

# Twan Basten

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

171  
papers

2,277  
citations

22  
h-index

42  
g-index

191  
ext. papers

2,715  
ext. citations

2.3  
avg, IF

5.09  
L-index

#	Paper	IF	Citations
171	Inheritance of workflows: an approach to tackling problems related to change. <i>Theoretical Computer Science</i> , <b>2002</b> , 270, 125-203	1.1	304
170	Diagnosing Workflow Processes using Woflan. <i>Computer Journal</i> , <b>2001</b> , 44, 246-279	1.3	221
169	Inheritance of behavior. <i>The Journal of Logic and Algebraic Programming</i> , <b>2001</b> , 47, 47-145		97
168	System-scenario-based design of dynamic embedded systems. <i>ACM Transactions on Design Automation of Electronic Systems</i> , <b>2009</b> , 14, 1-45	1.5	96
167	Exploring trade-offs in buffer requirements and throughput constraints for synchronous dataflow graphs <b>2006</b> ,		87
166	Throughput-Buffering Trade-Off Exploration for Cyclo-Static and Synchronous Dataflow Graphs. <i>IEEE Transactions on Computers</i> , <b>2008</b> , 57, 1331-1345	2.5	85
165	Branching bisimilarity is an equivalence indeed!. <i>Information Processing Letters</i> , <b>1996</b> , 58, 141-147	0.8	58
164	Scenario-aware dataflow: Modeling, analysis and implementation of dynamic applications <b>2011</b> ,		57
163	MoBAN: A Configurable Mobility Model for Wireless Body Area Networks <b>2011</b> ,		43
162	An event-based monitoring service for networks on chip. <i>ACM Transactions on Design Automation of Electronic Systems</i> , <b>2005</b> , 10, 702-723	1.5	37
161	A Predictable Multiprocessor Design Flow for Streaming Applications with Dynamic Behaviour <b>2010</b> ,		35
160	Reactive process networks <b>2004</b> ,		35
159	Identifying Commonalities and Differences in Object Life Cycles Using Behavioral Inheritance. <i>Lecture Notes in Computer Science</i> , <b>2001</b> , 32-52	0.9	32
158	A parameterized compositional multi-dimensional multiple-choice knapsack heuristic for CMP run-time management <b>2009</b> ,		30
157	A domain-independent descriptive design model and its application to structured reflection on design processes. <i>Research in Engineering Design - Theory, Applications, and Concurrent Engineering</i> , <b>2006</b> , 16, 147-173	3.5	30
156	A robust protocol stack for multi-hop wireless body area networks with transmit power adaptation <b>2010</b> ,		28
155	Transaction Monitoring in Networks on Chip: The On-Chip Run-Time Perspective <b>2006</b> ,		26

154	Buffer Sizing for Rate-Optimal Single-Rate Data-Flow Scheduling Revisited. <i>IEEE Transactions on Computers</i> , <b>2010</b> , 59, 188-201	2.5	25
153	Parametric Throughput Analysis of Synchronous Data Flow Graphs <b>2008</b> ,		25
152	Latency Minimization for Synchronous Data Flow Graphs <b>2007</b> ,		25
151	Liveness and Boundedness of Synchronous Data Flow Graphs <b>2006</b> ,		24
150	Automatic scenario detection for improved WCET estimation <b>2005</b> ,		23
149	Topology Management and TSCH Scheduling for Low-Latency Convergecast in In-Vehicle WSNs. <i>IEEE Transactions on Industrial Informatics</i> , <b>2019</b> , 15, 1082-1093	11.9	22
148	A fast and scalable multidimensional multiple-choice knapsack heuristic. <i>ACM Transactions on Design Automation of Electronic Systems</i> , <b>2013</b> , 18, 1-32	1.5	22
147	Model-Driven Design-Space Exploration for Embedded Systems: The Octopus Toolset. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 90-105	0.9	22
146	<b>2004</b> ,		21
145	Ambient intelligence visions and achievements: linking abstract ideas to real-world concepts		21
144	Multiprocessor Resource Allocation for Throughput-Constrained Synchronous Dataflow Graphs. <i>Proceedings - Design Automation Conference</i> , <b>2007</b> ,		20
143	Enhanced Time-Slotted Channel Hopping in WSNs Using Non-intrusive Channel-Quality Estimation <b>2015</b> ,		19
142	Modeling static-order schedules in synchronous dataflow graphs <b>2012</b> ,		18
141	An algebra of Pareto points		18
140	Intra-task scenario-aware voltage scheduling <b>2005</b> ,		17
139	Modular model-based supervisory controller design for wafer logistics in lithography machines <b>2015</b> ,		16
138	Efficient Retiming of Multirate DSP Algorithms. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2012</b> , 31, 831-844	2.5	15
137	Resource-efficient routing and scheduling of time-constrained streaming communication on networks-on-chip. <i>Journal of Systems Architecture</i> , <b>2008</b> , 54, 411-426	5.5	15

