

List of publications

Peer-reviewed articles in international journals

- IJ1. **Aranovskiy S.**, Efimov D., Sokolov D., Wang J., Ryadchikov I., Bobtsov A., “Switched Observer Design For a Class of Locally Unobservable Time-Varying Systems”, *Automatica*, 2021. (available online, doi 10.1016/j.automatica.2021.109715).
- IJ2. Wang J., **Aranovskiy S.**, Fridman E., Sokolov D., Efimov D., Bobtsov A. "Robust adaptive stabilization by delay under state parametric uncertainty and measurement bias," *IEEE Transactions on Automatic Control*, 2021. (available online, doi 10.1109/TAC.2020.3045125).
- IJ3. Ortega R., **Aranovskiy S.**, Pyrkin A., Astolfi A., Bobtsov A., "New Results on Parameter Estimation via Dynamic Regressor Extension and Mixing: Continuous and Discrete-time Cases," *IEEE Transactions on Automatic Control*, vol. 66, pp. 2265-2272, 2021.
- IJ4. Ortega R., Pyrkin A., Bobtsov A., Efimov D., **Aranovskiy S.**, “A Globally Convergent Adaptive Indirect Field-Oriented Torque Controller For Induction Motors”, *Asian Journal of Control*, vol. 22, no 1, pp. 11-24, 2020.
- IJ5. **Aranovskiy S.**, Ryadchikov I., Nikulchev E., Wang J., Sokolov D., "Experimental comparison of velocity observers: a scissored pair control moment gyroscope case study," *IEEE Access*, vol. 8, pp. 21694-21702, 2020.
- IJ6. **Aranovskiy S.**, Ryadchikov I., Nikulchev E., Wang J., Sokolov D., "Bias Propagation and Estimation in Homogeneous Differentiators for a Class of Mechanical Systems," *IEEE Access*, vol. 8, pp. 19450-19459, 2020.
- IJ7. **Aranovskiy S.**, Ushirobira R., Efimov D., Casiez G., “A switched dynamic model for pointing tasks with a computer mouse”, *Asian Journal of Control*, vol. 22, pp 1387-1400, 2020.
- IJ8. Wang J., Efimov D., **Aranovskiy S.**, Bobtsov A. "Fixed-time estimation of parameters for non-persistent excitation," *European Journal of Control*, vol. 55, pp. 24-32, 2020.
- IJ9. Pyrkin A., Bobtsov A., Ortega R., Vedyakov A., **Aranovskiy S.** “Adaptive State Observer Design Using Dynamic Regressor Extension and Mixing”, *Systems and Control Letters*, vol. 133, pp. 104519, 2019.
- IJ10. **Aranovskiy S.**, Ushirobira R., Efimov D., Casiez G., "An adaptive FIR filter for trajectory prediction and latency reduction in direct Human-Computer interactions", *Control Engineering Practice*, vol. 91, pp. 104093, 2019.
- IJ11. **Aranovskiy S.**, Belov A., Ortega R., Barabanov N., Bobtsov A., "Parameter Identification of Linear Time-Invariant Systems Using Dynamic Regressor Extension and Mixing", *International Journal of Adaptive Control and Signal Processing*, vol. 33, no. 6, pp. 1016-1030, 2019.
