

Georg Schitter

List of Publications by Year in descending order

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218
papers

5,490
citations

126858

33
h-index

95218

68
g-index

227
all docs

227
docs citations

227
times ranked

4063
citing authors

#	ARTICLE	IF	CITATIONS
1	Supplemental Peak Filters for Advanced Disturbance Rejection on a High Precision Endeffector for Robot-Based Inline Metrology. IEEE/ASME Transactions on Mechatronics, 2022, 27, 2258-2266.	3.7	8
2	Experimental Evaluation of Vibration Influence on a Resonant MEMS Scanning System for Automotive Lidars. IEEE Transactions on Industrial Electronics, 2022, 69, 3099-3108.	5.2	16
3	Three-DoF Vibration Compensation Platform for Robot-Based Precision Inline Measurements on Free-Form Surfaces. IEEE Transactions on Industrial Electronics, 2022, 69, 613-621.	5.2	8
4	High Precision Hybrid Reluctance Actuator With Integrated Orientation Independent Zero Power Gravity Compensation. IEEE Transactions on Industrial Electronics, 2022, 69, 13296-13304.	5.2	11
5	Bringing the Lab to the Fab: Robot-Based Inline Measurement System for Precise 3-D Surface Inspection in Vibrational Environments. IEEE Transactions on Industrial Electronics, 2022, 69, 10666-10673.	5.2	9
6	Instrument for tensile testing of individual collagen fibrils with facile sample coupling and uncoupling. Review of Scientific Instruments, 2022, 93, 054103.	0.6	3
7	Force-Controlled Tensile Test of Collagen Fibril by Using 2-DOF Control System With Modeling Error Compensation. IEEE Open Journal of the Industrial Electronics Society, 2022, 3, 366-374.	4.8	1
8	Design and evaluation of an active secondary mirror positioning system for a small telescope. Journal of Astronomical Telescopes, Instruments, and Systems, 2022, 8, .	1.0	0
9	Mechatronic Demodulation for Dynamic Atomic Force Microscopy Measurement Modes. , 2022, , .		0
10	Range extension of a scanning confocal chromatic sensor for precise robotic inline 3D measurements. , 2022, , .		1
11	Simulation and Reduction of Speckle-induced Uncertainty in Laser Triangulation Sensors. , 2022, , .		2
12	DC-Bias-free Surface Potential Measurements by Heterodyne AC Kelvin Probe Force Microscopy. , 2022, , .		1
13	Atomic Force Microscopy Breaking Through the Vertical Range-Bandwidth Tradeoff. IEEE Transactions on Industrial Electronics, 2021, 68, 786-795.	5.2	6
14	Linear Modeling and Control of Comb-Actuated Resonant MEMS Mirror With Nonlinear Dynamics. IEEE Transactions on Industrial Electronics, 2021, 68, 3315-3323.	5.2	19
15	Exploring the Pareto Fronts of Actuation Technologies for High Performance Mechatronic Systems. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1053-1063.	3.7	13
16	Charge-Based Capacitive Self-Sensing With Continuous State Observation for Resonant Electrostatic MEMS Mirrors. Journal of Microelectromechanical Systems, 2021, 30, 897-906.	1.7	6
17	A Mechatronic Lock-In Amplifier: Integrating Demodulation in Sensor Electronics for Measuring Mechanical Oscillations. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-8.	2.4	5
18	Robust wavefront segment registration based on a parallel approach. Applied Optics, 2021, 60, 1578.	0.9	6

