# Sergey Edward Lyshevski

## List of Publications by Year
## in descending order

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|---|---|---|---|
| **87** papers | **619** citations | 840776 **11** h-index | 839539 **18** g-index |
| **89** all docs | **89** docs citations | **89** times ranked | **333** citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Control Systems Theory with Engineering Applications. , 2001, , . | | 97 |
| 2 | Nonlinear control of mechatronic systems with permanent-magnet DC motors. Mechatronics, 1999, 9, 539-552. | 3.3 | 51 |
| 3 | Nano- and Micro-Electromechanical Systems. , 0, , . | | 39 |
| 4 | Robust control of nonlinear continuous-time systems with parameter uncertainties and input bounds. International Journal of Systems Science, 1999, 30, 247-259. | 5.5 | 34 |
| 5 | State-Space Model Identification of Deterministic Nonlinear Systems: Nonlinear Mapping Technology and Application of the Lyapunov Theory. Automatica, 1998, 34, 659-664. | 5.0 | 31 |
| 6 | Signal Processing in Cyber-Physical MEMS Sensors: Inertial Measurement and Navigation Systems. IEEE Transactions on Industrial Electronics, 2017, 64, 9618-9625. | 7.9 | 31 |
| 7 | Energy conversion and optimal energy management in diesel–electric drivetrains of hybrid-electric vehicles. Energy Conversion and Management, 2000, 41, 13-24. | 9.2 | 27 |
| 8 | Nonlinear Control of Servo - Systems Actuated by Permanent-Magnet Synchronous Motors. Automatica, 1998, 34, 1231-1238. | 5.0 | 24 |
| 9 | High-torque density integrated electro-mechanical flight actuators. IEEE Transactions on Aerospace and Electronic Systems, 2002, 38, 174-182. | 4.7 | 23 |
| 10 | High-power density miniscale power generation and energy harvesting systems. Energy Conversion and Management, 2011, 52, 46-52. | 9.2 | 21 |
| 11 | Motion control of electromechanical servo-devices with permanent-magnet stepper motors. Mechatronics, 1997, 7, 521-536. | 3.3 | 18 |
| 12 | Smart flight control surfaces with microelectromechanical systems. IEEE Transactions on Aerospace and Electronic Systems, 2002, 38, 543-552. | 4.7 | 18 |
| 13 | Mechatronic curriculum – retrospect and prospect. Mechatronics, 2002, 12, 195-205. | 3.3 | 17 |
| 14 | An Electromagnetic MEMS Actuator for Micropumps. , 2006, , . | | 14 |
| 15 | Microstepping and high-performance control of permanent-magnet stepper motors. Energy Conversion and Management, 2014, 85, 245-253. | 9.2 | 13 |
| 16 | Control of high performance induction motors: theory and practice. Energy Conversion and Management, 2001, 42, 877-898. | 9.2 | 12 |
| 17 | Control of high-precision direct-drive mechatronic servos: Tracking control with adaptive friction estimation and compensation. Mechatronics, 2017, 43, 1-5. | 3.3 | 12 |
| 18 | Neuronal Processing, Reconfigurable Neural Networks and Stochastic Computing. , 2008, , . | | 11 |