- IJ12. Y. Pan, **Aranovskiy S.**, Bobtsov A., H. Yu, "Efficient learning from adaptive control under sufficient excitation", *International Journal of Robust and Nonlinear Control*, vol. 29, no. 10, pp. 3111-3124, 2019.
- IJ13. **Aranovskiy S.**, A. Biryuk, E. Nikulchev, Ryadchikov I., Sokolov D., "Observer Design for an Inverted Pendulum with Biased Position Sensors", *Journal of Computer and Systems Sciences International*, vol. 58, no. 2, pp. 297–304, 2019.
- IJ14. **Aranovskiy S.**, Ortega R., J. G. Romero, Sokolov D., “A Globally Exponentially Stable Speed Observer for a Class of Mechanical Systems: Experimental and Simulation Comparison with High-Gain and Sliding Mode Designs”, *International Journal of Control*, vol. 92, no 7, pp. 1620-1633, 2019.
- IJ15. Ortega R., Praly L., **Aranovskiy S.**, Yi B., Zhang W., “On Dynamic Regressor Extension and Mixing Parameter Estimators: Two Luenberger Observers Interpretations”, *Automatica*, vol. 95, no. 9, pp. 548-551, 2018.
- IJ16. Pyrkin A., **Aranovskiy S.**, Bobtsov A., Kolyubin S., Nikolaev N., “Fradkov Theorem-Based Control of MIMO Nonlinear Lurie Systems”, *Automation and Remote Control*, vol. 79, no. 6, pp. 1074–1085, 2018.
- IJ17. Wang J., **Aranovskiy S.**, Bobtsov A., Pyrkin A., Kolyubin S., “A Method to Provide Conditions for Sustained Excitation”, *Automation and Remote Control*, vol. 79, no 2, pp. 258-264, 2018.
- IJ18. Vedyakov A., VEDIKOVA A., Bobtsov A., Pyrkin A., **Aranovskiy S.**, “A globally convergent frequency estimator of a sinusoidal signal with a time-varying amplitude”, *European Journal of Control*, vol. 38, pp. 32-38, 2017.
- IJ19. Wang J., **Aranovskiy S.**, Bobtsov A., Pyrkin A., “Compensating for a Multisinusoidal Disturbance Based on Youla–Kucera Parametrization”, *Automation and Remote Control*, vol. 78, no 9, pp. 1559-1571, 2017.
- IJ20. Pyrkin A., Mancilla-David F., Ortega R., Bobtsov A., **Aranovskiy S.** "Identification of photovoltaic arrays' maximum power extraction point via dynamic regressor extension and mixing", *International Journal of Adaptive Control and Signal Processing*, vol. 31, no 9, pp. 1337-1349, 2017.
- IJ21. Wang J., Gritsenko P., **Aranovskiy S.**, Bobtsov A., Pyrkin A. “A method for increasing the rate of parametric convergence in the problem of identification of the sinusoidal signal parameters”, *Automation and Remote Control*, no. 3, pp. 389-396, 2017.
- IJ22. **Aranovskiy S.**, Bobtsov A., Ortega R., Pyrkin A., “Performance Enhancement of Parameter Estimators via Dynamic Regressor Extension and Mixing”, *IEEE Transactions on Automatic Control*, vol. 62, no 7, pp. 3546-3550, 2017.