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19	Integrating PWM Amplifier with the Design of Mechatronic Systems for Energy-efficient Precision Motion. IEEJ Journal of Industry Applications, 2021, 10, 134-141.	0.9	0
20	Development of Reluctance Actuator for High-Precision Positioning and Scanning Motion. , 2021, , .		3
21	Turbulence load prediction for manned and unmanned aircraft by means of anticipating differential pressure measurements. CEAS Aeronautical Journal, 2021, 12, 535-548.	0.9	2
22	Speckle simulation tool for the design of laser-based displacement sensors. , 2021, , .		2
23	Fourier Series-Based Analytic Model of a Resonant MEMS Mirror for General Voltage Inputs. Journal of Microelectromechanical Systems, 2021, 30, 343-359.	1.7	0
24	Fast, precise, and shape-flexible registration of wavefronts. Applied Optics, 2021, 60, 6781.	0.9	7
25	Compact scanning confocal chromatic sensor enabling precision 3-D measurements. Applied Optics, 2021, 60, 7511.	0.9	17
26	Adaptive Lissajous scanning pattern design by phase modulation. Optics Express, 2021, 29, 27989.	1.7	6
27	A Novel Approach for Integrating IEC 61131-3 Engineering and Execution Into IEC 61499. IEEE Transactions on Industrial Informatics, 2021, 17, 5411-5418.	7.2	5
28	Iterative parallel registration of strongly misaligned wavefront segments. Optics Express, 2021, 29, 33281.	1.7	9
29	Self-sensing control of resonant MEMS scanner by comb-drive current feedback. Mechatronics, 2021, 78, 102631.	2.0	2
30	Automated Measurement of Highly Divergent Optical Wavefronts With a Scanning Shack-Hartmann Sensor. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-9.	2.4	9
31	Optical Scanning of a Laser Triangulation Sensor for 3-D Imaging. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 3606-3613.	2.4	25
32	Flux-Controlled Hybrid Reluctance Actuator for High-Precision Scanning Motion. IEEE Transactions on Industrial Electronics, 2020, 67, 9593-9600.	5.2	16
33	High performance motion control for optical satellite tracking systems. Advances in Space Research, 2020, 65, 1333-1343.	1.2	5
34	Integration of Control Design and System Operation of a High Performance Piezo-Actuated Fast Steering Mirror. IEEE/ASME Transactions on Mechatronics, 2020, 25, 239-247.	3.7	14
35	Imaging and tracking an electrostatic charge micro-domain by Kelvin force microscopy as evidence of water adsorption on mica surface. Current Applied Physics, 2020, 20, 1391-1395.	1.1	4
36	Self-Aligning Scanning Shack-Hartmann Sensor for Automatic Wavefront Measurements of High-NA Optics. , 2020, , .		2

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37	Efficient Demodulation for Measuring the Amplitude of Mechanical Oscillations. , 2020, , .		3
38	Design and control of a MAGLEV platform for positioning in arbitrary orientations. , 2020, , .		10
39	An efficient control transition scheme between stabilization and tracking task of a MAGLEV platform enabling active vibration compensation. , 2020, , .		3
40	Design of a Mechanical Tunable Resonant Fast Steering Mirror. , 2020, , .		0
41	Design and evaluation of an integrated scanning laser triangulation sensor. Mechatronics, 2020, 72, 102453.	2.0	16
42	Accurate Analytic Model of a Parametrically Driven Resonant MEMS Mirror With a Fourier Series-Based Torque Approximation. Journal of Microelectromechanical Systems, 2020, 29, 1431-1442.	1.7	6
43	Precise phase control of resonant MOEMS mirrors by comb-drive current feedback. Mechatronics, 2020, 71, 102420.	2.0	10
44	Multiphysics finite element model for the computation of the electro-mechanical dynamics of a hybrid reluctance actuator. Mathematical and Computer Modelling of Dynamical Systems, 2020, 26, 322-343.	1.4	6
45	Optically scanned laser line sensor. , 2020, , .		0
46	Glycation changes molecular organization and charge distribution in type I collagen fibrils. Scientific Reports, 2020, 10, 3397.	1.6	56
47	High-speed scanning chromatic confocal sensor for 3-D imaging with modeling-free learning control. Applied Optics, 2020, 59, 9234.	0.9	11
48	Confocal chromatic sensor with an actively tilted lens for 3D measurement. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2020, 37, B46.	0.8	10
49	Towards the Analogy of Electrostatic and Electromagnetic Transducers. IFAC-PapersOnLine, 2020, 53, 8941-8946.	0.5	1
50	Design methodology to develop an active optics system for a thin 1-m meniscus mirror. Journal of Astronomical Telescopes, Instruments, and Systems, 2020, 6, .	1.0	2
51	Heuristic Path Planning Approach for a Granular-fill Insulation Distributing Robot. IFAC-PapersOnLine, 2020, 53, 9956-9961.	0.5	1
52	Dynamic performance estimation: A design tool for mechatronic scanners. IFAC-PapersOnLine, 2020, 53, 8407-8412.	0.5	0
53	Noise Reduction of Learning Control for Periodic Motion of Galvanometer Scanner. IFAC-PapersOnLine, 2020, 53, 8401-8406.	0.5	6
54	Capacitive Charge-based Self-Sensing for Resonant Electrostatic MEMS mirrors. IFAC-PapersOnLine, 2020, 53, 8553-8558.	0.5	1

