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Modeling piezoelectric stack actuators for control of microm

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499	Hysteresis and Vibration Compensation for Piezoactuators. 1998 , 21, 710-717		53
498	Development of Mesoscale Actuator Device with Microinterlocking Mechanism. 1998 , 9, 449-457		7
497	A general approach for hysteresis modeling and identification using neural networks.		5
496	Trends in Low Cost Automation. 1998 , 31, 1-8		1
495	Physical Modeling of Piezoelectric Actuators for Control Purposes. 1998 , 31, 37-42		1
494	Hysteresis compensation of piezo actuators. 1999 ,		3
493	Effect of Bonding on the Performance of Segmented Piezoceramic Actuators. 1999 , 10, 920-929		1
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491	Modelling of a piezohydraulic actuator for control of a parallel micromanipulator.		1
490	Piezoelectric microactuator for dual stage control. 1999 , 35, 977-982		116
489	Parameter identification of ultrasonic motors. 1999 ,		3
488	Mixed Feedback/Inverse Control of Piezo-Actuated Systems 1. 2000 , 33, 389-394		
487	Closed loop testing of a suspension based piezoelectric microactuator.		2
486	Analysis and control of monolithic piezoelectric nano-actuator. 2000 ,		

485	Modeling the hysteresis of a scanning probe microscope. 2000 , 18, 621	22
484	Model-based control for ultrasonic motors. 2000 , 5, 165-180	40
483	Modeling piezoelectric actuators. 2000 , 5, 331-341	391
482	. 2001 , 9, 69-75	58
481	Development of PZT and PZN-PT based unimorph actuators for micromechanical flapping mechanisms.	36
480	Modeling nonlinear behavior in a piezoelectric actuator. 2001 , 25, 128-137	65
479	State-space analysis and identification for a class of hysteretic systems. 2001 , 37, 1883-1892	65
478	Dynamically tuned design of the MFI thorax.	35
477	An experimental observation of uncoupling of multi-DOF PZT actuators in a compliant mechanism.	3
476	Space Interferometry Mission: Recent instrument configuration developments.	0
475	Modeling Piezoceramic Actuators for Smart Applications. 2002 , 35, 155-160	2
474	A model for voltage-to-displacement dynamics in piezoceramic actuators subject to dynamic-voltage excitations. 2002 , 7, 479-489	110
473	Design and performance evaluation of a 3-DOF mobile microrobot for micromanipulation. 2003 , 17, 1268-1275	3
472	Piezoelectric modelling for an impact actuator. 2003 , 13, 553-570	9
471	Modeling, Identification and Compensation of Complex Hysteretic Nonlinearities: A Modified Prandtl-Ishlinskii Approach. 2003 , 9, 407-418	352
470	Efficient charge recovery method for driving piezoelectric actuators with quasi-square waves. 2003 , 50, 237-44	79
469	Modeling rate-dependent hysteresis in piezoelectric actuators.	5
468	Design of piezoelectric drives with applications to helical scan tape drives.	

467	Robust Tracking Control of a Piezoactuator Using a New Approximate Hysteresis Model. 2003 , 125, 96-102	74
466	Application of iterative learning to tracking control of a piezoelectric system.	0
465	Sliding-mode based force control of a piezoelectric actuator.	7
464	Sliding mode control based disturbance compensation and external force estimation for a piezoelectric actuator.	5
463	Sliding mode based piezoelectric actuator control.	
462	Application of identification to tracking control of the piezoelectric system.	
461	A compensation method for the hysteresis error of DVD VCM. 2004 , 15, 734-740	10
460	Adaptive tracking control solely using displacement feedback for a piezo-positioning mechanism. 2004 , 151, 653-660	26
459	Experimental and theoretical assessment of PZT modeled as RC circuit subject to variable voltage excitations. 2004 , 14, 667-674	10
458	Sliding mode framework in motion control what it offers?.	1
457	Robust tracking control of a novel piezodriven monolithic flexure-hinge stage.	2
456	Dual Servo Mechanism for High Precision Positioning with VCM and PZT Actuator. 2004 , 37, 283-288	1
455	Hysteresis identification and dynamic responses of the impact drive mechanism. 2005 , 283, 943-956	35
454	. 2005 , 10, 198-209	335
453	A fast tool feeding mechanism using piezoelectric actuators in noncircular turning. 2005 , 27, 254-259	26
452	Injection Rate Estimation of a Piezo-Actuated Injector. 2005 ,	4
451	Hybrid Motion Controller - SMC Point of View. 2005 ,	15
450	A dynamic nonlinearity model for a piezo-actuated positioning system.	2

449	Robust Control Framework for Piezoelectric Actuation Systems in Micro/Nano Manipulation. 2005,	1
448	Modeling, fabrication, and validation of a high-performance 2-DoF piezoactuator for micromanipulation. 2005, 10, 161-171	60
447	Experimental-model-based precision control of a piezoelectric actuated flexure stage.	
446	Sliding Mode Control of a Piezoelectric Actuator with Neural Network Compensating Rate-Dependent Hysteresis.	1
445	A charge controller for linear operation of a piezoelectric stack actuator. 2005, 13, 517-526	89
444	Adaptive control with hysteresis estimation and compensation using RFNN for piezo-actuator. 2006, 53, 1649-61	52
443	Experimental investigation of a SMC high precision control.	1
442	Embedded Model Control: Application to Interferometric Metrology Lines. 2006,	
441	Adaptive Tracking Control of a Piezoelectric Micropositioner. 2006,	4
440	Trajectory tracking of piezoelectric positioning stages using a dynamic sliding-mode control. 2006, 53, 1872-82	11
439	EHM Based Neural Model for Hysteresis.	
438	Modeling Piezoelectric Actuator Hysteresis with Singularity Free Prandtl-Ishlinskii Model. 2006,	11
437	Sliding Mode Adaptive Controller for PZT Actuators. 2006,	
436	Adaptive displacement control with hysteresis modeling for piezoactuated positioning mechanism. 2006, 53, 905-914	37
435	Electromechanical Modeling of Piezoceramic Actuators for Dynamic Loading Applications. 2006, 128, 558-567	36
434	Robust motion tracking control of piezoelectric actuation systems.	5
433	Intelligent H/spl infin/ Control of Nano-Positioning Systems. 2006,	0
432	Plurilinear Modeling and discrete Synthesis Control of a Hysteretic and Creeped Unimorph Piezoelectric Cantilever. 2006,	11

