

# Holger Voos

## List of Publications by Year in descending order

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Version: 2024-02-01

180  
papers

1,967  
citations

430442

18  
h-index

433756

31  
g-index

182  
all docs

182  
docs citations

182  
times ranked

1844  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonlinear control of a quadrotor micro-UAV using feedback-linearization. , 2009, , .		195
2	Observer-Based Approach for Fractional-Order Chaotic Synchronization and Secure Communication. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2013, 3, 442-450.	2.7	80
3	Towards an Autonomous Vision-Based Unmanned Aerial System against Wildlife Poachers. Sensors, 2015, 15, 31362-31391.	2.1	73
4	A Survey of Computer Vision Methods for 2D Object Detection from Unmanned Aerial Vehicles. Journal of Imaging, 2020, 6, 78.	1.7	60
5	Design of unknown input fractional-order observers for fractional-order systems. International Journal of Applied Mathematics and Computer Science, 2013, 23, 491-500.	1.5	59
6	Controller design for quadrotor UAVs using reinforcement learning. , 2010, , .		57
7	A Real-Time 3D Path Planning Solution for Collision-Free Navigation of Multirotor Aerial Robots in Dynamic Environments. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 93, 33-53.	2.0	57
8	Position Identification in Force-Guided Robotic Peg-in-Hole Assembly Tasks. Procedia CIRP, 2014, 23, 217-222.	1.0	54
9	New unified $\frac{H}{s^2}$ dynamic observer design for linear systems with unknown inputs. Automatica, 2016, 65, 43-52.	3.0	50
10	Collision Avoidance Effects on the Mobility of a UAV Swarm Using Chaotic Ant Colony with Model Predictive Control. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 93, 227-243.	2.0	46
11	Design and simulation of a real-time implementable energy-efficient model-predictive cruise controller for electric vehicles. Journal of the Franklin Institute, 2015, 352, 603-625.	1.9	45
12	A Real-Time Approach for Chance-Constrained Motion Planning With Dynamic Obstacles. IEEE Robotics and Automation Letters, 2020, 5, 3620-3625.	3.3	45
13	When I Look into Your Eyes: A Survey on Computer Vision Contributions for Human Gaze Estimation and Tracking. Sensors, 2020, 20, 3739.	2.1	44
14	Adaptive observer for nonlinear fractional-order systems. International Journal of Adaptive Control and Signal Processing, 2017, 31, 314-331.	2.3	37
15	Nonlinear and neural network-based control of a small four-rotor aerial robot. , 2007, , .		33
16	Mixed Integer linear programming and constraint programming models for the online printing shop scheduling problem. Computers and Operations Research, 2020, 123, 105020.	2.4	33
17	Nonlinear tracking and landing controller for quadrotor aerial robots. , 2010, , .		32
18	Vision based fuzzy control autonomous landing with UAVs: From V-REP to real experiments. , 2015, , .		31