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55	Complex Valued State Space Model for Weakly Nonlinear Duffing Oscillator with Noncollocated External Disturbance. IFAC-PapersOnLine, 2020, 53, 8546-8552.	0.5	1
56	Adaptive Control Method Based on Recursive Least Square Method by Piezoelectric Actuator for Pulling Fibril with Parameter Variation. , 2020, , .		0
57	Long-Range Fast Nanopositioner Using Nonlinearities of Hybrid Reluctance Actuator for Energy Efficiency. IEEE Transactions on Industrial Electronics, 2019, 66, 3051-3059.	5.2	51
58	Compact high performance hybrid reluctance actuated fast steering mirror system. Mechatronics, 2019, 62, 102251.	2.0	30
59	Iterative trajectory learning for highly accurate optical satellite tracking systems. Acta Astronautica, 2019, 164, 121-129.	1.7	11
60	Electrostatic Read Out for Label-Free Assays Based on Kelvin Force Principle. Sensing and Imaging, 2019, 20, 1.	1.0	2
61	Comparative Finite Element Analysis of a Voice Coil Actuator and a Hybrid Reluctance Actuator. IEEJ Journal of Industry Applications, 2019, 8, 192-199.	0.9	9
62	High-speed Scanner with Nanometer Resolution Using a Hybrid Reluctance Force Actuator. IEEJ Journal of Industry Applications, 2019, 8, 170-176.	0.9	9
63	System Integration and Control for 3D Scanning Laser Metrology. IEEJ Journal of Industry Applications, 2019, 8, 207-217.	0.9	9
64	Vision-Based Nonlinear Feedback Control of a Ball on Ball System With a Programmable Logic Controller. IEEJ Journal of Industry Applications, 2019, 8, 713-719.	0.9	0
65	Calibration and flight test of a 3D printed 5-hole probe for high-dynamic wind measurements for UAV. , 2019, , .		1
66	Mechatronic Approach towards Lightweight Mirrors with Active Optics for Telescope Systems. IFAC-PapersOnLine, 2019, 52, 7-12.	0.5	2
67	Digital Asynchronous Phase Locked Loop for Precision Control of MOEMS Scanning Mirror. IFAC-PapersOnLine, 2019, 52, 43-48.	0.5	4
68	MEMS Test Bench and its Uncertainty Analysis for Evaluation of MEMS Mirrors. IFAC-PapersOnLine, 2019, 52, 49-54.	0.5	11
69	Iterative Learning Control for Laser Scanning based Micro 3D Printing. IFAC-PapersOnLine, 2019, 52, 169-174.	0.5	5
70	Automated Tripod Leveling and Parameter Estimation for a Granular-fill Insulation Distributing Robot. IFAC-PapersOnLine, 2019, 52, 223-228.	0.5	3
71	A Fast Piezo Actuated Tip/Tilt Mirror for raster scan applications. IFAC-PapersOnLine, 2019, 52, 289-294.	0.5	8
72	Scanning laser triangulation sensor geometry maintaining imaging condition. IFAC-PapersOnLine, 2019, 52, 301-306.	0.5	5