431	Adaptive wavelet neural network control with hysteresis estimation for piezo-positioning mechanism. 2006 , 17, 432-44	83
430	State estimation of nonlinear piezoelectric stack actuator hysteresis model. 2006 , 6414, 15	3
429	Longitudinal Microdynamics of Piezo-Driven Pipettes in Intracytoplasmic Sperm Injection. 2006 , 21	
428	Robust and high precision control using piezoelectric actuator circuit and integral continuous sliding mode control design. 2006 , 293, 335-359	21
427	Self-Tuning Fuzzy Control of a Piezoelectric Actuator System. 2006 ,	3
426	Modeling and Identification of Hysteresis in Piezoelectric Actuators. 2006 , 128, 189-196	40
425	Experimental Evaluation of Adaptive and Variable Structure Control of Piezoelectric Actuation Systems for Micro/Nano Manipulation. 2006 ,	
424	A Study on High Accuracy Discrete-Time Sliding Mode Control. 2006 ,	
423	Digital control of interferometric metrology lines. 2006 ,	2
422	Adaptive Neural Network Control for Piezoelectric Hysteresis Compensation in A Positioning System. 2006 ,	5
421	Discrete Sliding Mode Control of Piezo Actuator in Nano-Scale Range. 2006 ,	10
420	Analog sliding mode controller for position tracking of piezoelectric actuators. 2007 ,	
419	Adaptive Sliding Motion Tracking Control of Piezo-Driven Flexure-Based Mechanism. 2007 ,	1
418	Modeling of Piezo-Actuated Positioning Systems. 2007 ,	1
417	Precise tracking of a piezoelectric positioning stage via a filtering-type sliding-surface control with chattering alleviation. 2007 , 1, 586-594	16
416	VHDL-AMS Model of Piezoelectric Actuators for Simulations in Mechatronics and in Power Electronics. 2007 ,	1
415	An Optimal Model for Hysteretic Nonlinear Phenomenon in Piezoelectric Actuator via Evolutionary Programming Algorithm. 2007 , 8,	2
414	Feedforward Controller With Inverse Rate-Dependent Model for Piezoelectric Actuators in Trajectory-Tracking Applications. 2007 , 12, 134-142	211

413	A Hybrid Force-Position Controller based Man-Machine Interface for Manipulation of Micro Objects. 2007,	3
412	An Integrator-Backstepping-Based Dynamic Surface Control Method for a Two-Axis Piezoelectric Micropositioning Stage. 2007, 15, 916-926	35
411	Motion tracking control of piezo-driven flexure-based mechanism based on sliding mode strategy. 2007,	0
410	Robust Adaptive Motion Tracking Control of Piezoelectric Actuation Systems for Micro/Nano Manipulation. 2007,	4
409	Hysteresis compensation of piezoelectric actuators under dynamic load condition. 2007,	6
408	Design, Modeling, and Control of Piezoelectric Actuators for Intracytoplasmic Sperm Injection. 2007, 15, 879-890	49
407	A Filtered Switching-Type Sliding-Mode Backstepping Control Approach for a Piezopositioning Stage. 2007,	1
406	Digital Control of Interferometric Metrology Lines. 2007, 13, 398-415	6
405	Sliding-Mode Control for High-Precision Motion of a Piezostage. 2007, 54, 629-637	71
404	Development of a micromanipulation mystem with force sensing. 2007,	1
403	Precise trajectory tracking of a piezoactuator-driven stage using an adaptive backstepping control scheme. 2007, 54, 705-14	3
402	SMC framework in motion control systems. 2007, 21, 731-744	22
401	Hysteresis modeling based on saturation operator without constraints. 2007, 310, 2647-2649	1
400	Enhanced sliding mode motion tracking control of piezoelectric actuators. 2007, 138, 194-202	107
399	Dynamic modeling and experimental verification of a piezoelectric part feeder in a structure with parallel bimorph beams. 2007, 46, 205-18	19
398	Nonlinear modeling of composite plates with piezoceramic layers using finite element analysis. 2008, 315, 911-926	18
397	Robust motion tracking control of piezo-driven flexure-based four-bar mechanism for micro/nano manipulation. 2008, 18, 111-120	99
396	Dynamic electromechanical drift model for PZT. 2008, 18, 81-89	16

395	An integrated physical model that characterizes creep and hysteresis in piezoelectric actuators. 2008 , 16, 93-110	36
394	Enhanced adaptive motion tracking control of piezo-actuated flexure-based four-bar mechanisms for micro/nano manipulation. 2008 , 147, 254-262	51
393	Robust generalised impedance control of piezo-actuated flexure-based four-bar mechanisms for micro/nano manipulation. 2008 , 148, 443-453	65
392	. 2008 , 57, 10-18	0
391	ULTRA-FINE TRACKING CONTROL ON PIEZOELECTRIC ACTUATED MOTION STAGE USING PIEZOELECTRIC HYSTERETIC MODEL. 2008 , 6, 208-216	22
390	APPLICATION OF A MODEL-BASED ITERATIVE LEARNING TECHNIQUE TO TRACKING CONTROL OF A PIEZOELECTRIC SYSTEM. 2008 , 7, 29-37	15
389	ROBUST ADAPTIVE CONTROL OF PIEZOELECTRIC ACTUATORS WITH AN APPLICATION TO INTRACYTOPLASMIC SPERM INJECTION. 2008 , 7, 63-72	3
388	MODELING OF A PIEZO-ACTUATED POSITIONING STAGE BASED ON A HYSTERESIS OBSERVER. 2008 , 7, 73-80	7
387	An Adaptive Approximator-Based Backstepping Control Approach for Piezoactuator-Driven Stages. 2008 , 55, 1729-1738	33
386	Displacement Control of Piezoelectric Actuator using the PID Controller and System Identification Method. 2008 ,	7
385	Self-sensing force control of a piezoelectric actuator. 2008 , 55, 2571-81	30
384	A new simple asymmetric hysteresis operator and its application to inverse control of piezoelectric actuators. 2008 , 55, 1086-94	22
383	Sliding-Mode Enhanced Adaptive Motion Tracking Control of Piezoelectric Actuation Systems for Micro/Nano Manipulation. 2008 , 16, 826-833	87
382	Compensation of Scanner Creep and Hysteresis for AFM Nanomanipulation. 2008 , 5, 197-206	139
381	Optimal PID Control System of a Piezoelectric Microspitoner. 2008 ,	1
380	Neural network based control of micro-manipulator. 2008 ,	0
379	Efficient Modeling of Ferroelectric Behavior for the Analysis of Piezoceramic Actuators. 2008 , 19, 1117-1129	38
378	Study of neural network motion control of piezoelectric actuation systems for micro/nano manipulation. 2008 ,	

377	Self-sensing High Speed Controller for Piezoelectric Actuator. 2008 , 19, 395-405	9
376	On the Dynamics of Piezoelectric-Driven Stick-Slip Actuator. 2008 , 375-376, 648-652	3
375	Modeling Hysteresis of the Piezoactuators with Prandtl-Ishlinskii Model. 2008 ,	1
374	An adaptive recurrent radial basis function network tracking controller for a two-dimensional piezo-positioning stage. 2008 , 55, 183-98	12
373	Combined H _∞ Feedback and eterative learning control design with application to nanopositioning systems. 2008 ,	3
372	Discrete-time adaptive fuzzy control with hysteresis observer for a three-axis flexure stage. 2008 , 31, 897-911	
371	On the dynamics of piezoactuated positioning systems. 2008 , 79, 116101	24
370	Robust H _∞ control of hysteresis in a piezoelectric stack actuator. 2008 , 41, 1996-2001	1
369	Introduction to Precision Engineering. 2008 , 19-26	
368	MultiRate Predictive Control of Piezoelectric actuators. 2008 , 41, 15774-15779	
367	Feedforward controller based-on piezoelectric actuator's hysteresis model and its performance simulation of an XY plane motion stage. 2009 ,	1
366	Enhanced sliding-mode constrained motion tracking control of piezo-actuated flexure-based mechanisms. 2009 ,	2
365	FPGA-based interface for control of a hybrid micropositioning stage. 2009 ,	3
364	Novel multirate control strategy for piezoelectric actuators. 2009 , 223, 673-682	3
363	A comprehensive model for piezoceramic actuators: modelling, validation and application. 2009 , 18, 125011	44
362	Development of a novel flexure-based microgripper for high precision micro-object manipulation. 2009 , 150, 257-266	115
361	Accuracy analysis and stabilization design of the FabryPerot frequency discriminator in double-edge wind lidars. 2009 , 30, 73-81	
360	Robust tracking control of a piezodriven monolithic flexure-hinge stage. 2009 , 52, 926-934	2