#	ARTICLE	IF	CITATIONS
19	Nonlinear state-dependent Riccati equation control of a quadrotor UAV. , 2006, , .		29
20	A real-time model predictive position control with collision avoidance for commercial low-cost quadrotors. , 2016, , .		26
21	A Fast Modelâ€Predictive Speed Controller for Minimised Charge Consumption of Electric Vehicles. Asian Journal of Control, 2016, 18, 133-149.	1.9	25
22	Attack-tolerant control and observer-based trajectory tracking for Cyber-Physical Systems. European Journal of Control, 2019, 47, 30-36.	1.6	24
23	Static output feedback $\hat{a}, \hat{z}$ control for a fractional-order glucose-insulin system. International Journal of Control, Automation and Systems, 2015, 13, 798-807.	1.6	23
24	Nonlinear Model Predictive Control for Ecological Driver Assistance Systems in Electric Vehicles. Robotics and Autonomous Systems, 2019, 112, 291-303.	3.0	21
25	Contact-state modelling in force-controlled robotic peg-in-hole assembly processes of flexible objects using optimised Gaussian mixtures. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2017, 231, 1448-1463.	1.5	20
26	A new polytopic approach for the unknown input functional observer design. International Journal of Control, 2018, 91, 658-677.	1.2	20
27	Impact of different spacing policies for adaptive cruise control on traffic and energy consumption of electric vehicles. , 2016, , .		19
28	Model Predictive Control for Aerial Collision Avoidance in Dynamic Environments. , 2018, , .		19
29	Adaptive control of Aerial Manipulation Vehicle. , 2014, , .		18
30	A model predictive approach for cyber-attack detection and mitigation in control systems. , 2013, , .		17
31	Nonlinear State-Dependent Riccati Equation Control of a Quadrotor UAV. , 2006, , .		17
32	Area exploration with a swarm of UAVs combining deterministic chaotic ant colony mobility with position MPC. , 2017, , .		16
33	Nonlinear model predictive extended eco-cruise control for battery electric vehicles. , 2016, , .		15
34	An efficient nonlinear model-predictive eco-cruise control for electric vehicles. , 2013, , .		14
35	Adaptive sliding mode fuzzy control for unknown robots with arbitrarily-switched constraints. Mechatronics, 2015, 30, 174-186.	2.0	14
36	Vision-Based Steering Control, Speed Assistance and Localization for Inner-City Vehicles. Sensors, 2016, 16, 362.	2.1	14

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37	An extended flexible job shop scheduling problem with parallel operations. ACM SIGAPP Applied Computing Review: A Publication of the Special Interest Group on Applied Computing, 2018, 18, 46-56.	0.5	14
38	Metaheuristics for the online printing shop scheduling problem. European Journal of Operational Research, 2021, 293, 419-441.	3.5	14
39	Modeling and Control of Aerial Manipulation Vehicle with Visual sensor. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 303-309.	0.4	13
40	A discrete-time nonlinear state observer for the anaerobic digestion process. International Journal of Robust and Nonlinear Control, 2019, 29, 1279-1301.	2.1	13
41	Ecological Advanced Driver Assistance System for Optimal Energy Management in Electric Vehicles. IEEE Intelligent Transportation Systems Magazine, 2020, 12, 92-109.	2.6	13
42	Entwurf eines Flugreglers für ein vierrotoriges unbemanntes Fluggerät. Control Systems Design for a Quadrotor UAV. Automatisierungstechnik, 2009, 57, 423-431.	0.4	12
43	Setting up a testbed for UAV vision based control using V-REP & ROS: A case study on aerial visual inspection. , 2014, , .		12
44	A Nonlinear observer-based trajectory tracking method applied to an anaerobic digestion process. Journal of Process Control, 2019, 75, 120-135.	1.7	12
45	Model predictive cooperative localization control of multiple UAVs using potential function sensor constraints. Autonomous Robots, 2019, 43, 153-178.	3.2	12
46	Declarative Specification of Robot Perception Architectures. Lecture Notes in Computer Science, 2014, , 291-302.	1.0	12
47	Nonlinear protocols for distributed consensus in directed networks of dynamic agents. Journal of the Franklin Institute, 2015, 352, 3645-3669.	1.9	11
48	Situational Graphs for Robot Navigation in Structured Indoor Environments. IEEE Robotics and Automation Letters, 2022, 7, 9107-9114.	3.3	11
49	A SysML-based integration framework for the engineering of mechatronic systems. , 2010, , .		10
50	An unknown input fractional-order observer design for fractional-order glucose-insulin system. , 2012, , .		10
51	An algebraic detection approach for control systems under multiple stochastic cyber-attacks. IEEE/CAA Journal of Automatica Sinica, 2015, 2, 258-266.	8.5	10
52	Glucose-Insulin System Based on Minimal Model: A Realistic Approach. , 2015, , .		9
53	A new approach for optimal control using market-based algorithms. , 1999, , .		8
54	Safety oriented software engineering process for autonomous robots. , 2013, , .		8