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73	Increasing the SNR of Electrical AFM Methods by Active Mechanical Q-control. IFAC-PapersOnLine, 2019, 52, 307-312.	0.5	1
74	Compensation of Hysteresis in Hybrid Reluctance Actuator for High-Precision Motion. IFAC-PapersOnLine, 2019, 52, 477-482.	0.5	5
75	Sample-tracking Vibration Isolation with Hybrid Reluctance Actuators for Inline Metrology. IFAC-PapersOnLine, 2019, 52, 537-542.	0.5	6
76	Similarity-based Feedback Control with Reduced Capacitive Load for Linear Operation of Piezoelectric Actuators. IFAC-PapersOnLine, 2019, 52, 585-590.	0.5	0
77	High-bandwidth tip-tilt vibration compensation in telescope systems. IFAC-PapersOnLine, 2019, 52, 549-554.	0.5	4
78	Signal reversal in Kelvin-probe force microscopy. Review of Scientific Instruments, 2019, 90, 113703.	0.6	5
79	Scanning Wavefront Sensor for Measurement of Highly Divergent Wavefronts. IFAC-PapersOnLine, 2019, 52, 25-30.	0.5	10
80	Analysis of tip-tilt compensation for reflective free-space optical satellite communication. , 2019, , .		1
81	Data based modelling and identification of nonlinear SDOF MOEMS mirror. , 2019, , .		11
82	Compensation for temperature dependency of 1D position sensitive detector. , 2019, , .		0
83	System and Control Design of a Voice Coil Actuated Mechanically Decoupling Two-Body Vibration Isolation System. IEEE/ASME Transactions on Mechatronics, 2018, 23, 321-330.	3.7	16
84	Atomic force microscopy capable of vibration isolation with low-stiffness Z-axis actuation. Ultramicroscopy, 2018, 186, 9-17.	0.8	24
85	Noise analysis and efficiency improvement of a pulse-width modulated permanent magnet synchronous motor by dynamic error budgeting. Mechatronics, 2018, 50, 225-233.	2.0	7
86	Influence of Scheimpflug condition on measurements of a scanning laser line sensor for 3D imaging. Journal of Physics: Conference Series, 2018, 1065, 142006.	0.3	2
87	Wavefront measurement based feedback control for automatic alignment of a high-NA optical system. Journal of Physics: Conference Series, 2018, 1065, 032001.	0.3	4
88	Analysis and Robust Control of an Precision Motion Platform Using Disturbance Compensation. , 2018, , .		0
89	Comparison of Code Measures of IEC 61131-3 and 61499 Standards for Typical Automation Applications. , 2018, , .		14
90	Feature detection and scan area selection for 3D laser scanning sensors. , 2018, , .		2

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91	Water desorption in Kelvin-probe force microscopy: a generic model. Nanotechnology, 2018, 29, 505705.	1.3	2
92	Similarity-based Feedback Control for Linear Operation of Piezoelectric Actuators. , 2018, , .		5
93	MEMS-based lidar for autonomous driving. Elektrotechnik Und Informationstechnik, 2018, 135, 408-415.	0.7	123
94	Optical scanning of laser line sensors for 3D imaging. Applied Optics, 2018, 57, 5242.	0.9	34
95	Evaluation of surface charge shift of collagen fibrils exposed to glutaraldehyde. Scientific Reports, 2018, 8, 10126.	1.6	23
96	High-Performance Hybrid-Reluctance-Force-Based Tip/Tilt System: Design, Control, and Evaluation. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2494-2502.	3.7	49
97	Optimal fail-safe motion using dynamic brake for Lorentz-actuated AFM. , 2018, , .		0
98	Patching process optimization in an agent-controlled timber mill. Journal of Intelligent Manufacturing, 2017, 28, 69-84.	4.4	2
99	Quantitative AC - Kelvin Probe Force Microscopy. Microelectronic Engineering, 2017, 176, 28-32.	1.1	15
100	Vibration isolator carrying atomic force microscope's head. Mechatronics, 2017, 44, 32-41.	2.0	21
101	Budgeting of Systematic Versus Stochastic Errors in Sensor Fusion for Piezo Electric Transducers. IFAC-PapersOnLine, 2017, 50, 7651-7656.	0.5	3
102	Parametric PID controller tuning for a fast steering mirror. , 2017, , .		10
103	Integrated system and control design of a one DoF nano-metrology platform. Mechatronics, 2017, 47, 88-96.	2.0	27
104	Design of a phase-locked-loop-based control scheme for Lissajous-trajectory scanning of fast steering mirrors. , 2017, , .		7
105	System Design and Control of a Resonant Fast Steering Mirror for Lissajous-Based Scanning. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1963-1972.	3.7	40
106	Active damping by Q-control for fast force-distance curve measurements in atomic force microscopy. Review of Scientific Instruments, 2017, 88, 123711.	0.6	7
107	Dual Actuation of Fast Scanning Axis for High-speed Atomic Force Microscopy. IFAC-PapersOnLine, 2017, 50, 7633-7638.	0.5	12
108	Automatic fourier synthesis based input-shaping for scanning piezo-electric actuators. , 2017, , .		1