136	Parametric throughput analysis of scenario-aware dataflow graphs <b>2012</b> ,		14
135	Exploring trade-offs between performance and resource requirements for synchronous dataflow graphs <b>2009</b> ,		14
134	Mapping of synchronous dataflow graphs on MPSoCs based on parallelism enhancement. <i>Journal of Parallel and Distributed Computing</i> , <b>2017</b> , 101, 79-91	4.4	13
133	Dependable Interference-Aware Time-Slotted Channel Hopping for Wireless Sensor Networks. <i>ACM Transactions on Sensor Networks</i> , <b>2018</b> , 14, 1-35	2.9	13
132	Throughput-constrained DVFS for scenario-aware dataflow graphs <b>2013</b> ,		13
131	Performance Analysis of Weakly-Consistent Scenario-Aware Dataflow Graphs. <i>Journal of Signal Processing Systems</i> , <b>2017</b> , 87, 157-175	1.4	13
130	MCMAC: An Optimized Medium Access Control Protocol for Mobile Clusters in Wireless Sensor Networks <b>2010</b> ,		13
129	Simulating and analyzing railway interlockings in ExSpec. <i>IEEE Parallel and Distributed Technology</i> , <b>1995</b> , 3, 50		13
128	Schedule-Extended Synchronous Dataflow Graphs. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2013</b> , 32, 1495-1508	2.5	12
127	Quality-of-service trade-off analysis for wireless sensor networks. <i>Performance Evaluation</i> , <b>2009</b> , 66, 191-208	1.2	12
126	Formal Modeling and Scheduling of Datapaths of Digital Document Printers. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 170-187	0.9	12
125	Application Scenarios in Streaming-Oriented Embedded System Design <b>2006</b> ,		12
124	Application Scenarios in Streaming-Oriented Embedded-System Design. <i>IEEE Design and Test of Computers</i> , <b>2008</b> , 25, 581-589		11
123	The FitOptiVis ECSEL project <b>2019</b> ,		10
122	<b>2016</b> ,		10
121	Robustness analysis of multiprocessor schedules <b>2014</b> ,		10
120	Scenario Selection and Prediction for DVS-Aware Scheduling of Multimedia Applications. <i>Journal of Signal Processing Systems</i> , <b>2008</b> , 50, 137-161	1.4	10
119	A monitoring-aware network-on-chip design flow. <i>Journal of Systems Architecture</i> , <b>2008</b> , 54, 397-410	5.5	10

118	xCPS. <i>ACM SIGBED Review</i> , <b>2017</b> , 14, 81-95	1.3	9
117	A scenario- and platform-aware design flow for image-based control systems. <i>Microprocessors and Microsystems</i> , <b>2020</b> , 75, 103037	2.4	9
116	Online multi-face detection and tracking using detector confidence and structured SVMs <b>2015</b> ,		9
115	Static Rate-Optimal Scheduling of Multirate DSP Algorithms via Retiming and Unfolding <b>2012</b> ,		9
114	Automated bottleneck-driven design-space exploration of media processing systems <b>2010</b> ,		9
113	Vector time and causality among abstract events in distributed computations. <i>Distributed Computing</i> , <b>1997</b> , 11, 21-39	1.2	9
112	A Calculator for Pareto Points <b>2007</b> ,		9
111	. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2016</b> , 35, 905-918	2.5	8
110	Model-Driven Design-Space Exploration for Software-Intensive Embedded Systems. <i>Embedded Systems</i> , <b>2013</b> , 189-244		8
109	Integrated model-driven design-space exploration for embedded systems <b>2011</b> ,		8
108	Execution-time Prediction for Dynamic Streaming Applications with Task-level Parallelism <b>2007</b> ,		8
107	Cluster-Based Partial-Order Reduction. <i>Automated Software Engineering</i> , <b>2004</b> , 11, 365-402	1.5	8
106	Kahn Process Networks and a Reactive Extension <b>2013</b> , 1041-1081		8
105	Fast Multiprocessor Scheduling with Fixed Task Binding of Large Scale Industrial Cyber Physical Systems <b>2013</b> ,		7
104	Pareto Analysis with Uncertainty <b>2011</b> ,		7
103	Configuring multi-objective evolutionary algorithms for design-space exploration of wireless sensor networks <b>2009</b> ,		7
102	Fast simulation methods to predict wireless sensor network performance <b>2009</b> ,		7
101	On-demand data forwarding for automatic adaptation of data propagation in WBANs <b>2012</b> ,		7

