# Roberto Oboe

## List of Publications by Citations



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|---|---|---|---|
| 116 papers | 1,853 citations | 20 h-index | 41 g-index |
| 160 ext. papers | 2,460 ext. citations | 4.5 avg, IF | 5.15 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 116 | Sensorless full-digital PMSM drive with EKF estimation of speed and rotor position. *IEEE Transactions on Industrial Electronics*, **1999**, 46, 184-191 | 8.9 | 362 |
| 115 | A Design and Control Environment for Internet-Based Telerobotics. *International Journal of Robotics Research*, **1998**, 17, 433-449 | 5.7 | 121 |
| 114 | Disturbance Observer-Based Robust Control and Its Applications: 35th Anniversary Overview. *IEEE Transactions on Industrial Electronics*, **2020**, 67, 2042-2053 | 8.9 | 114 |
| 113 | Towards Tactile Sensing System on Chip for Robotic Applications. *IEEE Sensors Journal*, **2011**, 11, 3216-3226 | 2.4 | 107 |
| 112 | Stability Analysis and Practical Design Procedure of Time Delayed Control Systems With Communication Disturbance Observer. *IEEE Transactions on Industrial Informatics*, **2008**, 4, 185-197 | 11.9 | 85 |
| 111 | Maximum-Torque-Per-Ampere Operation of Anisotropic Synchronous Permanent-Magnet Motors Based on Extremum Seeking Control. *IEEE Transactions on Industrial Electronics*, **2014**, 61, 5086-5093 | 8.9 | 84 |
| 110 | Automatic Mode Matching in MEMS Vibrating Gyroscopes Using Extremum-Seeking Control. *IEEE Transactions on Industrial Electronics*, **2009**, 56, 3880-3891 | 8.9 | 71 |
| 109 | Energy-Efficient Autonomous Solar Water-Pumping System for Permanent-Magnet Synchronous Motors. *IEEE Transactions on Industrial Electronics*, **2017**, 64, 43-51 | 8.9 | 68 |
| 108 | Experimental analysis of an Internet-based bilateral teleoperation system with motion and force scaling. *IEEE Transactions on Industrial Electronics*, **2008**, 55, 3290-3299 | 8.9 | 61 |
| 107 | Architectures for shared haptic virtual environments. *Computers and Graphics*, **1997**, 21, 421-429 | 1.8 | 50 |
| 106 | Control of a Z-axis MEMS vibrational gyroscope. *IEEE/ASME Transactions on Mechatronics*, **2005**, 10, 364-370 | 3.9 | 46 |
| 105 | Acceleration Measurement Drift Rejection in Motion Control Systems by Augmented-State Kinematic Kalman Filter. *IEEE Transactions on Industrial Electronics*, **2016**, 63, 1953-1961 | 8.9 | 41 |
| 104 | Web-interfaced, force-reflecting teleoperation systems. *IEEE Transactions on Industrial Electronics*, **2001**, 48, 1257-1265 | 8.9 | 41 |
| 103 | A low-power 3-axis digital-output MEMS gyroscope with single drive and multiplexed angular rate readout **2011**, | | 36 |
| 102 | Force-reflecting teleoperation over the Internet: the JBIT project. *Proceedings of the IEEE*, **2003**, 91, 449-463 | 4.3 | 31 |
| 101 | Enhanced Low-Speed Operations for Sensorless Anisotropic PM Synchronous Motor Drives by a Modified Back-EMF Observer. *IEEE Transactions on Industrial Electronics*, **2018**, 65, 3069-3076 | 8.9 | 29 |
| 100 | Benefits of Direct Phase Voltage Measurement in the Rotor Initial Position Detection for Permanent-Magnet Motor Drives. *IEEE Transactions on Industrial Electronics*, **2015**, 62, 6719-6726 | 8.9 | 28 |

