# Zhihua Qu

List of Publications by Year
in descending order

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|---|---|---|---|
| 166 papers | 4,032 citations | 279798 23 h-index | 149698 56 g-index |
| 169 all docs | 169 docs citations | 169 times ranked | 2868 citing authors |

| # | ARTICLE | IF | CITATIONS |
|---|---------|----|-----------|
| 1 | Continuous-Domain Real-Time Distributed ADMM Algorithm for Aggregator Scheduling and Voltage Stability in Distribution Network. IEEE Transactions on Automation Science and Engineering, 2022, 19, 60-69. | 5.2 | 10 |
| 2 | Distributed algorithms to determine eigenvectors of matrices on spatially distributed networks. Signal Processing, 2022, 196, 108530. | 3.7 | 2 |
| 3 | Resilient Dynamic Average-Consensus of Multiagent Systems. , 2022, 6, 3487-3492. | | 4 |
| 4 | Distributed resilient consensus on general digraphs under cyber-attacks. European Journal of Control, 2022, 68, 100681. | 2.6 | 4 |
| 5 | Data-Driven Wide-Area Control Design of Power System Using the Passivity Shortage Framework. IEEE Transactions on Power Systems, 2021, 36, 830-841. | 6.5 | 8 |
| 6 | An Optimal Kalman-Consensus Filter for Distributed Implementation Over a Dynamic Communication Network. IEEE Access, 2021, 9, 66696-66706. | 4.2 | 5 |
| 7 | Renewable energy integration and system operation challenge: control and optimization of millions of devices. , 2021, , 49-98. | | 4 |
| 8 | A Novel State-Constrained Primary Control for Grid-Forming Inverters. , 2021, , . | | 2 |
| 9 | Cooperative transport control by a multicopter system. IET Control Theory and Applications, 2021, 15, 861-876. | 2.1 | 2 |
| 10 | Resilient Control of Cyber-Physical System Using Nonlinear Encoding Signal Against System Integrity Attacks. IEEE Transactions on Automatic Control, 2021, 66, 4334-4341. | 5.7 | 17 |
| 11 | Distributed Data-Driven Power Iteration for Strongly Connected Networks. , 2021, , . | | 0 |
| 12 | A Triangulation-Based Coverage Path Planning. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 2157-2169. | 9.3 | 22 |
| 13 | An Optimized Input/Output-Constrained Control Design With Application to Microgrid Operation. , 2020, 4, 367-372. | | 8 |
| 14 | A Passivity-Shortage Based Control Design for Teleoperation With Time-Varying Delays. IEEE Robotics and Automation Letters, 2020, 5, 4070-4077. | 5.1 | 5 |
| 15 | A Hybrid-Learning Algorithm for Online Dynamic State Estimation in Multimachine Power Systems. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 5497-5508. | 11.3 | 14 |
| 16 | Preserving and Achieving Passivity-Short Property Through Discretization. IEEE Transactions on Automatic Control, 2020, 65, 4265-4272. | 5.7 | 2 |
| 17 | Resilient Cooperative Voltage Control for Distribution Network with High Penetration Distributed Energy Resources. , 2020, , . | | 7 |
| 18 | Self Attack Detection and State Estimation Algorithm in Distributed Observer System under Combination Attack. , 2020, , . | | 1 |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 19 | Data-Driven Distributed Algorithms for Estimating Eigenvalues and Eigenvectors of Interconnected Dynamical Systems. IFAC-PapersOnLine, 2020, 53, 52-57. | 0.9 | 3 |
| 20 | Non-Cooperative Optimization Algorithm of Charging Scheduling for Electric Vehicle. SICE Journal of Control Measurement and System Integration, 2020, 13, 265-273. | 0.7 | 2 |
| 21 | Decision-Making in Complex Dynamical Systems of Systems With One Opposing Subsystem. , 2019, , . | | 2 |
| 22 | Distributed finite-time estimation of the bounds on algebraic connectivity for directed graphs. Automatica, 2019, 107, 289-295. | 5.0 | 17 |
| 23 | Resilient Reinforcement in Secure State Estimation Against Sensor Attacks With <i>A Priori</i> Information. IEEE Transactions on Automatic Control, 2019, 64, 5024-5038. | 5.7 | 26 |
| 24 | Cooperative Design of Systems of Systems Against Attack on One Subsystem. , 2019, , . | | 1 |
| 25 | Smart Grid Security: Attacks and Defenses. Power Electronics and Power Systems, 2019, , 199-223. | 0.6 | 9 |
| 26 | Distributed Link Removal Using Local Estimation of Network Topology. IEEE Transactions on Network Science and Engineering, 2019, 6, 280-292. | 6.4 | 17 |
| 27 | Toward Resilient Operation of Smart Grid. Power Electronics and Power Systems, 2019, , 275-288. | 0.6 | 3 |
| 28 | A Real-Time Big Data Control-Theoretical Framework for Cyber-Physical-Human Systems. Springer Optimization and Its Applications, 2019, , 149-172. | 0.9 | 2 |
| 29 | Competitive Interaction Design of Cooperative Systems Against Attacks. IEEE Transactions on Automatic Control, 2018, 63, 3159-3166. | 5.7 | 82 |
| 30 | Motion synchronization for semi-autonomous robotic swarm with a passivity-short human operator. International Journal of Intelligent Robotics and Applications, 2018, 2, 235-251. | 2.8 | 13 |
| 31 | A Kernel-Based Predictive Model of EV Capacity for Distributed Voltage Control and Demand Response. IEEE Transactions on Smart Grid, 2018, 9, 3180-3190. | 9.0 | 16 |
| 32 | A Rainbow Coverage Path Planning for a Patrolling Mobile Robot With Circular Sensing Range. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2018, 48, 1238-1254. | 9.3 | 24 |
| 33 | Restoration using Distributed Energy Resources for Resilient Power Distribution Networks. , 2018, , . | | 1 |
| 34 | Discrete-time 3-D Attitude Synchronization Based on Passivity Shortage. , 2018, , . | | 2 |
| 35 | Coordinated Optimal Control of Constrained DERs. , 2018, , . | | 4 |
| 36 | Passivity-Short Bilateral Teleoperation with Communication Delays. , 2018, , . | | 3 |