100	Analysing qos trade-offs in wireless sensor networks <b>2007</b> ,		7
99	PARS: A Process Algebra with Resources and Schedulers. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 134-150,		7
98	RASW: A run-time adaptive sliding window to improve Viola-Jones object detection <b>2013</b> ,		6
97	Online Scheduling of 2-Re-entrant Flexible Manufacturing Systems. <i>Transactions on Embedded Computing Systems</i> , <b>2017</b> , 16, 1-20	1.8	6
96	Dynamic data prioritization for quality-of-service differentiation in heterogeneous Wireless Sensor Networks <b>2011</b> ,		6
95	Iteration-Based Trade-Off Analysis of Resource-Aware SDF <b>2011</b> ,		6
94	Profiling Driven Scenario Detection and Prediction for Multimedia Applications <b>2006</b> ,		6
93	Co-simulation Framework for Control, Communication and Traffic for Vehicle Platoons <b>2018</b> ,		6
92	An Experimental Study of Cross-Technology Interference in In-Vehicle Wireless Sensor Networks <b>2016</b> ,		5
91	Semantic interoperability in sensor applications making sense of sensor data <b>2013</b> ,		5
90	A Probabilistic Acknowledgment Mechanism for Wireless Sensor Networks <b>2011</b> ,		5
89	Multi-layer multi-rate model predictive control for vehicle platooning under IEEE 802.11p. <i>Transportation Research Part C: Emerging Technologies</i> , <b>2021</b> , 124, 102905	8.4	5
88	Process Algebra in PVS. <i>Lecture Notes in Computer Science</i> , <b>1999</b> , 270-284	0.9	5
87	Kahn Process Networks and a Reactive Extension <b>2010</b> , 967-1006		5
86	Schedule Synthesis for Halide Pipelines through Reuse Analysis. <i>Transactions on Architecture and Code Optimization</i> , <b>2019</b> , 16, 1-22	1.3	4
85	A blueprint for system-level performance modeling of software-intensive embedded systems. <i>International Journal on Software Tools for Technology Transfer</i> , <b>2016</b> , 18, 21-40	1.3	4
84	Efficient Cluster Mobility Support for TDMA-Based MAC Protocols in Wireless Sensor Networks. <i>ACM Transactions on Sensor Networks</i> , <b>2014</b> , 10, 1-32	2.9	4
83	Analyzing execution traces: critical-path analysis and distance analysis. <i>International Journal on Software Tools for Technology Transfer</i> , <b>2017</b> , 19, 487-510	1.3	4

82	xCPS <b>2015</b> ,		4
81	A tool for fast ground truth generation for object detection and tracking from video <b>2014</b> ,		4
80	Fault-tolerant embedded control systems for unreliable hardware <b>2014</b> ,		4
79	Modeling and validating globally asynchronous design in synchronous frameworks		4
78	Exploring the trade-off between processing resources and settling time in image-based control through LQR tuning <b>2017</b> ,		4
77	Trading Digital Accuracy for Power in an RSSI Computation of a Sensor Network Transceiver <b>2019</b> ,		3
76	A re-entrant flowshop heuristic for online scheduling of the paper path in a large scale printer <b>2015</b> ,		3
75	Performance analysis of weakly-consistent scenario-aware dataflow graphs <b>2014</b> ,		3
74	<b>2012</b> ,		3
73	Architecture for self-organizing, co-operative and robust Building Automation Systems <b>2013</b> ,		3
72	Predicting the throughput of multiprocessor applications under dynamic workload <b>2010</b> ,		3
71	Thermal-aware scratchpad memory design and allocation <b>2010</b> ,		3
70	Proactive reconfiguration of wireless sensor networks <b>2011</b> ,		3
69	Schedule Synthesis for Halide Pipelines on GPUs. <i>Transactions on Architecture and Code Optimization</i> , <b>2020</b> , 17, 1-25	1.3	3
68	QoS Management for Wireless Sensor Networks with a Mobile Sink. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 53-68	0.9	3
67	Memory-constrained static rate-optimal scheduling of synchronous dataflow graphs via retiming <b>2014</b> ,		3
66	Reconfigurable pipelined sensing for image-based control <b>2016</b> ,		3
65	Designing image-based control systems considering workload variations <b>2019</b> ,		3