359	Experimentally validated approach for the simulation of the forging process using mechanical vibration. 2009 , 2, 133-136	6
358	Investigations on a directly coupled piezoactuated tool feed system for micro-electro-discharge machine. 2009 , 49, 1197-1203	9
357	Modeling and control of a piezoelectric actuator driven system with asymmetric hysteresis. 2009 , 346, 17-32	36
356	A new design of piezoelectric driven compliant-based microgripper for micromanipulation. 2009 , 44, 2248-2264	92
355	A hysteresis compensation method of piezoelectric actuator: Model, identification and control. 2009 , 17, 1107-1114	62
354	A backstepping controller for piezoelectric actuators with hysteresis in nanopositioning. 2009 ,	
353	Modeling and simulation for dual stage system using bond graph theory. 2009 ,	3
352	Neural Network Motion Tracking Control of Piezo-Actuated Flexure-Based Mechanisms for Micro-/Nanomanipulation. 2009 , 14, 517-527	67
351	Robust neural network motion tracking control of piezoelectric actuation systems for micro/nanomanipulation. 2009 , 20, 356-67	55
350	Micro and nano robotics. 2009 ,	1
349	Characterization of a Piezoelectric Ultrasonic Linear Motor for Braille Displays. 2009 ,	14
348	Optimal fuzzy control of piezoelectric systems based on hybrid Taguchi method and particle swarm optimization. 2009 ,	3
347	Modeling of a walking piezo actuator. 2009 ,	3
346	Modeling and design of a high precision microgripper for microhandling operation. 2009 ,	
345	Adaptive Sliding-Mode Control of Piezoelectric Actuators. 2009 , 56, 3514-3522	55
344	. 2009 , 56, 3609-3618	45
343	Dynamometer Power Output Measurements of Miniature Piezoelectric Actuators. 2009 , 14, 1-10	18
342	Miniaturized Unconstrained on-off Pneumatic Poppet Valve Experiment and Simulation. 2009 , 14, 626-635	7

341	Longitudinal vibrations modeling of a piezoelectric actuator used in forming process. 2009,	4
340	Analyzing and Modeling of Disturbances for In-Cylinder Pressure Measurement with a Gasoline Injector. 2010, 43, 632-639	
339	Measurement and tracking control of the Z-tilts error compensating stage of the nano-measuring machine. 2010, 39, 1029-1039	1
338	Particle movement with squeezing flow of liquid films. 2010, 151, 297-303	3
337	Modified BVD model of PZT actuator using high-voltage square pulse method for micropumps. 2010, 8, 727-738	4
336	Neural network position control of XY piezo actuator stage by visual feedback. 2010, 19, 1043-1055	1
335	Modeling of a walking piezo actuator. 2010, 162, 51-60	22
334	Microdispensing system via the contacting method. 2010, 49, 443-6	2
333	Simulation tool design for the two-axis nano stage of lithography systems. 2010, 20, 574-581	11
332	Active Damping of a Piezoelectric Tube Scanner using Self-Sensing Piezo Actuation. 2010, 20, 656-665	60
331	Control of McKibben pneumatic muscles for a power-assist, lower-limb orthosis. 2010, 20, 686-697	86
330	Develop an Improved Miniature Amplifier for Piezoceramic Actuation through Feedback Control. 2010,	
329	Modeling of Piezoelectric Ceramics Based on Partial Least-Square Regression Method. 2010, 139-141, 13-16	
328	Dahl Model-Based Hysteresis Compensation and Precise Positioning Control of an XY Parallel Micromanipulator With Piezoelectric Actuation. 2010, 132,	86
327	System identification and control of piezo-based actuators for optical pickup devices. 2010,	
326	A particle swarm and neural network approach for position control of XY Piezo Actuator Stage. 2010,	
325	Study on NN-Preisach hybrid model of piezoelectric actuator. 2010,	
324	H2-optimal digital control of piezoelectric actuators. 2010,	2

323	Object detection and tracking for a vision guided automated suspended cell injection process. 2010	4
322	A Comprehensive Piezoceramic Actuator Model for Simulating Mechanical Interactions in Smart Structures. 2010 ,	
321	. 2010 , 18, 336-351	60
320	Robust H _∞ control in nano-positioning. 2010 ,	
319	Modelling and identification of a piezoelectrically driven fuel injection control valve. 2010 , 16, 285-305	2
318	Hysteresis modeling and inverse feedforward control of an AFM piezoelectric scanner based on nano images. 2011 ,	10
317	An asymmetric PI hysteresis model for piezoceramics in nanoscale AFM imaging. 2011 ,	5
316	A new model of hysteresis in piezoelectric actuators. 2011 ,	3
315	A Totally Decoupled Piezo-Driven XYZ Flexure Parallel Micropositioning Stage for Micro/Nanomanipulation. 2011 , 8, 265-279	156
314	Piezoelectric multilayer actuator life test. 2011 , 58, 820-8	6
313	. 2011 ,	4
312	A note on the properties of a generalized Prandtl-Bhlinkii model. 2011 , 20, 087003	17
311	Dynamic Modeling of a Piezoelectric Actuated Fuel Injector. 2011 , 133,	13
310	Model-Based Control of An Active Fixture for Advanced Aerospace Components. 2011 , 225, 35-51	4
309	Development of microgripper system. 2011 ,	1
308	Robust Adaptive Constrained Motion Tracking Control of Piezo-Actuated Flexure-Based Mechanisms for Micro/Nano Manipulation. 2011 , 58, 1406-1415	88
307	A Novel Piezoactuated XY Stage With Parallel, Decoupled, and Stacked Flexure Structure for Micro-/Nanopositioning. 2011 , 58, 3601-3615	122
306	Dynamic Characteristics of Tiny Ultrasonic Linear Actuators. 2011 , 1, 12-23	