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55	H $\hat{a}$ z Static Output Feedback Control for a Fractional-Order Glucose-Insulin System. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 266-271.	0.4	8
56	A novel model-predictive cruise controller for electric vehicles and energy-efficient driving. , 2014, , .		8
57	Cyber-attack detection based on controlled invariant sets. , 2014, , .		8
58	Chaos in a fractional-order cancer system. , 2014, , .		8
59	Real-time graph-based SLAM in unknown environments using a small UAV. , 2017, , .		8
60	Comparative study of genetic and discrete firefly algorithm for combinatorial optimization. , 2018, , .		8
61	Cyber Security and Vulnerability Analysis of Networked Control System subject to False-Data injection. , 2018, , .		8
62	Operational space control of a lightweight robotic arm actuated by shape memory alloy wires: A comparative study. Journal of Intelligent Material Systems and Structures, 2019, 30, 1368-1384.	1.4	8
63	Resource Allocation in Continuous Production using Market-Based Multi-Agent Systems. , 2007, , .		7
64	A modularization approach for nonlinear model predictive control of distributed fast systems. , 2016, , .		7
65	A Reference Architecture for Deploying Component-Based Robot Software and Comparison with Existing Tools. , 2018, , .		7
66	Robust Online Obstacle Detection and Tracking for Collision-Free Navigation of Multirotor UAVs in Complex Environments. , 2018, , .		7
67	Vision-Based Aircraft Pose Estimation for UAVs Autonomous Inspection without Fiducial Markers. , 2019, , .		7
68	Trajectory Tracking for Aerial Robots: an Optimization-Based Planning and Control Approach. Journal of Intelligent and Robotic Systems: Theory and Applications, 2020, 100, 531-574.	2.0	7
69	Observer-based approach for fractional-order chaotic synchronization and communication. , 2013, , .		7
70	Graph-based software knowledge: Storage and semantic querying of domain models for run-time adaptation. , 2016, , .		6
71	Control of aerial manipulation vehicle in operational space. , 2016, , .		6
72	Real time degradation identification of UAV using machine learning techniques. , 2017, , .		6

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73	Arguing Security of Autonomous Robots. , 2019, , .		6
74	An Integrated Teleoperation Assistance System for Collision Avoidance of High-speed UAVs in Complex Environments. , 2020, , .		6
75	In-situ unmanned aerial vehicle (UAV) sensor calibration to improve automatic image orthorectification. , 2010, , .		5
76	Robust H $\infty$ cyber-attacks estimation for control systems. , 2014, , .		5
77	A Formal Modeling Framework for Anaerobic Digestion Systems. , 2015, , .		5
78	An approach for a distributed world model with QoS-based perception algorithm adaptation. , 2015, , .		5
79	A flexible move blocking strategy to speed up model-predictive control while retaining a high tracking performance. , 2016, , .		5
80	On the robustness of linear and non-linear fractional-order systems with non-linear uncertain parameters. IMA Journal of Mathematical Control and Information, 2016, 33, 997-1014.	1.1	5
81	Model predictive control for cooperative control of space robots. AIP Conference Proceedings, 2017, , .	0.3	5
82	Risk-averse Stochastic Nonlinear Model Predictive Control for Real-time Safety-critical Systems. IFAC-PapersOnLine, 2017, 50, 5991-5997.	0.5	5
83	A contribution to cyber-security of networked control systems: An event-based control approach. , 2017, , .		5
84	Safer UAV Piloting: A Robust Sense-and-Avoid Solution for Remotely Piloted Quadrotor UAVs in Complex Environments. , 2019, , .		5
85	The NOAH Project: Giving a Chance to Threatened Species in Africa with UAVs. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2014, , 198-208.	0.2	5
86	Generalized H $\infty$ observers design for systems with unknown inputs. , 2013, , .		4
87	Using the Cross-Entropy method for control optimization: A case study of see-and-avoid on unmanned aerial vehicles. , 2014, , .		4
88	Context-based selection and execution of robot perception graphs. , 2015, , .		4
89	Decentralized dynamic-observer-based control for large scale nonlinear uncertain systems. , 2015, , .		4
90	Gaussian filtering for enhanced impedance parameters identification in robotic assembly processes. , 2015, , .		4

