for Engineering Emergence. , 2018, , 331-344.		0
86	Inhalt Tagungsband ASIM Workshop STS/GMMS 2019. , 2019, , .		0
87	Redesign and Evaluation of an Equation-Based Model Reduction Method in OpenModelica. International Journal of Engineering Systems Modelling and Simulation, 2019, 11, 1.	0.2	0
88	Simulation Based Execution of UAV Missions Sent Through Web Services. , 0, , .		0
89	ArTIC-M&S: An Architecture for Tosca-Based Inter-Cloud Modeling and Simulation. , 2020, , .		0
90	Verification of Drogue Detection during Autonomous Aerial Refueling in a Simulation Environment. , 0, , .		0