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|---|---------|-----|-----------|
| 19 | Clean high-energy density renewable power generation systems with soft-switching sliding mode control laws. , 2011, , . | | 10 |
| 20 | Nonlinear modeling and robust control of synchronous reluctance motors. Energy Conversion and Management, 2002, 43, 523-536. | 9.2 | 8 |
| 21 | Signal processing in MEMS inertial measurement units for dynamic motional control. , 2016, , . | | 7 |
| 22 | Design of the constrained controllers for uncertain nonlinear systems using the Lyapunov stability theory. Journal of the Franklin Institute, 1999, 336, 1075-1092. | 3.4 | 5 |
| 23 | Modeling and control of MEMS with high speed synchronous micromotors and controllers/drivers-on-VLSI-chip ICs. Energy Conversion and Management, 2003, 44, 667-679. | 9.2 | 5 |
| 24 | Secure communication and signal processing in inertial navigation systems. , 2017, , . | | 5 |
| 25 | Fuzzy control with random delays using invariant cones and its application to control of energy processes in microelectromechanical motion devices. Energy Conversion and Management, 2005, 46, 1305-1318. | 9.2 | 4 |
| 26 | Computing Paradigms for Logic Nanocells. Journal of Computational and Theoretical Nanoscience, 2008, 5, 2377-2395. | 0.4 | 4 |
| 27 | Belief trees and networks for biometric applications. Soft Computing, 2011, 15, 3-11. | 3.6 | 4 |
| 28 | Nonlinear identification and control of aircraft. International Journal of Systems Science, 2000, 31, 923-935. | 5.5 | 3 |
| 29 | Non-linear control of advanced direct drive robots: Theory and experiments. International Journal of Control, 2001, 74, 638-647. | 1.9 | 3 |
| 30 | Integrated micro- and miniscale electromechanical systems with permanent-magnet servo-motors and VLSI drivers–controllers. Mechatronics, 2002, 12, 1115-1131. | 3.3 | 3 |
| 31 | Modeling transport through single-molecule junctions. Open Physics, 2005, 3, . | 1.7 | 3 |
| 32 | Quantum molecular sensing, communication and processing by photons. , 2012, , . | | 3 |
| 33 | Identification of induction motor parameters adaptively controlling stator currents. , 2013, , . | | 3 |
| 34 | Identification of induction motor parameters for self-commissioning procedure: A new algorithm and experimental verification. , 2014, , . | | 3 |
| 35 | Performance functionals and dynamic systems' optimization. International Journal of Systems Science, 2002, 33, 823-830. | 5.5 | 2 |
| 36 | Modeling and identification of induction micromachines in microelectromechanical systems applications. Energy Conversion and Management, 2002, 43, 2123-2133. | 9.2 | 2 |

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|---|---------|----|-----------|
| 37 | Design, optimization, analysis and control topics in nanotechnology ad MEMS courses. , 2007, , . | | 2 |
| 38 | Nano-, NanoBio- and NanoBioMedical- Technologies: Enabling sensing, communication and processing paradigms. , 2012, , . | | 2 |
| 39 | Information fusion and data-driven processing in inertial measurement units for cyber-physical systems. , 2017, , . | | 2 |
| 40 | Information-Centric Cyberattack Analysis and Spatiotemporal Networks Applied to Cyber-Physical Systems. , 2020, , . | | 2 |
| 41 | Analysis of auxiliary power systems with conventional synchronous generators. Energy Conversion and Management, 2000, 41, 1379-1387. | 9.2 | 1 |
| 42 | Optimal structural synthesis, modeling, and control of micro-mechatronic systems. Mechatronics, 2001, 11, 837-851. | 3.3 | 1 |
| 43 | Quantum-mechanical analysis of single molecule quantum electronic devices. , 2011, , . | | 1 |
| 44 | Quantum processing: Feasibility studies and solutions. , 2011, , . | | 1 |
| 45 | Molecular and BioMolecular communication: Waveguides and possible role of microtubules. , 2011, , . | | 1 |
| 46 | Hardware, software and algorithmic solutions for quantum data processing. , 2012, , . | | 1 |
| 47 | Information-theoretic estimates of communication and processing in nanoscale and quantum optoelectronic systems. , 2013, , . | | 1 |
| 48 | Precision control of mechatronic systems with electromagnetically-steered moving masses. International Journal of Advanced Mechatronic Systems, 2013, 5, 306. | 0.2 | 1 |
| 49 | Design and Evaluations of 3D-Printed Microthrusters with Nanothermite Propellants. , 2018, , . | | 1 |
| 50 | Analysis of data-driven processing in inertial measurement systems for wireless optical communication applications. , 2019, , . | | 1 |
| 51 | Analysis of Multi-Degree-of-Freedom Inertial Sensors for Cyber-Physical Systems. , 2021, , . | | 1 |
| 52 | Probabilistic Models of Information Management in Cyber-Physical Systems. , 2021, , . | | 1 |
| 53 | Analysis and Design of Advanced Miniscale Mechatronic Systems: Synthesis of Intelligent Flight Servos. International Journal of Smart Engineering System Design, 2002, 4, 115-123. | 0.2 | 0 |
| 54 | MOEMS With Thin-Film Crystals. , 2006, , . | | 0 |