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109	A framework for automatic knowledge-based fault detection in industrial conveyor systems. , 2017, , .		6
110	Ontology-based framework for the generation of interlock code with redundancy elimination. , 2017, , .		4
111	Bandwidth extension of hybrid-reluctance-force-based tip/tilt system by reduction of eddy currents. , 2017, , .		13
112	Comparison of modeling-free learning control algorithms for galvanometer scanner's periodic motion. , 2017, , .		8
113	Flexure design for precision positioning using low-stiffness actuators. IFAC-PapersOnLine, 2016, 49, 200-205.	0.5	7
114	Noise Analysis and Improvement of a Permanent Magnet Synchronous Motor by Dynamic Error Budgeting. IFAC-PapersOnLine, 2016, 49, 339-346.	0.5	4
115	Framework for implementation of iterative learning control on programmable logic controllers. , 2016, , .		0
116	Quantifying the Thermomechanical Response of Bitumen from Microphase Properties. Transportation Research Record, 2016, 2574, 101-110.	1.0	13
117	Low photon-count tip-tilt sensor. Proceedings of SPIE, 2016, , .	0.8	1
118	Non-parametric robustness analysis for feedback motion control for a high precision stage with large mass uncertainty. , 2016, , .		0
119	Mechatronic Design of an Active Two-body Vibration Isolation System. IFAC-PapersOnLine, 2016, 49, 133-140.	0.5	6
120	Six Degree of Freedom Vibration Isolation Platform for In-Line Nano-Metrology. IFAC-PapersOnLine, 2016, 49, 149-156.	0.5	14
121	Design of Tuneable Damping for Precision Positioning of a Two-Body System. IFAC-PapersOnLine, 2016, 49, 222-227.	0.5	0
122	Extending the Range of Geophones by Negative Impedance Converter. IFAC-PapersOnLine, 2016, 49, 541-546.	0.5	1
123	Development of a Compact Atomic Force Microscope Based on an Optical Pickup Head. IFAC-PapersOnLine, 2016, 49, 629-635.	0.5	4
124	Comparison and Classification of High-Precision Actuators Based on Stiffness Influencing Vibration Isolation. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1169-1178.	3.7	33
125	Auto-tuning PI controller for surface tracking in atomic force microscopy - a practical approach. , 2016, , .		2
126	Design of a dual-tone controller for Lissajous-based scanning of fast steering mirrors. , 2016, , .		9