#	ARTICLE	IF	CITATIONS
91	A tracking error control approach for model predictive position control of a quadrotor with time varying reference. , 2016, , .		4
92	An application of linear algebra theory in networked control systems: stochastic cyber-attacks detection approach. IMA Journal of Mathematical Control and Information, 2016, 33, 1081-1102.	1.1	4
93	Fast stochastic non-linear model predictive control for electric vehicle advanced driver assistance systems. , 2017, , .		4
94	A Contribution to Cyber-Physical Systems Security: an Event-based Attack-tolerant Control Approach. IFAC-PapersOnLine, 2018, 51, 957-962.	0.5	4
95	A Mathematical Model and a Firefly Algorithm for an Extended Flexible Job Shop Problem with Availability Constraints. Lecture Notes in Computer Science, 2018, , 548-560.	1.0	4
96	Deep learning based semantic situation awareness system for multirotor aerial robots using LIDAR. , 2019, , .		4
97	Deep Reinforcement Learning-based Continuous Control for Multicopter Systems. , 2019, , .		4
98	Evaluation of End-to-End Learning for Autonomous Driving: The Good, the Bad and the Ugly. , 2019, , .		4
99	Nonlinear observer-based control with application to an anaerobic digestion process. European Journal of Control, 2019, 45, 74-84.	1.6	4
100	New Results on the Numerical Stability of the Stochastic Fluid Flow Model Analysis. Lecture Notes in Computer Science, 2000, , 446-457.	1.0	4
101	Action planning for autonomous systems with respect to safety aspects. , 2010, , .		3
102	Indoor navigation for quadrotor UAVS using schematic environment maps. , 2010, , .		3
103	Towards learning of safety knowledge from human demonstrations. , 2012, , .		3
104	A real-time implementable model-predictive cruise controller for electric vehicles and energy-efficient driving. , 2014, , .		3
105	H&lt;inf&gt;&#x221E;&lt;/inf&gt; dynamic observer design for linear time invariant systems. , 2014, , .		3
106	A class of Improved Wake Interaction Model for the coordinated control of wind farms. , 2015, , .		3
107	A wake interaction model for the coordinated control of Wind Farms. , 2015, , .		3
108	Effects of permanent bounded cyber-attacks on networked control systems. , 2015, , .		3

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109	Model Predictive Control for Spacecraft Rendezvous. , 2016, , .		3
110	Lightweight robotic arm actuated by shape memory alloy (SMA) wires. , 2016, , .		3
111	Automated Decision Support IoT Framework. , 2016, , .		3
112	Cooperative localization of unmanned aerial vehicles in ROS â€” The Atlas node. , 2017, , .		3
113	Implementation and validation of an event-based real-time nonlinear model predictive control framework with ROS interface for single and multi-robot systems. , 2017, , .		3
114	A Perspective of Security for Mobile Service Robots. Advances in Intelligent Systems and Computing, 2018, , 88-100.	0.5	3
115	Evasive Maneuvering for UAVs: An MPC Approach. Advances in Intelligent Systems and Computing, 2018, , 829-840.	0.5	3
116	Heuristic Procedure For The Centralized Control Of EV Charging In LV Networks. IEEE Latin America Transactions, 2019, 17, 453-461.	1.2	3
117	Semantic situation awareness of ellipse shapes via deep learning for multirotor aerial robots with a 2D LIDAR. , 2020, , .		3
118	Faster Visual-Based Localization with Mobile-PoseNet. Lecture Notes in Computer Science, 2019, , 219-230.	1.0	3
119	Agent-Based Distributed Resource Allocation in Continuous Dynamic Systems. , 0, , .		2
120	Visual Attitude Estimation for Low-Cost Personal Remote Sensing Systems. , 2011, , .		2
121	Robust Exploration/Exploitation Trade-Offs in Safety-Critical Applications. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 660-665.	0.4	2
122	Static output feedback stabilization of nonlinear fractional-order glucose-insulin system. , 2012, , .		2
123	Swarm-based evaluation of nonparametric SysML mechatronics system design. , 2013, , .		2
124	H&inf&#x221E;&lt;/inf&gt; decentralized dynamic-observer-based control for large-scale uncertain nonlinear systems. , 2014, , .		2
125	A multilayer software architecture for safe autonomous robots. , 2014, , .		2
126	Model-Free Robust Adaptive Control for flexible rubber objects manipulation. , 2015, , .		2