Aranovskiy S. – List of publications

- IJ23. Bobtsov A., Bazylev D., Pyrkin A., **Aranovskiy S.**, Ortega R. "A robust nonlinear position observer for synchronous motors with relaxed excitation conditions", *International Journal of Control*, no 4, pp. 813-824, 2017.
- IJ24. Vazquez C., **Aranovskiy S.**, Freidovich L. "Input nonlinearity compensation and chattering reduction in a mobile hydraulic forestry crane", *Elektrotechnik und Informationstechnik*, no 6, pp. 248-52, 2016.
- IJ25. Vazquez C., **Aranovskiy S.**, Freidovich L., Fridman L. "Time-Varying Gain Differentiator: Mobile-Hydraulic System Case Study", *IEEE Transactions On Control Systems Technology*, no 5, pp. 1740-1750, 2016.
- IJ26. **Aranovskiy S.**, Bobtsov A., Pyrkin A., Gritcenko, P. "Adaptive filters cascade applied to a frequency identification improvement problem", *International Journal of Adaptive Control and Signal Processing*, no 5, pp. 677-689, 2016.
- IJ27. **Aranovskiy S.**, Ortega R., Cisneros R. "A robust PI passivity-based control of nonlinear systems and its application to temperature regulation", *International Journal of Robust and Nonlinear Control*, no 10, pp. 2216-2231, 2016.
- IJ28. Ortega R., Bobtsov A., Pyrkin A., **Aranovskiy S.** "A parameter estimation approach to state observation of nonlinear systems", *Systems and Control Letters*, V. 85, pp. 84-94, 2015.
- IJ29. **Aranovskiy S.**, Freidovich L. "Adaptive Compensation of Disturbances Formed as Sums of Sinusoidal Signals with Application to an Active Vibration Control Benchmark", *European Journal of Control*, no.4, pp. 253-265, 2013.
- IJ30. Ruderman M., **Aranovskiy S.**, Bobtsov A., Bertram T. "Nonlinear dynamics of drives with elasticities and friction", *Automation and Remote Control*, no. 10, pp. 1604-1615, 2012.
- IJ31. **Aranovskiy S.**, Bobtsov A., Kremlev A., Nikolaev N., Slita O. "Identification of frequency of biased harmonic signal", *European Journal of Control*, no. 2, pp. 129-139, 2010.
- IJ32. **Aranovskiy S.**, Bobtsov A., Pyrkin A., "Adaptive observer of an unknown sinusoidal output disturbance for linear plants", *Automation and Remote Control*, no. 11, pp. 1862-1870, 2009.
- IJ33. **Aranovskiy S.**, Bobtsov A., Kremlev A., Luk'anova G., Nikolaev N. "Identification of frequency of a shifted sinusoidal signal", *Automation and Remote Control*, no. 9, pp. 1447-1453, 2008.
- IJ34. **Aranovskiy S.**, Bobtsov A., Kremlev A., Luk'anova G., "A Robust Algorithm for Identification of the Frequency of a Sinusoidal Signal", *Journal of Computer and Systems Sciences International*, no. 3, pp. 39-44, 2007.
- IJ35. **Aranovskiy S.**, Bobtsov A., Kremlev A. "Compensation of a finite-dimensional quasi-harmonic disturbance for a nonlinear object", *Journal of Computer and Systems Sciences International*, no. 4, pp. 518-525, 2006.

Patents

- P1. Aranovskiy, S., Casiez, G., Efimov, D., Roussel, N. & Ushirobira, R. (2016). Dispositif à affichage prédictif (*EN: Predictive display device*). FR patent application No. FR3056317A1, filling date: 09/20/2016.

Peer-reviewed conference contributions

- IC1. **Aranovskiy S.**, Efimov D., Sokolov D., Wang J., Ryadchikov I., Bobtsov A. "State estimation for a locally unobservable parameter-varying system: one gradient-based and one switched solutions", IFAC World Congress, 2020, Berlin, Germany.
- IC2. Efimov D., **Aranovskiy S.**, Fridman E., Sokolov D., Wang J., Bobtsov A. "Adaptive stabilization by delay with biased measurements", IFAC World Congress, 2020, Berlin, Germany.
- IC3. Bobtsov A., Pyrkin A., **Aranovskiy S.**, Nikolaev N., Slita O., Kozachek O., Vo Quoc D. "Stator flux and load torque observers for PMSM", IFAC World Congress, 2020, Berlin, Germany.
- IC4. Efimov D., **Aranovskiy S.**, Bobtsov A., Raissi T. "On fixed-time parameter estimation under interval excitation", European Control Conference, 2020, Saint-Petersburg, Russia.
- IC5. Korotina M., **Aranovskiy S.**, Ushirobira R., Vedyakov A. "On parameter tuning and convergence properties of the DREM procedure", European Control Conference, 2020, Saint-Petersburg, Russia.
- IC6. Sokolov D., **Aranovskiy S.**, Gusev A., Ryadchikov I. "Experimental comparison of velocity estimators for a control moment gyroscope inverted pendulum", International Workshop on Advanced Motion Control, 2020, Kristiansand, Norway.
- IC7. Bobtsov A., Pyrkin A., **Aranovskiy S.**, Nikolaev N., Slita O., Kozachek O. "Stator Flux Finite-time Observer for Non-Salient Permanent Magnet Synchronous Motors", Mediterranean Conference on Control and Automation, 2020, Saint-Raphael, France.
- IC8. Le Van Tuan, Korotina M., Bobtsov A., **Aranovskiy S.**, Pyrkin A. "Online Estimation of time-varying frequency of a sinusoidal signal", *13th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing*, Winchester, United Kingdoms, 2019.
- IC9. Ryadchikov I., **Aranovskiy S.**, Nikulchev E., Wang J., Sokolov D. "Differentiator-based velocity observer with sensor bias estimation: an inverted pendulum case study", *11th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2019)*, 2019, Vienna, Austria.