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127	A service-oriented domain specific language programming approach for batch processes. , 2016, , .		15
128	Adaptive optics for confocal laser scanning microscopy with adjustable pinhole. Proceedings of SPIE, 2016, , .	0.8	2
129	A framework for modular and distributable control of reconfigurable robotic systems. , 2016, , .		2
130	Automatic generation of diagnostic handling code for decentralized PLC-based control architectures. , 2016, , .		4
131	Probabilistic Absolute Position Sensor Based on Objective Laser Speckles. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1188-1196.	2.4	13
132	High speed laser scanning microscopy by iterative learning control of a galvanometer scanner. Control Engineering Practice, 2016, 50, 12-21.	3.2	58
133	High bandwidth deflection readout for atomic force microscopes. Review of Scientific Instruments, 2015, 86, 103701.	0.6	2
134	Atomic force microscopy using voice coil actuators for vibration isolation. , 2015, , .		16
135	Advanced Mechatronics for Precision Engineering and Mechatronic Imaging Systems. IFAC-PapersOnLine, 2015, 48, 942-943.	0.5	2
136	Low-stiffness dual stage actuator for long range positioning with nanometer resolution. Mechatronics, 2015, 29, 46-56.	2.0	37
137	Vision-based probabilistic absolute position sensor. , 2015, , .		1
138	Entwurf und Regelung eines Positioniersystems für robotergestützte Nanomesstechnik. Automatisierungstechnik, 2015, 63, 727-738.	0.4	9
139	Automated spherical aberration correction in scanning confocal microscopy. Review of Scientific Instruments, 2014, 85, 123706.	0.6	22
140	Microstructural changes in bitumen at the onset of crack formation. European Polymer Journal, 2014, 56, 17-25.	2.6	14
141	Sliding Mode and PID Control of a Dual Stage Actuator for Precision Positioning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6550-6555.	0.4	9
142	Turning Back Time. Transportation Research Record, 2014, 2444, 52-62.	1.0	55
143	Quantitative nanomechanical property mapping of bitumen micro-phases by peak-force Atomic Force Microscopy. , 2014, , 1397-1406.		27
144	Evaluation of a multi-agent approach for a real transportation system. , 2013, , .		8

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145	Demonstration of a Multi-Agent-based control system for active electric power distribution grids. , 2013, , .		7
146	Low-Latency Shack-Hartmann Wavefront Sensor Based on an Industrial Smart Camera. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 1241-1249.	2.4	18
147	Integrated design of the feedback controller and topography estimator for atomic force microscopy. Control Engineering Practice, 2013, 21, 1110-1120.	3.2	7
148	Temperature and thermal history dependence of the microstructure in bituminous materials. European Polymer Journal, 2013, 49, 1964-1974.	2.6	62
149	First Observation of Blending-Zone Morphology at Interface of Reclaimed Asphalt Binder and Virgin Bitumen. Transportation Research Record, 2013, 2370, 1-9.	1.0	103
150	High precision wavelength estimation method for integrated optics. Optics Express, 2013, 21, 17042.	1.7	5
151	Implementation guidelines for closed loop control algorithms on PLCs. , 2013, , .		1
152	Design patterns for separating fault handling from control code in discrete manufacturing systems. , 2013, , .		7
153	Compensation Based Displacement Measurement Using Objective Laser Speckles. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 264-270.	0.4	2
154	High-precision Positioning System using a Low-stiffness Dual Stage Actuator. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 20-27.	0.4	5
155	Towards High Speed Ferrule-Top Atomic Force Microscopy. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 131-137.	0.4	2
156	Transformation-based iterative learning control for non-collocated sensing of a galvanometer scanner. , 2013, , .		4
157	Towards fast AFM-based nanometrology and nanomanufacturing. International Journal of Nanomanufacturing, 2012, 8, 392.	0.3	7
158	The potential of magnetic force microscopy for in-situ investigation of nanophase iron in lunar dust. Planetary and Space Science, 2012, 74, 270-275.	0.9	3
159	Trade-off between the control bandwidth and the measurement accuracy in Atomic Force Microscopy. , 2012, , .		1
160	Shack-Hartmann wavefront sensor based on an industrial smart camera. , 2012, , .		1
161	Automated adjustment of aberration correction in scanning confocal microscopy. , 2012, , .		3
162	Model-based feedback controller design for dual actuated atomic force microscopy. Mechatronics, 2012, 22, 327-337.	2.0	36