305	Piezoelectric Fuel Injection: Pulse-to-Pulse Coupling and Flow Rate Estimation. 2011 , 16, 627-642	16
304	Modeling and Waveform Optimization of a Nano-motion Piezo Stage. 2011 , 16, 615-626	37
303	Tracking control design for a wave equation with dynamic boundary conditions modeling a piezoelectric stack actuator. 2011 , 21, 542-562	23
302	Robust control of novel pendulum-type vibration isolation system. 2011 , 330, 4384-4398	3
301	Parameter identification and hysteresis compensation of embedded piezoelectric stack actuators. 2011 , 21, 329-338	59
300	Experimental analysis and simulation of nonlinear microscopic behavior of ball screw mechanism for ultra-precision positioning. 2011 , 35, 650-668	21
299	Dynamic modeling of thickness-mode piezoelectric transducer using the block diagram approach. 2011 , 51, 617-24	20
298	Robust H _∞ control in fast atomic force microscopy. 2011 ,	2
297	Hysteresis independent on-line capacitance measurement for piezoelectric stack actuators. 2011 ,	2
296	Study on a Flexure Hinge-Based Micro-Displacement Platform. 2011 , 179-180, 1368-1373	1
295	Control of Residual Vibration in Micro-Positioning Platform. 2011 , 221, 444-448	
294	Design and Characterization of a Flexible Micro-Displacement Manipulator. 2011 , 221, 449-454	
293	Feedback Control of a Flexible Micro-Displacement Manipulator. 2011 , 480-481, 1167-1172	
292	Modeling of Hysteresis and Backlash for a Smart Fin with a Piezoelectric Actuator. 2011 , 22, 1161-1176	6
291	A novel hysteresis reducing piezoceramic amplifier. 2011 ,	
290	A Method for Evaluating the Electro-Mechanical Characteristics of Piezoelectric Actuators during Motion. 2012 , 12, 11559-11570	6
289	A macro-micro motion servopneumatic device. 2012 , 226, 775-786	5
288	Hysteresis compensation and high-performance tracking control of piezoelectric actuators. 2012 , 226, 1050-1059	3

287	Modeling and Control of Rate-Dependent Hysteresis for PEA with MPI Model-Based Hammerstein System. 2012,	
286	Control performance comparison of PZT microactuator driven by voltage and current amplifiers in HDD dual-stage systems. 2012,	
285	Ultra-precise tracking control of piezoelectric actuators via a fuzzy hysteresis model. 2012, 83, 085114	5
284	Design of a miniature 3-DOF flexure-based mechanism for micro/nano manipulation. 2012,	0
283	Using frequency-weighted data fusion to improve the performance of a digital charge amplifier. 2012,	
282	Modeling Hysteresis with Inertial-Dependent Prandtl-Ishlinskii Model in Wide-Band Frequency-Operated Piezoelectric Actuator. 2012, 2012, 1-15	2
281	Studies on the Resonance-Enhanced Micro-Actuator with Active Structures. 2012,	1
280	Modeling of Rate-Dependent Hysteresis for Piezoelectric Actuator with MPI Model-Based Hammerstein System. 2012, 281-290	2
279	A Hammerstein-based model for rate-dependent hysteresis in piezoelectric actuator. 2012,	10
278	Trade-off between the control bandwidth and the measurement accuracy in Atomic Force Microscopy. 2012,	1
277	Sliding-mode control of a flexure based mechanism using piezoelectric actuators. 2012,	1
276	Study on reinforcement and repair of cracked piezoelectric materials. 2012,	1
275	Non-symmetrical Bouc-Wen model for piezoelectric ceramic actuators. 2012, 181, 51-60	78
274	Tracking control of a biaxial piezo-actuated positioning stage using generalized Duhem model. 2012, 64, 766-787	85
273	Experimental Investigations on Piezoelectric Based Prototype Actuator. 2012, 272-279	
272	Particle swarm optimization based feedforward controller for a XY PZT positioning stage. 2012, 22, 614-628	32
271	Invited review article: high-speed flexure-guided nan positioning: mechanical design and control issues. 2012, 83, 121101	318
270	SVD-based Preisach hysteresis identification and composite control of piezo actuators. 2012, 51, 430-8	30

269	Dual-stage repetitive control with Prandtl-Bhinskii hysteresis inversion for piezo-based nanopositioning. 2012 , 22, 271-281	33
268	Controllable Lubrication for Main Engine Bearings Using Mechanical and Piezoelectric Actuators. 2012 , 17, 279-287	8
267	Automatic Hysteresis Modeling of Piezoelectric Micromanipulator in Vision-Guided Micromanipulation Systems. 2012 , 17, 547-553	37
266	A new variable structure sliding mode control strategy for FTS in diamond-cutting microstructured surfaces. 2013 , 65, 1177-1184	7
265	Motion Control of Piezoelectric Positioning Stages: Modeling, Controller Design, and Experimental Evaluation. 2013 , 18, 1459-1471	161
264	Creep modeling and identification for piezoelectric actuators based on fractional-order system. 2013 , 23, 840-847	32
263	A digital charge amplifier for hysteresis elimination in piezoelectric actuators. 2013 , 22, 075016	13
262	. 2013 , 9, 859-868	57
261	Modeling and High Dynamic Compensating the Rate-Dependent Hysteresis of Piezoelectric Actuators via a Novel Modified Inverse Preisach Model. 2013 , 21, 1549-1557	118
260	Hysteresis and creep modeling and compensation for a piezoelectric actuator using a fractional-order Maxwell resistive capacitor approach. 2013 , 22, 115020	40
259	Design and construction of the motion mechanism of an XY micro-stage for precision positioning. 2013 , 201, 395-406	43
258	Prediction of the LISA-Pathfinder release mechanism in-flight performance. 2013 , 51, 1145-1156	13
257	Analysis and experiments of a novel and compact 3-DOF precision positioning platform. 2013 , 27, 3347-3356	15
256	Restoration and Reinforcement Method for Damaged Piezoelectric Materials. 2013 , 449, 52-61	12
255	Design and Control for High-Speed Nanopositioning: Serial-Kinematic Nanopositioners and Repetitive Control for Nanofabrication. <i>IEEE Control Systems</i> , 2013 , 33, 86-105	2.9 41
254	Tracking control for piezo-actuated stage using sliding mode controller with observer-based hysteresis compensation. 2013 ,	
253	Modeling hysteresis and creep behavior of macrofiber composite-based piezoelectric bimorph actuator. 2013 , 24, 369-377	7
252	A simple fuzzy system for modelling of both rate-independent and rate-dependent hysteresis in piezoelectric actuators. 2013 , 36, 182-192	43

251	A Survey of Modeling and Control of Piezoelectric Actuators. 2013 , 03, 1-20	45
250	Highly stable piezoelectrically tunable optical cavities. 2013 , 111, 223-231	7
249	Development of an Approach Toward Comprehensive Identification of Hysteretic Dynamics in Piezoelectric Actuators. 2013 , 21, 1834-1845	37
248	A comprehensive dynamic modeling approach for giant magnetostrictive material actuators. 2013 , 22, 125005	6
247	Micro position control of a 3-RRR compliant mechanism. 2013 ,	3
246	Robust H ∞ Control in Fast Atomic Force Microscopy. 2013 , 15, 872-887	26
245	Robust H ∞ Control of Hysteresis in a Piezoelectric Stack Actuator1. 2013 , 135,	4
244	Stability Analysis of Piezoelectric Actuator based Micro Gripper for Robotic Micro Assembly. 2013 ,	1
243	Dither based precise position control of piezo actuated micro-nano manipulator. 2013 ,	5
242	A comparison of dithers for hysteresis alleviation in dahl model based piezoelectric actuator. 2013 ,	1
241	Dither control for Dahl model based hysteresis compensation. 2013 ,	5
240	An improved electromechanical model and parameter identification technique for piezoelectric actuators. 2013 , 24, 1049-1058	4
239	Implementation and analysis of an innovative digital charge amplifier for hysteresis reduction in piezoelectric stack actuators. 2014 , 85, 045005	8
238	Terminal sliding-mode based force tracking control of piezoelectric actuators for variable physical damping system. 2014 ,	6
237	Increasing the accuracy and the repeatability of position control for micromanipulations using Heteroscedastic Gaussian Processes. 2014 ,	1
236	Modeling and active disturbance rejection control for a piezoelectric-actuator driven nanopositioner. 2014 ,	3
235	Dahl model based feedforward control for precise positioning of nano actuators using TMS320C6713. 2014 ,	
234	Development of a Flat Type Six-Axis Stage Based on Piezoelectric Actuators. 2014 , 2014, 1-16	1