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| 99 | Haptic-based neurorehabilitation in poststroke patients: a feasibility prospective multicentre trial for robotics hand rehabilitation. *Computational and Mathematical Methods in Medicine*, **2013**, 2013, 895492 | 2.8 | 22 |
| 98 | Hard disk drive with voltage-driven voice coil motor and model-based control. *IEEE Transactions on Magnetics*, **2005**, 41, 784-790 | 2 | 21 |
| 97 | Hierarchical Scaled-States Direct Predictive Control of Synchronous Reluctance Motor Drives. *IEEE Transactions on Industrial Electronics*, **2016**, 1-1 | 8.9 | 20 |
| 96 | Exploring the Potential of MEMS Gyroscopes: Successfully Using Sensors in Typical Industrial Motion Control Applications. *IEEE Industrial Electronics Magazine*, **2012**, 6, 14-24 | 6.2 | 20 |
| 95 | Track-Following Control With Active Vibration Damping of a PZT-Actuated Suspension Dual-Stage Servo System. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2006**, 128, 568-576 | 1.6 | 18 |
| 94 | Open loop compensation of the quadrature error in MEMS vibrating gyroscopes **2009**, | | 16 |
| 93 | Analysis and Design of Time Delayed Control Systems with Communication Disturbance Observer **2007**, | | 16 |
| 92 | Advanced Motion Control for Next-Generation Industrial Applications. *IEEE Transactions on Industrial Electronics*, **2016**, 63, 1886-1888 | 8.9 | 16 |
| 91 | Online Stator Resistance Tracking for Reluctance and Interior Permanent Magnet Synchronous Motors. *IEEE Transactions on Industry Applications*, **2018**, 54, 3405-3414 | 4.3 | 15 |
| 90 | Disturbance Observer and Kalman Filter Based Motion Control Realization. *IEEJ Journal of Industry Applications*, **2018**, 7, 1-14 | 0.7 | 15 |
| 89 | The SPES multi-foil direct target. *Nuclear Instruments & Methods in Physics Research B*, **2008**, 266, 4257-4260 | 1.2 | 14 |
| 88 | A Multi-Instrument, Force-Feedback Keyboard. *Computer Music Journal*, **2006**, 30, 38-52 | 0.5 | 14 |
| 87 | Advanced current control of synchronous reluctance motors **2017**, | | 11 |
| 86 | A simulation and control design environment for single-stage and dual-stage hard disk drives. *IEEE/ASME Transactions on Mechatronics*, **2002**, 7, 161-170 | 5.5 | 11 |
| 85 | Impedance Field Expression of Bilateral Control for Reducing Data Traffic in Haptic Transmission. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 1142-1150 | 8.9 | 10 |
| 84 | Robust Time Delayed Control Systems with Communication Disturbance Observer **2007**, | | 10 |
| 83 | A General Framework for Designing SISO-Based Motion Controller With Multiple Sensor Feedback. *IEEE Transactions on Industrial Electronics*, **2016**, 63, 7607-7620 | 8.9 | 8 |
| 82 | Theory and implementation of a MTPA tracking controller for anisotropic PM motor drives **2012**, | | 8 |

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| 81 | Issues on Internet-Based Teleoperation. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1997**, 30, 591-597 | | 8 |
| 80 | Robust bilateral generalized predictive control for teleoperation systems **2007**, | | 8 |
| 79 | Use of load-side MEMS accelerometers in servo positioning of two-mass-spring systems **2015**, | | 7 |
| 78 | Development of a Human Assistive Robot to Support Hip Joint Movement During Sit-to-stand Using Non-linear Springs. *IEEJ Journal of Industry Applications*, **2016**, 5, 261-266 | 0.7 | 7 |
| 77 | Time-Critical Wireless Networked Embedded Systems: Feasibility and Experimental Assessment. *IEEE Transactions on Industrial Informatics*, **2020**, 16, 7732-7742 | 11.9 | 6 |
| 76 | Disturbance rejection in hard disk drives with multi-rate estimated state feedback. *Control Engineering Practice*, **2004**, 12, 1409-1421 | 3.9 | 6 |
| 75 | A 2.5-rad/s/sup 2/ resolution digital output MEMS-based rotational accelerometer for HDD applications. *IEEE Transactions on Magnetics*, **2003**, 39, 915-919 | 2 | 6 |
| 74 | Robustness on Model Error of Time Delayed Control Systems with Communication Disturbance Observer-Verification on an Example Constructed by Double Integration Controlled Object and PD Controller-. *IEEJ Transactions on Industry Applications*, **2008**, 128, 709-717 | 0.2 | 6 |
| 73 | Performance improvement of haptic device in bilateral control using aaKF and RFOB **2016**, | | 5 |
| 72 | **2016**, | | 5 |
| 71 | Cooperative Optimization of UAVs Formation Visual Tracking. *Robotics*, **2019**, 8, 52 | 2.8 | 4 |
| 70 | Torque Ripple Minimization in Hybrid Stepper Motors Using Acceleration Measurements1. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 10349-10354 | | 4 |
| 69 | Development of a haptic teleoperation system for remote motor and functional evaluation of hand in patients with neurological impairments **2010**, | | 4 |
| 68 | A reduction method of steady-state errors in time-delay systems with communication disturbance observer **2011**, | | 4 |
| 67 | Modeling, identification and validation of an electric vehicle for model-based control design **2010**, | | 4 |
| 66 | Development of a reduced size unmanned car **2008**, | | 4 |
| 65 | Modelling, control and design of heavy duty suspension systems **2008**, | | 4 |
| 64 | Realization of an adaptive voltage driver for voice coil motor. *Microsystem Technologies*, **2005**, 11, 663-675 | 1.7 | 4 |