Aranovskiy S. – List of publications

- IC10. Zonetti D., Yi B., **Aranovskiy S.**, Efimov D., Ortega R., Garcia-Quismondo E. "On Physical Modeling of Lithium-Ion Cells and Adaptive Estimation of their State-of-Charge" *57 Conference on Decision and Control*, 2018, Miami, FL, USA.
- IC11. Nancel M., **Aranovskiy S.**, Ushirobira R., Efimov D., Poulmane S., Roussel N., Casiez G. "Next-Point Prediction for Direct Touch Using Finite-Time Derivative Estimation", *ACM Symposium on User Interface Software and Technology (UIST)*, 2018, Berlin, Germany.
- IC12. Belov A., **Aranovskiy S.**, Ortega R., Barabanov N., Bobtsov A. "Enhanced Parameter Convergence for Linear Systems Identification: The DREM Approach", *European Control Conference*, 2018, Limassol, Cyprus.
- IC13. **Aranovskiy S.**, Ushirobira R., Efimov D., Casiez G. "Frequency Domain Forecasting Approach for Latency Reduction in Direct Human-Computer Interaction", *56 Conference on Decision and Control*, Melbourne, Australia, 2017.
- IC14. Vedyakov A., VEDIKOVA A., Bobtsov A., Pyrkin A., **Aranovskiy S.**, "Frequency estimation of a sinusoidal signal with time-varying amplitude", *20th IFAC World Congress*, Toulouse, France, 2017.
- IC15. Gromov V., Borisov O., Pyrkin A., Bobtsov A., Kolyubin S., **Aranovskiy S.**, "The DREM Approach for Chaotic Oscillators Parameter Estimation with Improved Performance", *20th IFAC World Congress*, Toulouse, France, 2017.
- IC16. Borisov O., Gromov V., Vedyakov A., Pyrkin A., Bobtsov A., **Aranovskiy S.**, "Adaptive Tracking of a Multi-Sinusoidal Signal with DREM-Based Parameters Estimation", *20th IFAC World Congress*, Toulouse, France, 2017.
- IC17. **Aranovskiy S.**, Ushirobira R., Efimov D., Casiez G. "Modeling Pointing Tasks in Mouse-Based Human-Computer Interactions", *55 Conference on Decision and Control*, Las-Vegas, USA, 2016.
- IC18. **Aranovskiy S.**, Bobtsov A., Ortega R., Pyrkin A. "Parameters Estimation Via Dynamic Regressor Extension and Mixing", *American Control Conference*, Boston, MA, USA, 2016.
- IC19. **Aranovskiy S.**, Bobtsov A., Ortega R., Pyrkin A. "Improved Transients In Multiple Frequencies Estimation via Dynamic Regressor Extension And Mixing", *12th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing*, Eindhoven, The Netherlands, 2016.
- IC20. Pyrkin A., Mancilla-David F., Ortega R., Bobtsov A., **Aranovskiy S.** "Identification of the Current–Voltage Characteristic of Photovoltaic Arrays", *12th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing*, Eindhoven, The Netherlands, 2016.
- IC21. Gromov V., Borisov O., Vedyakov A., Pyrkin A., Shavetov S., Bobtsov A., Salikhov V., **Aranovskiy S.** "Adaptive Multisinusoidal Signal Tracking System with Input Delay", *12th IFAC International Workshop on Adaptation and Learning in Control and Signal Processing*, Eindhoven, The Netherlands, 2016.