233	A serial-kinematic nanopositioner for high-speed atomic force microscopy. 2014 , 85, 105104	31
232	Identification of the PEA hysteresis property using a fractional order model. 2014 ,	5
231	Modeling of a Dynamic Mirror With Antagonistic Piezoelectric Stack Actuation. 2014 , 136,	2
230	Dynamic modeling and identification of magnetostrictive actuators for control of micromanipulation. 2014 ,	
229	An adaptive internal model control system of a piezo-ceramic actuator with two RBF neural networks. 2014 ,	3
228	Interferómetro de polarización para la caracterización mecánica de dispositivos piezoeléctricos. 2014 ,	
227	Comparison of Model-Based Approaches to the Compensation of Hysteresis in the Force Characteristic of Pneumatic Muscles. 2014 , 61, 3620-3629	60
226	Model-free force tracking control of piezoelectric actuators: Application to variable damping actuator. 2014 ,	12
225	Actuation of Linear Ultrasonic Motors with a Square-wave Based Excitation Voltage. 2014 , 473, 75-93	1
224	A high cell count cascade full bridge converter for wide bandwidth ultrasonic transducer excitation. 2014 ,	3
223	Feedforward hysteresis calibration of piezoelectric actuator in AFM based on inverse model identification. 2014 ,	0
222	Study on electromechanical hysteretic model of Macro-Fiber Composite actuator. 2014 , 25, 1469-1483	9
221	A modified Preisach model and its inversion for hysteresis compensation in piezoelectric actuators. 2014 , 10, 122-142	4
220	Electromechanical modelling for piezoelectric flexensional actuators. 2014 , 23, 025005	11
219	Transfer matrix method for multibody systems for piezoelectric stack actuators. 2014 , 23, 095043	10
218	Hysteresis compensation and trajectory preshaping for piezoactuators in scanning applications. 2014 , 23, 015015	3
217	Adaptive Control for Uncertain Hysteretic Systems. 2014 , 136,	5
216	Precision control of piezo-actuated optical deflector with nonlinearity correction based on hysteresis model. 2014 , 57, 26-31	20

215	Memory characteristics of hysteresis and creep in multi-layer piezoelectric actuators: An experimental analysis. 2014 , 435, 40-43	11
214	Feedback/feedforward control of hysteresis-compensated piezoactuators for highspeed scanning applications. 2014 ,	1
213	Control system design for piezoelectric actuator based on hysteresis compensation. 2014 ,	1
212	Sensorless Position Control For Piezoelectric Actuators Using A Hybrid Position Observer. 2014 , 19, 667-675	38
211	An adaptive nanoindentation system based on electric bending of a piezoelectric cantilever. 2014 , 216, 249-256	6
210	Development of a novel plane piezoelectric actuator using Hamilton's principle based model and Hertz contact theory. 2014 , 217, 116-123	8
209	Simultaneous compensation of hysteresis and creep in a single piezoelectric actuator by open-loop control for quasi-static space active optics applications. 2014 , 33, 48-62	22
208	MRT letter: An extended scanning probe microscopy system for macroscopic topography imaging. 2014 , 77, 749-53	
207	Modeling and compensation for hysteresis properties in piezoelectric actuators. 2014 ,	6
206	Design and analysis of a novel flexure-based 3-DOF mechanism. 2014 , 74, 173-187	114
205	A survey on hysteresis modeling, identification and control. 2014 , 49, 209-233	257
204	Integral resonant damping for high-bandwidth control of piezoceramic stack actuators with asymmetric hysteresis nonlinearity. 2014 , 24, 367-375	20
203	A Stitching Method for AFM Based Large Scale Scanning with High Resolution. 2014 , 47, 2697-2702	2
202	Recent Advances in the Control of Piezoelectric Actuators. 2014 , 11, 182	28
201	A Novel Time Dependent Prandtl-Ishlinskii Model for Sensorless Hysteresis Compensation in Piezoelectric Actuators. 2014 , 47, 2703-2708	4
200	Modeling and control of a piezoelectric-actuated nano-positioner: An hierarchical composite anti-disturbance control approach. 2014 ,	
199	Controller design and verification for a rotational piezo-based actuator for accurate positioning applications in noisy environments. 2015 ,	2
198	Adaptive internal model control design for positioning control of a piezo-ceramic actuator with rate-dependent hysteresis. 2015 , 2, 15-00190-15-00190	1

197	Modeling hysteresis, creep, and dynamic effects for piezoactuator-based nano-positioning systems. 2015,	
196	A Modified Comprehensive Model for Piezoelectric Stack Actuators and Corresponding Parameter Identification Method. 2015, 2015, 1-11	2
195	Non-Linear Piezoelectric Actuator with a Preloaded Cantilever Beam. 2015, 6, 1066-1081	3
194	Modeling and Identification of Asymmetric Hysteresis in Smart Actuators: A Modified MS Model Approach. 2015, 1-1	14
193	Design of a Charge Drive for Reducing Hysteresis in a Piezoelectric Bimorph Actuator. 2015, 1-1	11
192	Three-port equivalent circuit of multi-layer piezoelectric stack. 2015, 236, 92-97	17
191	Displacement characteristics of a piezoactuator-based prototype microactuator with a hydraulic displacement amplification system. 2015, 29, 4817-4822	5
190	Microstructures replication using high frequency excitation. 2015,	
189	Feedforward neural network position control of a piezoelectric actuator based on a BAT search algorithm. 2015, 42, 5416-5423	26
188	Nonlinear Control of Systems Preceded by Preisach Hysteresis Description: A Prescribed Adaptive Control Approach. 2015, 1-1	24
187	Generalized modal analysis for closed-loop piezoelectric devices. 2015, 24, 085028	1
186	Extended lumped parameter electromechanical model of piezoelectric actuators. 2015,	2
185	. 2015,	1
184	A 16 Channel High-Voltage Driver with 14 Bit Resolution for Driving Piezoelectric Actuators. 2015, 62, 1726-1736	8
183	Improving atomic force microscopy imaging by a direct inverse asymmetric PI hysteresis model. 2015, 15, 3409-25	18
182	Eliminating hysteresis of piezoelectric deformable mirror by charge control. 2015, 349, 1-5	5
181	Simultaneous parametric optimization of IPMC actuator for compliant gripper. 2015, 16, 2289-2297	16
180	Damping control of variable damping compliant actuators. 2015,	8