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|---|---------|-----|-----------|
| 37 | Distributed Learning of Mode Shapes in Power System Models. , 2018, , . | | 6 |
| 38 | Passivity-Short-based Stability Analysis on Electricity Market Trading System Considering Negative Price. , 2018, , . | | 2 |
| 39 | Non-Cooperative Optimization of Charging Scheduling of Electric Vehicle via Stackelberg Game. , 2018, , . | | 7 |
| 40 | Control of Cryogenic Memory State Transitions in a Josephson Junction Array. , 2018, , . | | 2 |
| 41 | Distributed Scheduling and Cooperative Control for Charging of Electric Vehicles at Highway Service Stations. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 2713-2727. | 8.0 | 93 |
| 42 | A distributed cooperative load control approach for ancillary services in smart grid. , 2017, , . | | 0 |
| 43 | Dissipativity-based design of local and wide-area DER controls for large-scale power systems with high penetration of renewables. , 2017, , . | | 10 |
| 44 | Distributed Estimation of All the Eigenvalues and Eigenvectors of Matrices Associated With Strongly Connected Digraphs. , 2017, 1, 328-333. | | 52 |
| 45 | The role of electric vehicles for frequency regulation during grid restoration. , 2017, , . | | 3 |
| 46 | Passivity-based stability analysis of dynamic electricity pricing with power flow. , 2017, , . | | 6 |
| 47 | Cooperative, non-cooperative and greedy pursuers strategies in multi-player pursuit-evasion games. , 2017, , . | | 15 |
| 48 | A Kernel-based predictive model of EV capacity for distributed voltage control and demand response. , 2017, , . | | 0 |
| 49 | Distributed cooperative state estimation for dynamically changing networked navigation. , 2016, , . | | 1 |
| 50 | A restorative strategy for resilient unbalanced power distribution networks. , 2016, , . | | 0 |
| 51 | An adaptive restorative method for resilient power distribution networks. , 2016, , . | | 5 |
| 52 | Cooperative control of heterogeneous multi-agent systems in a sampled-data setting. , 2016, , . | | 17 |
| 53 | An Attack-Resilient Cooperative Control Strategy of Multiple Distributed Generators in Distribution Networks. IEEE Transactions on Smart Grid, 2016, 7, 2923-2932. | 9.0 | 81 |
| 54 | Analysis of cooperative systems with time delay: Application to transportation systems. , 2016, , . | | 1 |