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| 63 | Design and Construction of a Bilateral Haptic System for the Remote Assessment of the Stiffness and Range of Motion of the Hand. *Sensors*, **2016**, 16, | 3.8 | 4 |
| 62 | Use of MEMS Inertial Sensors for Performance Improvement of Low-cost Motion Control Systems. *IEEJ Journal of Industry Applications*, **2016**, 5, 78-89 | 0.7 | 4 |
| 61 | A LSTM Neural Network applied to Mobile Robots Path Planning **2018**, | | 4 |
| 60 | Fast Force Control without Force Sensor Using Combination of aaKF and RFOB for In-circuit Test with Probing System. *IEEJ Journal of Industry Applications*, **2019**, 8, 152-159 | 0.7 | 3 |
| 59 | How disturbance observer changed my life **2018**, | | 3 |
| 58 | Drive-by-Wi-Fi: testing 1 kHz control experiments over wireless **2019**, | | 3 |
| 57 | Performance improvement of motion control systems with low resolution position sensors using MEMS accelerometers **2013**, | | 3 |
| 56 | Motion reconstruction with a low-cost MEMS IMU for the automation of human operated specimen manipulation **2011**, | | 3 |
| 55 | Vehicle Simulation for the Development of an Active Suspension System for an Agricultural Tractor. *SAE International Journal of Commercial Vehicles*, **2009**, 2, 12-25 | 1 | 3 |
| 54 | Performance evaluation of a VR-based hand and finger rehabilitation program **2011**, | | 3 |
| 53 | A telerobotic manipulation system for an immerse ultrasonic examination using haptic constraints **2012**, | | 3 |
| 52 | A new direct deformation sensor for active compensation of positioning errors in large milling machines **2006**, | | 3 |
| 51 | MEMS-based accelerometers use in Hard Disk Drives. *Microsystem Technologies*, **2002**, 8, 174-181 | 1.7 | 3 |
| 50 | Enhanced low-speed operations of back EMF-based sensorless anisotropic PMSM drives **2016**, | | 3 |
| 49 | External Force Estimation in Linear Series Elastic Actuator Without Load-Side Encoder. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 861-870 | 8.9 | 3 |
| 48 | Neuronal Avalanches Across the Rat Somatosensory Barrel Cortex and the Effect of Single Whisker Stimulation. *Frontiers in Systems Neuroscience*, **2021**, 15, 709677 | 3.5 | 3 |
| 47 | Development of a four-channel haptic system for remote assessment of patients with impaired hands. *Robotica*, **2017**, 35, 1975-1991 | 2.1 | 2 |
| 46 | Weight estimation system using surface EMG armband **2017**, | | 2 |

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| 45 | Estimation of load-side position of two mass resonant systems using MEMS accelerometers **2016**, | | 2 |
| 44 | Self-commissioning calculation of dynamic models for synchronous machines with magnetic saturation using flux as state variable. *Journal of Engineering*, **2019**, 2019, 3609-3613 | 0.7 | 2 |
| 43 | Non-linear adaptive impedance controller for rehabilitation purposes **2014**, | | 2 |
| 42 | Force controller tuning for a master-slave system with proximity based haptic feedback **2014**, | | 2 |
| 41 | IMU-aided image stabilization and tracking in a HSM-driven camera positioning unit **2013**, | | 2 |
| 40 | A PhysX-based framework to develop rehabilitation using haptic and virtual reality **2013**, | | 2 |
| 39 | Fast force control using acceleration-aided Kalman filter and reaction force observer for probing systems **2017**, | | 2 |
| 38 | Time delay compensation method based on reflected wave rejection **2013**, | | 2 |
| 37 | Development and characterization of touch sensing devices for robotic applications **2009**, | | 2 |
| 36 | Experiments results on robustness effects of a new prefilter in generalized predictive control: Application to bilateral teleoperation systems **2008**, | | 2 |
| 35 | Teleoperation systems over the Internet: Experimental validation of a bilateral Generalized Predictive Controller **2007**, | | 2 |
| 34 | Test-Mass Release Phase Ground Testing for the LISA Pathfinder Mission. *AIP Conference Proceedings*, **2006**, | 0 | 2 |
| 33 | Stability experiments of a scaled bilateral teleoperation system over Internet using a model predictive controller **2007**, | | 2 |
| 32 | Embedded systems for time‐critical applications over Wi-Fi: design and experimental assessment **2019**, | | 2 |
| 31 | High-Precision Dual-Stage Pointing Mechanism for Miniature Satellite Laser Communication Terminals. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 776-785 | 8.9 | 2 |
| 30 | . *IEEE Transactions on Control Systems Technology*, **2021**, 1-12 | 4.8 | 2 |
| 29 | Comparative Study of Soft Motion for Motion Copying System with Environmental Variations **2018**, | | 2 |
| 28 | A Dual Quaternion Feedback Linearized Approach for Maneuver Regulation of Rigid Bodies **2018**, 2, 327-332 | | 2 |