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|---|---------|----|-----------|
| 55 | Control of neurotransmitters in brain neurons using soft-switching sliding mode control. , 2006, , . | | 0 |
| 56 | Control of stochastic systems and molecular fluidic electronic devices. , 2006, , . | | 0 |
| 57 | Design of nano- and microsystems with novel control laws. , 2006, , . | | 0 |
| 58 | Active electromagnetic-vibroacoustic control and optimization of microelectromechanical motion devices. , 2007, , . | | 0 |
| 59 | BioMEMS and Molecular Processing: Engineering Biomimetics in Design of MEMS and Processing Platforms. , 2007, , . | | 0 |
| 60 | Quantum-Effect Multi-Terminal Molecular Electronic Devices. , 2008, , . | | 0 |
| 61 | Quantum Mechanics and Electromagnetics of Weak Magnetic Field Sensing, Storage and Retrieval in Biosystems and Engineered Systems. , 2008, , . | | 0 |
| 62 | Neuroarchitectronics and Neuromorphological Molecular Processing Platforms. , 2008, , . | | 0 |
| 63 | Characterization of Physical Defects and Fault Analysis of Molecular and Nanoscaled Integrated Circuits. , 2008, , . | | 0 |
| 64 | Molecular and Biomolecular Processing: Three-Dimensional-Topology Processing and Memory Cells. , 2008, , . | | 0 |
| 65 | Rhodopsin Photon Receptor Energetics: Studies of Biomolecular Sensing and Processing. , 2008, , . | | 0 |
| 66 | Engineered and Natural Processing: Neurocomputing and Neuromorphological Processing Platforms. , 2009, , . | | 0 |
| 67 | Graphene: Quantum-mechanical outlook. , 2011, , . | | 0 |
| 68 | Multi-state digital and quantum signal processing and emerging nanoelectronic processing hardware: complexity, performance and capabilities. , 2011, , . | | 0 |
| 69 | Molecular sensing and processing on photons. , 2011, , . | | 0 |
| 70 | Soft-switching sliding mode control of power generation systems. , 2011, , . | | 0 |
| 71 | Tracking control of direct-drive servos. , 2011, , . | | 0 |
| 72 | Design of tracking control laws using nonlinear aircraft models. , 2011, , . | | 0 |

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|---|---------|-----|-----------|
| 73 | Nonlinear analysis and tracking control of advanced airframe aircraft. , 2012, , . | | 0 |
| 74 | Nanotechnology enabled self-sustained power systems and high-power-density electronics for autonomous flight vehicles. , 2012, , . | | 0 |
| 75 | Nano and molecular technologies in microelectronics, MEMS and electronic systems. , 2013, , . | | 0 |
| 76 | Control of dynamic microsystems. International Journal of Systems Science, 2015, 46, 2770-2780. | 5.5 | 0 |
| 77 | Power electronics, microelectronics and propulsion systems for solar-powered unmanned aerial vehicles. , 2016, , . | | 0 |
| 78 | Data processing analysis in nano-and microelectronics processing platforms. , 2016, , . | | 0 |
| 79 | Analysis of high-performance DC-DC switching converters. , 2016, , . | | 0 |
| 80 | Nanotechnology for portable energy systems: Modular photovoltaics, energy storage and electronics. , 2016, , . | | 0 |
| 81 | Measuring spatiotemporal magnetic fields by hall effect sensors with post-processing solutions. , 2017, , . | | 0 |
| 82 | Real-Time Dynamic Data Processing and Fusion: Multi-Degree-of-Freedom MEMS Inertial Sensors. , 2018, , . | | 0 |
| 83 | Multi-Agent Distributed Coordination and Control For Aerial Systems. , 2018, , . | | 0 |
| 84 | Control of Neurotransmitters in Brain Neurons Using Soft-Switching Sliding Mode Control. , 2006, , . | | 0 |
| 85 | Control of Stochastic Systems and Molecular Fluidic Electronic Devices. , 2006, , . | | 0 |
| 86 | Design of Nano- and Microsystems With Novel Control Laws. , 2006, , . | | 0 |
| 87 | Object recognition, identification and classification for intelligent surveillance and reconnaissance platforms. , 2019, , . | | 0 |