- IC22. Ortega R., Bobtsov A., Pyrkin A., **Aranovskiy S.** "A Parameter Estimation Approach to State Observation of Nonlinear Systems", *54 Conference on Decision and Control*, Osaka, Japan, 2015.
- IC23. Pyrkin A., Ortega R., Bobtsov A., **Aranovskiy S.**, D. Gerasimov. "Cuk Converter Full State Adaptive Observer Design", *Multi-conference on Systems and Control*, Sydney, Australia, 2015.
- IC24. **Aranovskiy S.**, Ortega R., Cisneros R. "Robust PI Passivity-based Control of Nonlinear Systems: Application to Port–Hamiltonian Systems and Temperature Regulation", *American Control Conference*, Chicago, Illinois, USA, 2015.
- IC25. **Aranovskiy S.**, Bobtsov A., Pyrkin A., Ortega R., Chaillet A. "Flux and Position Observer of Permanent Magnet Synchronous Motors with Relaxed Persistency of Excitation Conditions", *1st IFAC Conference on Modelling, Identification and Control of Nonlinear Systems*, Saint-Petersburg, Russia, 2015.
- IC26. Wang J., **Aranovskiy S.**, Bobtsov A., Pyrkin A., Gritcenko P. "On Stability of Tunable Linear Time-Varying Band-Pass Filters", *1st IFAC Conference on Modelling, Identification and Control of Nonlinear Systems*, Saint-Petersburg, Russia, 2015.
- IC27. **Aranovskiy S.**, Vazquez C. "Control of a single-link mobile hydraulic actuator with a pressure compensator", *Multi-conference on Systems and Control*, Antibes, France, 2014.
- IC28. **Aranovskiy S.**, Bobtsov A., Pyrkin A., Gritcenko P. "Improved Frequency Identification Via an Adaptive Filters Cascade", *Multi-conference on Systems and Control*, Antibes, France, 2014.
- IC29. **Aranovskiy S.**, Losenkov A., Vazquez C. "Position Control of an Industrial Hydraulic System with a Pressure Compensator", *22th Mediterranean Conference on Control and Automation*, Palermo, Italy, 2014.
- IC30. Vazquez C., **Aranovskiy S.**, Freidovich L., Fridman L. "Second Order Sliding Mode Control of a Mobile Hydraulic Crane", *53 Conference on Decision and Control*, Los Angeles, CA, USA, 2014.
- IC31. Vazquez C., **Aranovskiy S.**, Freidovich L. "Time-varying gain second order sliding mode differentiator", *19th IFAC World Congress*, Cape Town, RSA, 2014.
- IC32. Pyrkin A., Bobtsov A., **Aranovskiy S.**, Kolyubin S., Gromov V. "Adaptive Controller for Linear Plant with Parametric Uncertainties, Input Delay and Unknown Disturbance", *19th IFAC World Congress*, Cape Town, RSA, 2014.
- IC33. Vazquez C., **Aranovskiy S.**, Freidovich L. "Sliding mode control of a forestry-standard mobile hydraulic system", *13th Variable Structure Systems Workshop*, Nantes, 2014.
- IC34. Pyrkin A., Bobtsov A., Kolyubin S., Borisov O., Gromov V., **Aranovskiy S.** "Output Controller for Quadcopters with Wind Disturbance Cancellation", *Multi-conference on Systems and Control*, Antibes, France, 2014.