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| 27 | **2016**, | | 1 |
| 26 | Use of antagonistic shape memory alloy wires in load positioning applications **2014**, | | 1 |
| 25 | Parametric identification of PM synchronous motors: A Hammerstein-model approach **2013**, | | 1 |
| 24 | Adaptive optimal control for rehabilitation systems **2017**, | | 1 |
| 23 | IMU-based image stabilization in a HSM-driven camera positioning unit **2013**, | | 1 |
| 22 | Use of MEMS accelerometers for performance improvement of motion control systems with low resolution position sensors **2013**, | | 1 |
| 21 | Active damping applied to HSM-driven mechanical loads with elasticity*. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 10355-10360 | | 1 |
| 20 | A general framework for a rehabilitative oriented haptic interface **2010**, | | 1 |
| 19 | Identification and validation of a fractional order dynamic model for a piezoelectric tactile sensor **2010**, | | 1 |
| 18 | Stability of a telerobotic manipulation system with proximityBased haptic feedback **2012**, | | 1 |
| 17 | Semi-Active Suspension Systems for Heavy-Duty Vehicles: Multibody Model Development, Identification and Control Algorithm Evaluation **2009**, | | 1 |
| 16 | Stability analysis of an extremum seeking controller for mode-matching in vibrating microgyros **2008**, | | 1 |
| 15 | A novel structure of time delayed control systems with communication disturbance observer **2008**, | | 1 |
| 14 | MC-13 REALIZATION OF AN ADAPTIVE VOLTAGE DRIVER FOR VOICE COIL MOTOR. *Proceedings of JSME-IIP/ASME-ISPS Joint Conference on Micromechatronics for Information and Precision Equipment IIP/ISPS Joint MIPE*, **2003**, 2003, 107-108 | | 1 |
| 13 | Novel Force Observer for Precise Force Estimation Using Force Sensor **2020**, | | 1 |
| 12 | A Nonlinear Adaptive Compliance Controller for Rehabilitation. *IEEJ Journal of Industry Applications* , **2016**, 5, 123-131 | 0.7 | 1 |
| 11 | Robustness Analysis of Two-Mass System Control Using Acceleration-Aided Kalman Filter **2018**, | | 1 |
| 10 | Guest Editorial Introduction to the Focused Section on Adaptive Learning and Control for Advanced Mechatronics Systems. *IEEE/ASME Transactions on Mechatronics*, **2022**, 1-4 | 5.5 | 1 |

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| 9 | Voltage driven hard disk drive with voice coil model-based control. *Microsystem Technologies*, **2005**, 11, 478-487 | 1.7 | 0 |
| 8 | Selection of Required Controller for Position- and Force-Based Task in Motion Copying System. *Journal of Robotics and Mechatronics*, **2020**, 32, 113-127 | 0.7 | 0 |
| 7 | Tactile Sensing Systems Based on POSFET Sensing Arrays. *Lecture Notes in Electrical Engineering*, **2012**, 181-186 | 0.2 | 0 |
| 6 | Reverse-Engineer the Brain: Perspectives and Challenges. *Biosystems and Biorobotics*, **2014**, 173-188 | 0.2 | 0 |
| 5 | Modeling product variations in hard disk drive micro-actuator suspensions. *Microsystem Technologies*, **2006**, 12, 803-813 | 1.7 | |
| 4 | Twofold Observer-Based Precise Force Control. *IEEE Transactions on Control Systems Technology*, **2021**, 1-10 | 4.8 | |
| 3 | A PhysX-Based Framework to Develop Rehabilitation Systems Using Haptics and Virtual Reality **2020**, 969-988 | | |
| 2 | A PhysX-Based Framework to Develop Rehabilitation Systems Using Haptics and Virtual Reality. *Advances in Medical Technologies and Clinical Practice Book Series*, **2016**, 28-47 | 0.3 | |
| 1 | A Reduced-order Multi-sensor-based Force Observer. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1 | 8.9 | |