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|---|---------|-----|-----------|
| 55 | Multivariate Predictive Analytics of Wind Power Data for Robust Control of Energy Storage. IEEE Transactions on Industrial Informatics, 2016, 12, 1350-1360. | 11.3 | 18 |
| 56 | Game theoretical designs of resilient cooperative systems. , 2015, , . | | 9 |
| 57 | On constructing Lyapunov functions for multi-agent systems. Automatica, 2015, 58, 39-42. | 5.0 | 203 |
| 58 | Growing connected networks under privacy constraint: Achieving trade-off between performance and security. , 2015, , . | | 5 |
| 59 | Scheduled Perturbation to Reduce Nondetection Zone for Low Gain Sandia Frequency Shift Method. IEEE Transactions on Smart Grid, 2015, 6, 3095-3103. | 9.0 | 17 |
| 60 | Stochastic distributed optimization of reactive power operations using conditional ensembles of V2G capacity. , 2015, , . | | 5 |
| 61 | An autonomous underwater vehicle as an underwater glider and its depth control. International Journal of Control, Automation and Systems, 2015, 13, 1212-1220. | 2.7 | 32 |
| 62 | A Transient Stiffness Measure for Islanding Detection of Multi-DG Systems. IEEE Transactions on Power Delivery, 2015, 30, 986-995. | 4.3 | 18 |
| 63 | Development of Dynamic Estimators for Islanding Detection of Inverter-Based DG. IEEE Transactions on Power Delivery, 2015, 30, 428-436. | 4.3 | 22 |
| 64 | Optimal design of cooperative guidance law for simultaneous strike. , 2014, , . | | 6 |
| 65 | Scheduling and cooperative control of electric vehicles' charging at highway service stations. , 2014, , . | | 23 |
| 66 | Cooperative control with distributed gain adaptation and connectivity estimation for directed networks. International Journal of Robust and Nonlinear Control, 2014, 24, 450-476. | 3.7 | 41 |
| 67 | Robust design of cooperative systems against attacks. , 2014, , . | | 27 |
| 68 | Modularized design for cooperative control and plug-and-play operation of networked heterogeneous systems. Automatica, 2014, 50, 2405-2414. | 5.0 | 71 |
| 69 | Optimal, Nonlinear, and Distributed Designs of Droop Controls for DC Microgrids. IEEE Transactions on Smart Grid, 2014, 5, 2508-2516. | 9.0 | 107 |
| 70 | Realizing Unified Microgrid Voltage Profile and Loss Minimization: A Cooperative Distributed Optimization and Control Approach. IEEE Transactions on Smart Grid, 2014, 5, 1621-1630. | 9.0 | 108 |
| 71 | Distributed finite-time consensus of nonlinear systems under switching topologies. Automatica, 2014, 50, 1626-1631. | 5.0 | 96 |
| 72 | Secondary control of microgrids based on distributed cooperative control of multiâ€agent systems. IET Generation, Transmission and Distribution, 2013, 7, 822-831. | 2.5 | 408 |