64	Monotonic Optimization of Dataflow Buffer Sizes. <i>Journal of Signal Processing Systems</i> , <b>2019</b> , 91, 21-32	1.4	3
63	Partial-Order Reduction for Performance Analysis of Max-Plus Timed Systems <b>2018</b> ,		3
62	Designing Area and Performance Constrained SIMD/VLIW Image Processing Architectures. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 689-696	0.9	3
61	Effective link quality estimation as a means to improved end-to-end packet delivery in high traffic mobile ad hoc networks ?. <i>Digital Communications and Networks</i> , <b>2017</b> , 3, 150-163	5.9	2
60	Designing a Controller with Image-based Pipelined Sensing and Additive Uncertainties. <i>ACM Transactions on Cyber-Physical Systems</i> , <b>2019</b> , 3, 1-26	2.3	2
59	Loop transformations leveraging hardware prefetching <b>2018</b> ,		2
58	Robust online face tracking-by-detection <b>2016</b> ,		2
57	Parametric Critical Path Analysis for Event Networks With Minimal and Maximal Time Lags. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2018</b> , 37, 2697-2708	2.5	2
56	Scalable Analysis for Multi-Scale Dataflow Models. <i>Transactions on Embedded Computing Systems</i> , <b>2018</b> , 17, 1-26	1.8	2
55	Multi-Constraint multi-processor Resource Allocation <b>2015</b> ,		2
54	Demonstrating on-demand listening and data forwarding in wireless body area networks <b>2012</b> ,		2
53	A pareto-algebraic framework for signal power optimization in global routing <b>2010</b> ,		2
52	Parameterized Partial Orders for Modeling Embedded System Use Cases: Formal Definition and Translation to Coloured Petri Nets <b>2011</b> ,		2
51	Hybrid Code-Data Prefetch-Aware Multiprocessor Task Graph Scheduling <b>2011</b> ,		2
50	Distributed maintenance of minimum-cost path information in wireless sensor networks <b>2011</b> ,		2
49	Parsing Partially Ordered Multisets. <i>International Journal of Foundations of Computer Science</i> , <b>1997</b> , 08, 379-407	0.6	2
48	Analyzing concurrency in streaming applications. <i>Journal of Systems Architecture</i> , <b>2008</b> , 54, 124-144	5.5	2
47	Predictable embedding of large data structures in multiprocessor networks-on-chip		2



46	Using Aspect-GAMMA in the design of embedded systems		2
45	SPaC 2008,		2
44	Kahn Process Networks and a Reactive Extension 2019, 865-906		2
43	Scenarios in the Design of Flexible Manufacturing Systems 2020, 181-224		2
42	Performance Engineering for Industrial Embedded Data-Processing Systems. <i>Lecture Notes in Computer Science</i> , 2015, 399-414	0.9	2
41	Model-Driven Design-Space Exploration for Software-Intensive Embedded Systems. <i>Lecture Notes in Computer Science</i> , 2012, 1-6	0.9	2
40	Design and management of image processing pipelines within CPS: 2 years of experience from the FitOptiVis ECSEL Project 2020,		2
39	Receiver-Sensitivity Control for Energy-Efficient IoT Networks. <i>IEEE Communications Letters</i> , 2021, 25, 1383-1386	3.8	2
38	Tight temporal bounds for dataflow applications mapped onto shared resources 2016,		2
37	Control of Platooned Vehicles in Presence of Traffic Shock Waves 2019,		2
36	Hybrid Timeslot Design for IEEE 802.15.4 TSCH to Support Heterogeneous WSNs 2018,		2
35	Optimising Quality-of-Control for Data-Intensive Multiprocessor Image-Based Control Systems Considering Workload Variations 2018,		2
34	Task-FIFO Co-Scheduling of Streaming Applications on MPSoCs with Predictable Memory Hierarchy. <i>Transactions on Embedded Computing Systems</i> , 2017, 16, 1-25	1.8	1
33	A Distributed Reconfiguration Approach for Quality-of-Service Provisioning in Dynamic Heterogeneous Wireless Sensor Networks. <i>ACM Transactions on Sensor Networks</i> , 2015, 11, 1-41	2.9	1
32	A Fast Estimator of Performance with Respect to the Design Parameters of Self Re-Entrant Flowshops 2016,		1
31	. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2013, 21, 1308-1321	2.6	1
30	Multi-Domain Virtual Prototyping in a SystemC SIL framework: A heating system case study 2015,		1
29	Iterative robust multiprocessor scheduling 2015,		1