179	Modeling of piezoelectric stack actuators considering bonding layers. 2015 , 26, 2418-2427	7
178	A review of long range piezoelectric motors using frequency leveraged method. 2015 , 235, 240-255	101
177	Feedback/feedforward control of hysteresis-compensated piezoelectric actuators for high-speed scanning applications. 2015 , 24, 015012	18
176	Design and analysis of piezoelectric actuator for micro gripper. 2015 , 11, 253-276	20
175	A feedforward controller with neural-network based rate-dependent model for piezoelectric-driven mechanism. 2016 ,	2
174	On damping characteristics of frictional hysteresis in pre-sliding range. 2016 , 727, 012014	2
173	Characterization, Modeling and H _∞ Control of n-DOF Piezoelectric Actuators: application to A 3-DOF Precise Positioner. 2016 , 18, 1239-1258	5
172	Position self-sensing for piezoelectric actuators utilizing an anti-resonant circuit. 2016 ,	1
171	A novel microgripper hybrid driven by a piezoelectric stack actuator and piezoelectric cantilever actuators. 2016 , 87, 115003	21
170	Robust control of piezostage for nanoscale three-dimensional images acquisition. 2016 ,	2
169	Robust model reference adaptive control for a two-dimensional piezo-driven micro-displacement scanning platform based on the asymmetrical Bouc-Wen model. 2016 , 6, 115308	3
168	Modelling and diagnostic of an ultrasonic piezoelectric actuator. 2016 , 628, 23-40	2
167	Development and investigation of MOEMS type displacement-pressure sensor for biological information monitoring. 2016 ,	
166	Linear Modeling of a Flexible Substructure Actuated through Piezoelectric Components for Use in Integrated Control/Structure Design. 2016 , 49, 296-301	1
165	Adaptive Control of Magnetostrictive-Actuated Positioning Systems with Input Saturation. 2016 , 635-645	
164	Adaptive Dynamic Surface Inverse Output Feedback Control for a Class of Hysteretic Systems. 2016 , 646-662	
163	Angle hybrid control for a two-axis piezo-positioning system and its application. 2016 , 25, 095002	3
162	Modified ADRC with composite nonlinear feedback for a piezoelectric-actuator driven nano-manipulating stage. 2016 ,	

161	A Novel Hybrid Self-sensing Method For Force Estimation In A Piezo-stepperActuator. 2016,	
160	. 2016, 63, 5733-5743	46
159	Design, kinematic modeling and sliding mode control with sliding mode observer of a novel 3-PRR compliant mechanism. 2016, 30, 1228-1242	3
158	High-speed and precision control of a piezoelectric positioner with hysteresis, resonance and disturbance compensation. 2016, 22, 2499-2509	13
157	Nonlinear modeling and tracking control of a single-link micro manipulator using controlled Lagrangian method. 2016, 22, 2645-2656	4
156	Control system design for nano-positioning using piezoelectric actuators. 2016, 25, 025024	20
155	Adaptive Fuzzy Hysteresis Internal Model Tracking Control of Piezoelectric Actuators With Nanoscale Application. 2016, 24, 1246-1254	36
154	Two-Degree-of-Freedom Hysteresis Compensation for a Dynamic Mirror Actuator. 2016, 21, 29-37	20
153	Microstructures replication using high frequency excitation. 2016, 22, 1831-1843	8
152	On the identification of Hammerstein systems in the presence of an input hysteretic nonlinearity with nonlocal memory: Piezoelectric actuators In an experimental case study. 2016, 486, 101-105	12
151	Robust output feedback control with disturbance estimation for piezoelectric actuators. 2016, 173, 2129-2135	3
150	Mu-Synthesis robust control of 3D bar structure vibration using piezo-stack actuators. 2016, 78, 18-27	17
149	Formulation of a simple distributed-parameter model of multilayer piezoelectric actuators. 2016, 27, 1485-1491	20
148	A piezoelectric model based multi-objective optimization of robot gripper design. 2016, 53, 453-470	8
147	Modeling and Control of Piezo-Actuated Nanopositioning Stages: A Survey. 2016, 13, 313-332	306
146	Robust adaptive backstepping control for piezoelectric nano-manipulating systems. 2017, 83, 130-148	36
145	. 2017, 14, 1265-1285	39
144	Modeling and tracking control of a novel XY stage. 2017, 23, 3575-3588	9

143	Cognition-Enhanced, Self-optimizing Assembly Systems. 2017 , 877-990	1
142	Dual sensing-actuation artificial muscle based on polypyrrole-carbon nanotube composite. 2017 ,	1
141	Compensation of the residual error from the charge feedback control of a piezoelectric-actuated stage. 2017 , 231, 414-424	2
140	Parameter identification of hysteresis nonlinear dynamic model for piezoelectric positioning system based on the improved particle swarm optimization method. 2017 , 9, 168781401770281	6
139	Nonlinear cross-coupling of a 2-DOF piezoelectric actuator with multi-channel Hammerstein model. 2017 ,	1
138	On the performance of human energy harvesting technology. 2017 ,	1
137	Nonlinear hammerstein model identification of amplified piezoelectric actuators (APAs): Experimental considerations. 2017 ,	8
136	Untersuchung analytischer und numerischer Modelle zur anwendungsspezifischen Dimensionierung eines Amplified Piezo Actuators. 2017 , 84, 706-718	6
135	Adaptive rate-dependent feedforward control for piezoelectric actuator. 2017 ,	1
134	Design of a generalised charge-based self-sensing model for quasi-static piezoelectric actuators. 2017 ,	1
133	Wideband quad optical sensor for high-speed sub-nanometer interferometry. 2017 , 56, 397-403	7
132	Modeling of cellular actuators. 2017 , 45-119	
131	Robust independent modal space control of a coupled nano-positioning piezo-stage. 2018 , 106, 466-478	19
130	A Survey of Methods Used to Control Piezoelectric Tube Scanners in High-Speed AFM Imaging. 2018 , 20, 1379-1399	28
129	A hybrid dynamic model of shape memory alloy spring actuators. 2018 , 114, 340-353	8
128	Power Generation Amplification and Stack Toughening via Compliant Layer Interdigitation. 2018 ,	1
127	Irreversible port-Hamiltonian formulation of non-isothermal electromechanical systems with hysteresis. 2018 , 51, 19-24	2
126	Modelling and Analysis of Characteristics of a Piezoelectric-Actuated Micro-/Nano Compliant Platform Using Bond Graph Approach. 2018 , 9,	9

125	Identification of Piezoelectric Energy Harvester Parameters Using Adaptive Models. 2018,	2
124	An enhanced Bouc-Wen model for characterizing rate-dependent hysteresis of piezoelectric actuators. 2018, 89, 115002	19
123	Distributed Hammerstein Modeling for Cross-Coupling Effect of Multiaxis Piezoelectric Micropositioning Stages. 2018, 23, 2794-2804	17
122	A distributed parameter Maxwell-Slip hysteresis model for piezoelectric actuators. 2018,	
121	A distributed parameter model for the piezoelectric stack harvester subjected to general periodic and random excitations. 2018, 173, 191-202	20
120	Interval model of the piezoelectric drive. 2018,	1
119	Dynamics Modeling and Inversion-Based Synchronized Model Predictive Control for a FabryPerot Spectrometer. 2019, 24, 1818-1828	17
118	A generalized saturated capacitor model for hysteresis in piezoelectric materials. 2019, 474, 012004	
117	Design of Adaptive Voltage Dither Control Framework Based on Spectral Analysis for Nonlinear Piezoelectric Actuator. 2019, 30, 954-969	2
116	A high-frequency piezoelectric rheometer with validation of the loss angle measuring loop: application to polymer melts and colloidal glasses. 2019, 58, 619-637	6
115	Displacement Control of Piezoelectric Actuator Based on Fuzzy Fractional Order PID. 2019,	1
114	A Modified Duhem Model for Rate-Dependent Hysteresis Behaviors. 2019, 10,	9
113	Design of a New Piezoelectric Energy Harvesting Handrail With Vibration and Force Excitations. 2019, 7, 151449-151458	4
112	Positioning Error Analysis and Control of a Piezo-Driven 6-DOF Micro-Positioner. 2019, 10,	7
111	Ulam-Hyers-Mittag-Leffler stability for Hilfer fractional-order delay differential equations. 2019, 2019,	27
110	On Energy Harvesting Using Piezoelectric Transducer with Two-Port Model Under Force Excitation. 2019,	2
109	Recent progress in piezoelectric thin film fabrication via the solvothermal process. 2019, 7, 16046-16067	18
108	A Multistate Friction Model for the Compensation of the Asymmetric Hysteresis in the Mechanical Response of Pneumatic Artificial Muscles. 2019, 8, 49	7