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163	Dynamics, load balancing, and modal control of piezoelectric tube actuators. <i>Mechatronics</i> , 2012, 22, 282-294.	2.0	7
164	Special issue on "Mechatronic systems for micro- and nanoscale applications". <i>Mechatronics</i> , 2012, 22, 239-240.	2.0	0
165	Controller Design for a High-Sampling-Rate Closed-Loop Adaptive Optics System with Piezo-Driven Deformable Mirror. <i>European Journal of Control</i> , 2011, 17, 290-301.	1.6	18
166	Towards Integrated Design of a Robust Feedback Controller and Topography Estimator for Atomic Force Microscopy. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011, 44, 12709-12714.	0.4	5
167	Local strain and damage mapping in single trabeculae during three-point bending tests. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 523-534.	1.5	50
168	Improving the Imaging Speed of AFM with Modern Control Techniques. <i>Lecture Notes in Control and Information Sciences</i> , 2011, , 83-100.	0.6	5
169	Modeling and Control of a Nonlinear Dynamic Adaptive Optics System. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2010, 43, 299-305.	0.4	0
170	Dual Actuation for High Speed Atomic Force Microscopy. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2010, 43, 220-226.	0.4	12
171	Dynamics and Modal Control of Piezoelectric Tube Actuators. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2010, 43, 317-323.	0.4	1
172	Active damping of a piezoelectric tube scanner using self-sensing piezo actuation. <i>Mechatronics</i> , 2010, 20, 656-665.	2.0	69
173	Modal actuation for high bandwidth nano-positioning. , 2010, , .		9
174	Model-based aberration correction in a closed-loop wavefront-sensor-less adaptive optics system. <i>Optics Express</i> , 2010, 18, 24070.	1.7	54
175	MIMO Self-Sensing Control of a Piezoelectric Tube Scanner. , 2009, , .		1
176	Self-sensing actuation and damping of a piezoelectric tube scanner for atomic force microscopy. , 2009, , .		6
177	Improving the Speed of AFM by Mechatronic Design and Modern Control Methods Geschwindigkeitsverbesserung beim AFM mittels mechatronischem Design und modernen Regelmethode. <i>TM Technisches Messen</i> , 2009, 76, 266-273.	0.3	24
178	The Effect of NaF In Vitro on the Mechanical and Material Properties of Trabecular and Cortical Bone. <i>Advanced Materials</i> , 2009, 21, 451-457.	11.1	25
179	Extracting hysteresis from nonlinear measurement of wavefront-sensorless adaptive optics system. <i>Optics Letters</i> , 2009, 34, 61.	1.7	31
180	Load dynamics in piezoelectric actuation. , 2009, , .		2

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181	Scanning probe microscopy at video-rate. <i>Materials Today</i> , 2008, 11, 40-48.	8.3	119
182	Design and input-shaping control of a novel scanner for high-speed atomic force microscopy. <i>Mechatronics</i> , 2008, 18, 282-288.	2.0	189
183	Field Programmable Analog Array (FPAA) based control of an Atomic Force Microscope. , 2008, , .		14
184	Dual actuation for high-bandwidth nanopositioning. , 2008, , .		22
185	In situ observation of fluoride-ion-induced hydroxyapatiteâ€œcollagen detachment on bone fracture surfaces by atomic force microscopy. <i>Nanotechnology</i> , 2007, 18, 135102.	1.3	34
186	Advanced Mechanical Design and Control Methods for Atomic Force Microscopy in Real-Time. <i>Proceedings of the American Control Conference</i> , 2007, , .	0.0	26
187	Design and Modeling of a High-Speed AFM-Scanner. <i>IEEE Transactions on Control Systems Technology</i> , 2007, 15, 906-915.	3.2	328
188	A Tutorial on the Mechanisms, Dynamics, and Control of Atomic Force Microscopes. <i>Proceedings of the American Control Conference</i> , 2007, , .	0.0	154
189	High-speed photography of compressed human trabecular bone correlates whitening to microscopic damage. <i>Engineering Fracture Mechanics</i> , 2007, 74, 1928-1941.	2.0	107
190	Design and modeling of a high-speed scanner for atomic force microscopy. , 2006, , .		22
191	Sacrificial Bonds and Hidden Length: Unraveling Molecular Mesostructures in Tough Materials. <i>Biophysical Journal</i> , 2006, 90, 1411-1418.	0.2	273
192	DESIGN AND CHARACTERIZATION OF A NOVEL SCANNER FOR HIGH-SPEED ATOMIC FORCE MICROSCOPY. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2006, 39, 819-824.	0.4	7
193	Hierarchical interconnections in the nano-composite material bone: Fibrillar cross-links resist fracture on several length scales. <i>Composites Science and Technology</i> , 2006, 66, 1205-1211.	3.8	66
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