28	Task-FIFO Co-scheduling of Streaming Applications on MPSoCs with Predictable Memory Hierarchy <b>2015,</b>			1
27	Memory-constrained static rate-optimal scheduling of synchronous dataflow graphs via retiming <b>2014,</b>			1
26	<b>2012,</b>			1
25	A Distributed Feedback Control Mechanism for Quality-of-Service Maintenance in Wireless Sensor Networks <b>2012,</b>			1
24	Playing games with scenario- and resource-aware SDF graphs through policy iteration <b>2012,</b>			1
23	Dynamic-SIMD for lens distortion compensation <b>2006,</b>			1
22	CAST - a task-level concurrency analysis tool			1
21	Programming tensor cores from an image processing DSL <b>2020,</b>			1
20	Firmness Analysis of Real-time Tasks. <i>Transactions on Embedded Computing Systems</i> , <b>2020</b> , 19, 1-24	1.8		1
19	Trading Sensitivity for Power in an IEEE 802.15.4 Conformant Adequate Demodulator <b>2020,</b>			1
18	INLyD <b>2016,</b>			1
17	Compositional Dataflow Modelling for Cyclo-Static Applications <b>2018,</b>			1
16	Model-driven system-performance engineering for cyber-physical systems <b>2021,</b>			1
15	Partial-Order Reduction for Supervisory Controller Synthesis. <i>IEEE Transactions on Automatic Control</i> , <b>2021</b> , 1-1	5.9		0
14	Design and management of image processing pipelines within CPS: acquired experience towards the end of the FitOptiVis ECSEL Project. <i>Microprocessors and Microsystems</i> , <b>2021</b> , 104350	2.4		0
13	Delay-Aware Multi-Layer Multi-Rate Model Predictive Control for Vehicle Platooning Under Message-Rate Congestion Control. <i>IEEE Access</i> , <b>2022</b> , 10, 44583-44607	3.5		0
12	Special Section. <i>ACM Transactions on Design Automation of Electronic Systems</i> , <b>2017</b> , 22, 1-2	1.5		
11	Parametric Scheduler Characterization. <i>Transactions on Embedded Computing Systems</i> , <b>2019</b> , 18, 1-25	1.8		

- 10 Wireless Body Area Network Protocols **2015**, 191-210
- 9 Wireless Body Area Network Data Delivery **2015**, 211-230
- 8 Fast-performance simulation for Gossip-based Wireless Sensor Networks. *Simulation*, **2014**, 90, 103-126 1.2
- 7 Aspects of Adaptive Systems Engineering: A Professional Printing Case. *Embedded Systems*, **2013**, 11-40
- 6 Static resource models for code-size efficient embedded processors. *Transactions on Embedded Computing Systems*, **2003**, 2, 219-250 1.8
- 5 A Compositional Model for Multi-Rate Max-Plus Linear Systems. *IFAC-PapersOnLine*, **2020**, 53, 54-61 0.7
- 4 Introduction and Organization of Book Material **2020**, 1-5
- 3 Scenarios in Dataflow Modeling and Analysis **2020**, 145-180
- 2 Reconfigurable Pipelined Control Systems. *IEEE Design and Test*, **2020**, 1-1 1.4
- 1 Optimising Multiprocessor Image-Based Control Through Pipelining and Parallelism. *IEEE Access*, **2021**, 9, 112332-112358 3.5