107	On an equivalent model of multi-layer piezoelectric actuators for facilitating finite element simulations. 2019 , 25, 4455-4464	1
106	Nonlinear Hysteresis Modeling of Piezoelectric Actuators Using a Generalized Bouc-Wen Model. 2019 , 10,	12
105	A review of nonlinear hysteresis modeling and control of piezoelectric actuators. 2019 , 9, 040702	28
104	Dynamic modeling of piezoelectric media. 2019 , 43-94	
103	Bibliography. 2019 , 201-203	
102	Comprehensive approach to modeling and identification of a two-axis piezoelectric fast steering mirror system based on multi-component analysis and synthesis. 2019 , 127, 50-67	6
101	Asynchronous Control of a Prototype Inchworm Actuator: Control Design and Test Results. 2019 , 8, 20	3
100	Modeling of Rate-Independent and Symmetric Hysteresis Based on Madelung's Rules. 2019 , 19,	3
99	Design of a Feedforward-Feedback Controller for a Piezoelectric-Driven Mechanism to Achieve High-Frequency Nonperiodic Motion Tracking. 2019 , 24, 853-862	21
98	Sliding Mode Control of Piezoelectric Stack Actuators for Roll Gap Adjustment in a Cold Rolling Mill. 2019 ,	2
97	A proposal of a piezo rotary positioning device: design, modeling and experiments. 2019 , 28, 115032	3
96	Development of a New Long Stroke Nanopositioning System With Modular Pantograph Compliant Mechanism. 2019 ,	1
95	Trajectory tracking of piezoelectric-driven stage via a hybrid controller for both periodic and non-periodic motion. 2019 , 28, 025023	2
94	. 2019 , 66, 7150-7158	18
93	Inversion-free force tracking control of piezoelectric actuators using fast finite-time integral terminal sliding-mode. 2019 , 57, 39-50	19
92	Adaptive Inverse Control of Piezoelectric Actuators Based on Segment Similarity. 2019 , 66, 5403-5411	9
91	Charge-based hysteresis compensation in low impedance piezoelectric actuators by a modified Prandtl-Bhlinkii model. 2019 , 233, 83-93	5
90	Adaptation-Enhanced Model-Based Control with Charge Feedback for Piezo-Actuated Stage. 2020 , 22, 104-116	2

89	Online Hysteresis Identification and Compensation for Piezoelectric Actuators. 2020 , 67, 5595-5603	9
88	An Overview of Piezoelectric Self-Sensing Actuation for Nanopositioning Applications: Electrical Circuits, Displacement, and Force Estimation. 2020 , 69, 2-14	15
87	Comprehensive Piezoelectric Material Application Issues on Energy Harvesting for Artificial Intelligence Systems. 2020 ,	2
86	Energy harvesting using piezoelectric transducers for suspension systems. 2020 , 65, 102294	10
85	Comparison between Resonance and Non-Resonance Type Piezoelectric Acoustic Absorbers. 2019 , 20,	1
84	A High-Voltage and Low-Noise Power Amplifier for Driving Piezoelectric Stack Actuators. 2020 , 20,	3
83	Reproducing kernel Hilbert space embedding for adaptive estimation of nonlinearities in piezoelectric systems. 2020 , 101, 1397-1415	1
82	Adaptive Control of a Piezo-Positioning Mechanism With Hysteresis and Input Saturation Using Time Delay Estimation. 2020 , 8, 176062-176072	1
81	. 2020 ,	
80	Hybrid Model Based on the Maxwell-Slip Model and a Support Vector Machine for Hysteresis in Piezoelectric Actuators*. 2020 ,	0
79	On hysteresis modeling of a piezoelectric precise positioning system under variable temperature. 2020 , 145, 106880	15
78	Piezoelectric Energy Harvesting Solutions: A Review. 2020 , 20,	104
77	Model and Analysis of Piezoelectric Actuator in Practical Three-Stage Mechanism. 2020 , 21, 1717-1728	0
76	Design, analysis and fabrication of a novel hybrid electrothermal microgripper in microassembly cell. 2020 , 231, 111374	4
75	Modeling and Identification of Temperature-Dependent Hysteresis in Piezoelectric Materials Considering Parameter Sensitivity. 2020 , 8, 40901-40908	2
74	A Finite-Memory Discretization Algorithm for the Distributed Parameter Maxwell-Slip Model. 2020 , 25, 1138-1142	1
73	Power-Efficient Driver Circuit for Piezo Electric Actuator with Passive Charge Recovery. 2020 , 13, 2866	6
72	A quasi-rayleigh model for modeling hysteresis of piezoelectric actuators. 2020 , 29, 075012	3

71	Optimal design and experimental verification of piezoelectric energy harvester with fractal structure. 2021 , 282, 116121	5
70	Modeling and Compensation Algorithms of Asymmetric Nonlinearity for Piezoelectric Actuators Based on Madelung's Rules. 2021 , 68, 11359-11368	1
69	Hybrid Model Based on Maxwell-Slip Model and Relevance Vector Machine. 2021 , 68, 10050-10057	0
68	Research on coupling effects of actuator and round window membrane on reverse stimulation of human cochlea. 2021 , 235, 447-458	4
67	. 2021 , 1-1	1
66	Modeling of Piezoceramic Actuators for Control.	
65	. 2021 ,	0
64	Bouc-Wen model for SISO Nano-Positioning System with Kalman Filtering. 2021 ,	
63	Application of mass micromanipulations to submillimeter-scale particles in multiple containers on a laterally oscillated stage. 2021 , 77, 102602	
62	Review on tools and tool wear in EDM. 1-72	2
61	Statically Stable Charge Sensing Method for Precise Displacement Estimation of Piezoelectric Stack-Based Nanopositioning. 2021 , 68, 8550-8560	1
60	Model-based optimization for structure dimension and driving signal of a stick-slip piezoelectric actuator. 2022 , 164, 108191	1
59	Hysteresis Feedforward Compensation: A Direct Tuning Approach Using Hybrid-MEM-Elements. 2022 , 6, 1070-1075	0
58	A Dynamic Hysteresis Model and Nonlinear Control System for a Structure-Integrated Piezoelectric Sensor-Actuator. 2021 , 21,	2
57	Modeling of the dynamic hysteresis in DEAP actuator using an empirical mode decomposition based long-short term memory network. 1045389X2098699	
56	Self-Sensing Measurement in Piezoelectric Cantilevered Actuators for Micromanipulation and Microassembly Contexts. 2011 , 29-69	6
55	Unified Minimalistic Modeling of Piezoelectric Stack Actuators for Engineering Applications. 2015 , 459-473	1
54	Modeling of Piezoelectric-Actuated Nanopositioning Stages Involving with the Hysteresis. 2016 , 183-212	2