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| 73 | Nonlinear control and synchronization of a class of nonlinear coupled dynamical systems. Journal of Control Theory and Applications, 2013, 11, 623-628. | 0.8 | 0 |
| 74 | A practical approach to coverage control for multiple mobile robots with a circular sensing range. , 2013, , . | | 2 |
| 75 | Triangulation-based path planning for patrolling by a mobile robot. , 2013, , . | | 4 |
| 76 | Optimum design and analysis of the cooperative control, applied to the distributed generators control in smart grids. , 2013, , . | | 5 |
| 77 | Frequency control of electric power microgrids using distributed cooperative control of multi-agent systems. , 2013, , . | | 11 |
| 78 | Discontinuous cooperative control for consensus of multiagent systems with switching topologies and time-delays. , 2013, , . | | 12 |
| 79 | Rock-paper-scissors prediction experiments using muscle activations. , 2012, , . | | 6 |
| 80 | Lyapunov, Adaptive, and Optimal Design Techniques for Cooperative Systems on Directed Communication Graphs. IEEE Transactions on Industrial Electronics, 2012, 59, 3026-3041. | 7.9 | 540 |
| 81 | Clustering and cooperative control of distributed generators for maintaining microgrid unified voltage profile and complex power control. , 2012, , . | | 27 |
| 82 | Enhanced protection against false data injection by dynamically changing information structure of microgrids. , 2012, , . | | 26 |
| 83 | Analysis of controlled morse type Frenkel-Kontorova model. , 2011, , . | | 0 |
| 84 | A Self-Organizing Strategy for Power Flow Control of Photovoltaic Generators in a Distribution Network. IEEE Transactions on Power Systems, 2011, 26, 1462-1473. | 6.5 | 243 |
| 85 | Distributed extremum seeking and cooperative control for mobile communication. , 2011, , . | | 12 |
| 86 | Friction control of one-dimensional particles with Morse-type interaction. , 2011, , . | | 0 |
| 87 | Comparison of Optimal Solutions to Real-Time Path Planning for a Mobile Vehicle. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2010, 40, 721-731. | 2.9 | 40 |
| 88 | Nonlinear positive observer design for positive dynamical systems. , 2010, , . | | 12 |
| 89 | A distributed cooperative steering control with application to nonholonomic robots. , 2010, , . | | 11 |
| 90 | RoboLeader for reconnaissance by a team of robotic vehicles. , 2010, , . | | 10 |

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| 91 | RoboLeader: An agent for supervisory control of multiple robots. , 2010, , . | | 5 |
| 92 | Development of current dynamic estimator for Islanding Detection of inverter based Distributed Generation. , 2010, , . | | 1 |
| 93 | Reactive target-tracking control with obstacle avoidance of unicycle-type mobile robots in a dynamic environment. , 2010, , . | | 7 |
| 94 | Cooperative control with improvable network connectivity. , 2010, , . | | 2 |
| 95 | A new reactive target-tracking control with obstacle avoidance in a dynamic environment. , 2009, , . | | 7 |
| 96 | Stability of an AFM-based sliding system. , 2009, , . | | 2 |
| 97 | Continuous and inverse optimal control designs for chained systems: A global state–scaling transformation and a time–scaling method. Optimal Control Applications and Methods, 2009, 30, 1-25. | 2.1 | 6 |
| 98 | Stability of coupled oscillators using Frenkel-Kontorova model. , 2009, , . | | 0 |
| 99 | Cooperative Control of Dynamical Systems With Application to Autonomous Vehicles. IEEE Transactions on Automatic Control, 2008, 53, 894-911. | 5.7 | 304 |
| 100 | A comparison theorem for cooperative control of nonlinear systems. , 2008, , . | | 6 |
| 101 | Real-time Obstacles Avoidance for Vehicles in the Urban Grand Challenge. Journal of Aerospace Computing, Information, and Communication, 2007, 4, 1117-1133. | 0.8 | 4 |
| 102 | An Improved Particle Swarm Optimization with Mutation Based on Similarity. , 2007, , . | | 20 |
| 103 | Single particle dynamics and control in a sliding nanocluster system. , 2007, , . | | 1 |
| 104 | Nonlinear cooperative control for consensus of nonlinear and heterogeneous systems. , 2007, , . | | 17 |
| 105 | Quadratic Lyapunov Functions for Cooperative Control of Networked Systems. , 2007, , . | | 2 |
| 106 | Lyapunov Design of Cooperative Control and Its Application to the Consensus Problem. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , . | 0.0 | 11 |
| 107 | Cascaded feedback linearization and its application to stabilization of nonholonomic systems. , 2006, , . | | 2 |
| 108 | Feedback Control of Frictional Dynamics. , 2006, , . | | 1 |