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127	Adaptive Control of Hysteretic Robotic arm in Operational Space. , 2016, , .		2
128	Invariant observer applied to anaerobic digestion model. , 2016, , .		2
129	An LMI-Based H $\hat{z}$ Discrete-Time Nonlinear State Observer Design for an Anaerobic Digestion Model. IFAC-PapersOnLine, 2017, 50, 11547-11552.	0.5	2
130	A Polytopic Observer Design Approach for Landing Control of a Quadrotor UAV. IFAC-PapersOnLine, 2017, 50, 9753-9759.	0.5	2
131	Vulnerability Analysis of Cyber Physical Systems Under False-Data Injection and Disturbance Attacks. , 2018, , .		2
132	Towards trajectory planning from a given path for multirotor aerial robots trajectory tracking. , 2018, , .		2
133	Stability Analysis of Power Networks under Cyber-Physical Attacks: an LPV-Descriptor Approach. , 2019, , .		2
134	Observer-Based Event-Triggered Attack-Tolerant Control Design for Cyber-Physical Systems. , 2019, , 439-462.		2
135	Video Indexing Using Face Appearance and Shot Transition Detection. , 2019, , .		2
136	Real-Time Human Head Imitation for Humanoid Robots. , 2019, , .		2
137	Title is missing!. ScienceAsia, 2010, 36, 333.	0.2	2
138	Simultaneous State and False-Data Injection Attacks Reconstruction for NonLinear Systems. , 2019, , .		2
139	A Preliminary Study on the Automatic Visual based Identification of UAV Pilots from Counter UAVs. , 2020, , .		2
140	Utilizing dynamic hazard knowledge for risk sensitive action planning of autonomous robots. , 2012, , .		1
141	&#x210B;&lt;inf&gt;&#x2212;&lt;/inf&gt; adaptive observer design and parameter identification for a class of nonlinear fractional-order systems. , 2014, , .		1
142	Uncertainty quantification of Group Synchronization and control of a new class of adaptive complex dynamical network with brownian motion and Time-varying Delay. , 2014, , .		1
143	Exponential synchronization for a new class of complex dynamical network with PIPC and hybrid TVD. , 2014, , .		1
144	Group synchronization and control of a new class of adaptive complex network with Brownian Motion and Time-varying Delay. , 2014, , .		1