53	Feasibility Study of Robust Neural Network Motion Tracking Control of Piezoelectric Actuation Systems for Micro/Nano Manipulation. 2007 , 5-19	4
52	On PSO Based Bouc-Wen Modeling for Piezoelectric Actuator. 2010 , 125-134	5
51	Modeling Rate-Dependent and Thermal-Drift Hysteresis through Preisach Model and Neural Network Optimization Approach. 2012 , 179-187	1
50	Miniaturization Design of Piezoelectric Vibration-Driven Pneumatic Unconstrained Valves. 2010 , 22, 91-99	16
49	Modelling, Identification, and Compensation of Complex Hysteretic and log(t)-Type Creep Nonlinearities. 2005 , 33,	28
48	A Method of Hysteresis Modeling and Traction Control for a Piezoelectric Actuator. 2008 , 3, 401-407	4
47	Research on a cascade model synthesis with the use of classical and non-classical methods in the context of new piezoelectric stack applications. 2021 , 12, 959-969	
46	Dynamic Analysis of the Piezo-Actuator for a New Generation Lithography System. 2003 , 27, 472-477	
45	Development of a Simulation Tool of a Two-Axis Nano Stage for a New Generation Lithography System. 2004 , 28, 1541-1548	
44	Observer Design of an Injector for Fuel Control in DI Diesel Engines with an Electronically Controlled Injector. 2004 , 10, 1305-1311	
43	High Precision Tracking Control Using Piezoelectric Actuator Network. 2005 ,	
42	Modeling of Micro-Piezoelectric Motion Platform for Compensation and Neuro-PID Controller Design. 2009 , 784-793	1
41	Study on ECNLP Dynamics Model of Piezoceramic Actuator and Position Tracking Controller. 2009 , 34, 1090-1099	
40	Lernfähiger Beobachter. 2010 , 127-180	
39	Stable Adaptive Fuzzy Control with Hysteresis Observer for Three-Axis Micro/Nano Motion Stages. 2012 , 03, 390-403	
38	Design of a Controller for Enhancing Positioning Performance of a PZT Driven Stage. 2012 , 21, 465-472	
37	Dynamic Characteristics of Tiny Ultrasonic Linear Actuators. 2013 , 12-23	
36	Case Studies of Precise Actuator Applications. 2013 , 177-241	

- 35 Identification and Compensation of Preisach Hysteresis in Piezoelectric Actuators. **2013**, 21-62
- 34 Tracking Control for Nanopositioning Systems. **2016**, 213-244 0
- 33 Bibliography. **2017**, 319-334
- 32 A Review of Piezoelectric Design in MEMS Scanner. **2018**, 593-608 0
- 31 A Distributed Parameter Saturated Capacitor Model for Hysteresis in Piezoelectric Actuators. **2018**,
- 30 Precision Displacement Control of a Diamond-shaped Amplifying Mechanism Driven by Piezoelectric Actuator Based on Fuzzy Fractionalorder PID Controller. **2019**, 15, 596-605
- 29 Simulation and Analysis of Piezoelectric Actuator under Weft Insertion. **2020**,
- 28 First-principle study of the properties in BaTiO₃ and the electronic structure of H₂O adsorption on BaTiO₃. **2021**, 121, e26576 4
- 27 Hybrid-MEM-Element Feedforward: With Application to Hysteretic Piezoelectric Actuators. **2020**, 0
- 26 Comprehensive study of charge-based motion control for piezoelectric nanopositioners: Modeling, instrumentation and controller design. **2022**, 166, 108477 5
- 25 Hysteresis in nanopositioning systems driven by dual-stack differential driving piezoelectric actuators. **2020**, 53, 8599-8604
- 24 On stability of linear dynamic systems with hysteresis feedback. **2020**, 15, 52
- 23 Modeling of a Piezoelectric Based Nanopositioning Stage. **2021**, 257-264
- 22 A wireless radiofrequency-powered insect-scale flapping-wing aerial vehicle. **2021**, 4, 845-852 11
- 21 Design and Comparison of Reinforcement-Learning-Based Time-Varying PID Controllers with Gain-Scheduled Actions. **2021**, 9, 319 2
- 20 Displacement Estimation and Control Based on High Frequency Injection and Bridge Circuit in Piezoelectric Actuators. **2020**, 0
- 19 An irreversible port-Hamiltonian model for a class of piezoelectric actuators. **2021**, 54, 436-441 1
- 18 On the Effect of Force, Displacement and Voltage on the Capacitance of Piezoelectric Stack Actuators for Self-Sensing Applications. **2021**,

17	Design of a piezoelectric energy harvesting handrail with dual excitation modes. 2022 , 93-113	
16	Critical Damping in Travel Curves of Piezoelectrically Actuated Fast Mechanical Switches for Hybrid Circuit Breakers. 2022 , 1-1	1
15	Modeling and compensation for dynamic hysteresis of piezoelectric actuators based on Lissajous Curve. 2022 , 335, 113353	0
14	Dynamic Model of a Piezoelectric Walking Drive. 2022 ,	
13	A research of new potential vibration cancellation techniques with the use of piezo stacks. 2022 , 1235, 012055	
12	Reference modification for trajectory tracking using hybrid offline and online neural networks learning. 1	0
11	Temperature-dependent Asymmetric Prandtl-Ishlinskii Hysteresis Model for Piezoelectric Actuators.	2
10	Controllable preparation of two-dimensional oriented BaTiO ₃ polycrystals from K _{0.8} Ti _{1.73} Li _{0.27} O ₄ crystals by a one-step solvothermal process. 2022 , 48, 10693-10703	0
9	Principle, implementation, and applications of charge control for piezo-actuated nanopositioners: A comprehensive review. 2022 , 171, 108885	3
8	Soft pneumatic actuators adapted in multiple environments: A novel fuzzy cascade strategy for the dynamics control with hysteresis compensation. 2022 , 84, 102797	1
7	Empirical analysis of piezoelectric stacks composed of plates with different parameters and excited with different frequencies. 2022 , 1239, 012008	0
6	Near-Optimal Control of Atomic Force Microscope For Non-contact Mode Applications. 2022 , 55, 317-322	0
5	Response analysis of undamped primary system subjected to base excitation with a dynamic vibration absorber integrated with a piezoelectric stack energy harvester. 2023 , 44, 490-499	0
4	A data-driven controller for position tracking of a long-stroke piezoelectric actuator.	0
3	Model-Free Output-Feedback Sliding-Mode Control Design for Piezo-Actuated Stage. 2023 , 11, 152	0
2	Review of Play and Preisach Models for Hysteresis in Magnetic Materials. 2023 , 16, 2422	0
1	Microstructural and high-temperature dielectric, piezoelectric and complex impedance spectroscopic properties of K _{0.5} Bi _{0.5} TiO ₃ modified NBT-BT lead-free ferroelectric ceramics. 2023 , 9, e14761	0