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| 109 | Cooperative Control of Dynamical Systems and Its Robustness Analysis. , 2006, , . | | 1 |
| 110 | A control-design-based solution to robotic ecology: Autonomy of achieving cooperative behavior from a high-level astronaut command. Autonomous Robots, 2006, 20, 97-112. | 4.8 | 18 |
| 111 | Lyapunov stability and precise control of the frictional dynamics of a one-dimensional particle array. Physical Review B, 2006, 73, . | 3.2 | 18 |
| 112 | Output-feedback near-optimal control of chained systems. , 2006, , . | | 1 |
| 113 | Robust state observer and control design using command-to-state mapping. Automatica, 2005, 41, 1323-1333. | 5.0 | 8 |
| 114 | Design and Simulation of Robust and Adaptive Controls for a Nonlinear String System1. Journal of Vibration and Acoustics, Transactions of the ASME, 2004, 126, 54-62. | 1.6 | 1 |
| 115 | Global Stabilization and Convergence of Nonlinear Systems With Uncertain Exogenous Dynamics. IEEE Transactions on Automatic Control, 2004, 49, 1852-1858. | 5.7 | 3 |
| 116 | Globally stabilizing adaptive control design for nonlinearly-parameterized systems. , 2004, , . | | 1 |
| 117 | A New Analytical Solution to Mobile Robot Trajectory Generation in the Presence of Moving Obstacles. , 2004, 20, 978-993. | | 130 |
| 118 | A reduced-order analytical solution to mobile robot trajectory generation in the presence of moving obstacles. , 2004, , . | | 0 |
| 119 | 2-D Shape Recognition using Recursive Landmark Determination and Fuzzy ART Network Learning. Neural Processing Letters, 2003, 18, 81-95. | 3.2 | 4 |
| 120 | Asymptotic learning control for a class of cascaded nonlinear uncertain systems. IEEE Transactions on Automatic Control, 2002, 47, 1369-1376. | 5.7 | 40 |
| 121 | A new suboptimal control design for cascaded non-linear systems. Optimal Control Applications and Methods, 2002, 23, 303-328. | 2.1 | 15 |
| 122 | Simplified robust control for nonlinear uncertain systems: a method of projection and online estimation. , 2002, , . | | 5 |
| 123 | Robust and adaptive boundary control of a stretched string on a moving transporter. IEEE Transactions on Automatic Control, 2001, 46, 470-476. | 5.7 | 76 |
| 124 | Lyapunov recursive design of robust adaptive tracking control withL2-gain performance for electrically-driven robot manipulators. International Journal of Control, 2001, 74, 811-828. | 1.9 | 33 |
| 125 | Robust and adaptive boundary control of a stretched string. , 2000, , . | | 4 |
| 126 | Robust learning control for robotic manipulators with an extension to a class of non-linear systems. International Journal of Control, 2000, 73, 858-870. | 1.9 | 59 |