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145	Adaptive control of the methane flow rate in biogas plants. , 2015, , .		1
146	Linearizing control of biogas flow rate and quality. , 2015, , .		1
147	Stochastic cyber-attacks estimation for nonlinear control systems based on robust H&lt;inf&gt;&#x221E;&lt;/inf&gt; filtering technique. , 2015, , .		1
148	States and unknown input estimation via non-linear sliding mode high-gain observers for a glucose-insulin system. , 2016, , .		1
149	Adaptive Control of Robotic arm with Hysteretic Joint. , 2016, , .		1
150	Operational Space Control of a Lightweight Robotic Arm Actuated by Shape Memory Alloy (SMA) Wires. , 2016, , .		1
151	Hierarchical control of aerial manipulation vehicle. AIP Conference Proceedings, 2017, , .	0.3	1
152	Model-Driven Interaction Design for Social Robots. Lecture Notes in Computer Science, 2018, , 219-224.	1.0	1
153	Deadzone-Quadratic Penalty Function for Predictive Extended Cruise Control with Experimental Validation. Advances in Intelligent Systems and Computing, 2018, , 446-459.	0.5	1
154	Experimental Validation of Adaptive Control for a Shape Memory Alloy Actuated Lightweight Robotic Arm. , 2018, , .		1
155	Stochastic Optimum Energy Management for Advanced Transportation Network. IFAC-PapersOnLine, 2018, 51, 317-322.	0.5	1
156	A non-invasive tool for attention-deficit disorder analysis based on gaze tracks. , 2019, , .		1
157	An effective hybrid imperialist competitive algorithm and tabu search for an extended flexible job shop scheduling problem. , 2019, , .		1
158	A case study on the impact of masking moving objects on the camera pose regression with CNNs. , 2019, , .		1
159	Ocular Biometrics Recognition by Analyzing Human Exploration during Video Observations. Applied Sciences (Switzerland), 2020, 10, 4548.	1.3	1
160	Global Sensitivity Analysis of Economic Model Predictive Longitudinal Motion Control of a Battery Electric Vehicle. Electronics (Switzerland), 2022, 11, 1574.	1.8	1
161	NeuroIdentifier: Tool zur Identifikation dynamischer Systeme mit neuronalen Netzen. Automatisierungstechnik, 1999, 47, 181-182.	0.4	0
162	DESIGN AND CONTROL OF A MOBILE EXPLORATION ROBOT. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 950-955.	0.4	0

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163	A MATLAB-Based Application Development Using a 3D PMD Camera for a Mobile Robot. , 2011, , .		0
164	Multiagent-based flexible automation of microproduction systems including mobile transport robots. , 2013, , .		0
165	Visual odometry based absolute target geo-location from micro aerial vehicle. , 2015, , .		0
166	Observer Design for a Nonlinear Minimal Model of Glucose Disappearance and Insulin Kinetics. Communications in Computer and Information Science, 2015, , 261-273.	0.4	0
167	Uncertainty quantification of exponential synchronization for a novel class of complex dynamical networks with hybrid TVD using PIPC. , 2015, , .		0
168	A polytopic approach for the nonlinear unknown input functional observers design: Application to a quadrotor aerial robots landing. , 2016, , .		0
169	A generalized interaction Wake Model with its variation for control in Wind Farms. , 2016, , .		0
170	On the unknown input functional observers design: A polytopic Takagi-Sugeno approach. , 2016, , .		0
171	Generalized wake interaction models and optimal control in wind farms. , 2016, , .		0
172	UAV degradation identification for pilot notification using machine learning techniques. , 2016, , .		0
173	Unknown input functional observers design for polytopic discrete time systems. , 2017, , .		0
174	An Imperialist Competitive Algorithm for a Real-World Flexible Job Shop Scheduling Problem. , 2018, , .		0
175	A Decoupling Approach to Design Observers for Polytopic Takagi-Sugeno Models Subject to Unknown Inputs. , 2018, , .		0
176	A parallel multi-population biased random-key genetic algorithm for electric distribution network reconfiguration. , 2019, , .		0
177	Nonlinear Landing Control for Quadrotor UAVs. Informatik Aktuell, 2009, , 113-120.	0.4	0
178	Collaborative Explanation and Response in Assisted Living Environments Enhanced with Humanoid Robots. , 2016, , .		0
179	Understanding and Modelling Human Attention for Soft Biometrics Purposes. , 2019, , .		0
180	On the Event-based Attack-tolerant Control. , 2019, , .		0