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| 127 | Toward a globally robust decentralized control for large-scale power systems. IEEE Transactions on Control Systems Technology, 1997, 5, 309-319. | 5.2 | 57 |
| 128 | Dynamic robust recursive control design and its application to a nonlinear missile autopilot. , 1997, , . | | 16 |
| 129 | Model reference robust control of systems with significant unmodelled dynamics. International Journal of Robust and Nonlinear Control, 1997, 7, 951-974. | 3.7 | 2 |
| 130 | Lyapunov Direct Design of Robust Control for Electrical-Mechanical Systems Composed of Cascaded Nonlinear Uncertain Subsystems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1995, 117, 54-62. | 1.6 | 1 |
| 131 | Robust estimation and control of robotic manipulators. Robotica, 1995, 13, 223-231. | 1.9 | 40 |
| 132 | Nonlinear robust control design for robot manipulators with unmodeled actuator dynamics. Advanced Robotics, 1995, 10, 453-467. | 1.8 | 2 |
| 133 | Asymptotic stability of controlling uncertain dynamical systems. International Journal of Control, 1994, 59, 1345-1355. | 1.9 | 34 |
| 134 | Nonâ€linear learning control of robot manipulators without requiring acceleration measurement. International Journal of Adaptive Control and Signal Processing, 1993, 7, 77-90. | 4.1 | 17 |
| 135 | Model Reference Robust Control of SISO Systems with Significant Unmodelled Dyamics. , 1993, , . | | 13 |
| 136 | Continuous Robust Control Guaranteeing Functional Performance Index for Nonlinear Uncertain Systems. , 1993, , . | | 1 |
| 137 | Robust control by two Lyapunov functions. International Journal of Control, 1992, 55, 1335-1350. | 1.9 | 8 |
| 138 | Model Reference Robust Control of A Class of SISO Systems. , 1992, , . | | 7 |
| 139 | Continuous Control Design for Synchronous Machines. , 1992, , . | | 0 |
| 140 | On the robust control of two manipulators holding a rigid object. Journal of Intelligent and Robotic Systems: Theory and Applications, 1992, 6, 107-119. | 3.4 | 5 |
| 141 | Asymptotic Stability of Controlling Uncertain Dynamical Systems. , 1992, , . | | 14 |
| 142 | Robust Tracking Control of a Switched Reluctance Motor Turning and Inertial Load. , 1992, , . | | 33 |
| 143 | Robust Control of Generalized Dynamic Systems Without the Matching Conditions. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1991, 113, 582-589. | 1.6 | 35 |
| 144 | Toward A Linear Control Design For Power Systems. , 1991, , . | | 2 |

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| 145 | Controlling a Constrained Robot Manipulator in the Presence of Uncertainty. , 1991, , . | | 0 |
| 146 | Robust Control Designed by Composition of Lyapunov Functions. , 1991, , . | | 0 |
| 147 | A global-stabilizing near-optimal control for real-time trajectory tracking of nonholonomic chained systems. , 0, , . | | 1 |
| 148 | Robust control design for nonlinear uncertain systems in the absence of the generalized matching conditions. , 0, , . | | 4 |
| 149 | Negative feedback control design for a PWM-buck converter. , 0, , . | | 4 |
| 150 | Design and evaluation of robust nonlinear missile autopilots from a performance perspective. , 0, , . | | 27 |
| 151 | Robust learning control for a class of nonlinear systems. , 0, , . | | 2 |
| 152 | Robust control of nonlinear systems by estimating time variant uncertainties. , 0, , . | | 1 |
| 153 | Recursive estimation of unstructured uncertainty and robust control design. , 0, , . | | 2 |
| 154 | Robust adaptive control of strict-feedback nonlinear systems with nonlinear parameterization. , 0, , . | | 2 |
| 155 | Robust estimation and control using command-to-state mapping. , 0, , . | | 0 |
| 156 | Synchronization of Lorenz systems by adaptive observation. , 0, , . | | 2 |
| 157 | A near optimal tracking control of dynamic nonholonomic systems. , 0, , . | | 3 |
| 158 | Coverage control for a mobile robot patrolling a dynamic and uncertain environment. , 0, , . | | 32 |
| 159 | Products of row stochastic matrices and their applications to cooperative control for autonomous mobile robots. , 0, , . | | 8 |
| 160 | An Optimal and Real-Time Solution to Parameterized Mobile Robot Trajectories in the Presence of Moving Obstacles. , 0, , . | | 5 |
| 161 | Stabilization and tracking control of friction dynamics of a one-dimensional nanoarray. , 0, , . | | 4 |
| 162 | A real-time optimized path planning for a fixed wing vehicle flying in a dynamic and uncertain environment. , 0, , . | | 1 |

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|---|---------|----|-----------| 
| 163 | Cooperative control design and stability analysis for multi-agent systems with communication delays. , 0, , . | | 2 |
| 164 | Robust control of nonlinear systems in the presence of unknown exogenous dynamics. , 0, , . | | 1 |
| 165 | Robust control of a class of nonlinear uncertain systems. Fault tolerance against sensor failures and subsequent self recovery. , 0, , . | | 7 |
| 166 | A real-time optimized path planning for a fixed wing vehicle flying in a dynamic and uncertain environment. , 0, , . | | 0 |