Aranovskiy S. – List of publications

- IC35. Pyrkin A., Bobtsov A., Nikiforov V., **Aranovskiy S.**, Kolyubin S., Vedyakov A., Borisov O., Gromov V. "Output Adaptive Controller for Linear System with Input Delay and Multisinusoidal Disturbance", *Multi-conference on Systems and Control*, Antibes, France, 2014.
- IC36. **Aranovskiy S.**, Kapitonov A., Bobtsov A., Pyrkin A., Zavarin E., Davydov D., Ortega R. "Robust Control of Rapid Thermal Processes Applied to Vapor Deposition Processing", *6th International Congress on Ultra-Modern Telecommunications and Control Systems*, Saint-Petersburg, Russia, 2014.
- IC37. Bobtsov A., Nikolaev N., Slita O., Borgul A., **Aranovskiy S.**, "The New Algorithm of Sinusoidal Signal Frequency Estimation", *IFAC Workshop on Adaptation and Learning in Control and Signal Processing*, 2013, Caen, France.
- IC38. **Aranovskiy S.**, "Adaptive Attenuation of Disturbance Formed as a Sum of Sinusoidal Signals Applied to a Benchmark Problem", *European Control Conference*, 2013, Zurich, Switzerland.
- IC39. **Aranovskiy S.**, "Modeling and Identification of Spool Dynamics in an Industrial Electro-Hydraulic Valve", *21th Mediterranean Conference on Control and Automation*, 2013, Crete, Greece.
- IC40. **Aranovskiy S.**, Bobtsov A., "Output harmonic Disturbance Compensation for Nonlinear Plant", *20th Mediterranean Conference on Control and Automation*, 2012, Barcelona, Spain.
- IC41. Pyrkin A., Bobtsov A., Kemlev A., **Aranovskiy S.**, "Cancellation of unknown harmonic disturbance for nonlinear system with input delay", *18th IFAC World Congress*, 2011, Milano, Italy.
- IC42. **Aranovskiy S.**, Bobtsov A., Bardov V., "The method of identification for the "motor – dual-section device" system through output signal measurements", *IEEE Conference on Automatic Science and Engeneering*, 2011, Trieste, Italy.
- IC43. Ruderman M., Bertram T., **Aranovskiy S.**, "Nonlinear dynamic of actuators with elasticities and friction", *5th IFAC Symposium on Mechatronic Systems*, 2010, Cambridge, MA, USA.
- IC44. **Aranovskiy S.**, Bobtsov A., "Frequency Identification of Biased Harmonic Output Disturbance", *15th IFAC Symposium on System Identification*, 2009, Saint-Malo, France.
- IC45. **Aranovskiy S.**, Bobtsov A., Nikolaev N., Pyrkin A., Slita O., "Observer for chaotic Duffing system", *6th EUROMECH Nonlinear Dynamics Conference*, 2008, Saint-Petersburg, Russia.
- IC46. **Aranovskiy S.**, Bobtsov A., Kremlev A., Nikolaev N., Slita O., "Identification of frequency of biased harmonic signal", *IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP 07)*, 2007, Saint-Petersburg, Russia.

Articles in peer-reviewed regional or national journals

- NJ1. Korotina M., **Aranovskiy S.**, Bobtsov A., Lyamin A. The parametric convergence performance improvement in the direct adaptive multi-sinusoidal disturbance compensation problem. *Scientific and Technical Journal of Information Technologies, Mechanics and Optics*, 2021, vol. 21, no. 2, pp. 172–178 (in Russian).
- NJ2. Korotina M., **Aranovskiy S.**, Bobtsov A. Parameter estimation of a sinusoidal signal with a polynomial frequency change, *Instrumentation Technologies (in Russian: Приборостроение)*, vol. 63, no. 6, pp 507-514, 2020.
- NJ3. Le V. T., Korotina M., Bobtsov A., **Aranovskiy S.**, Vo Q. D., Identification of Linear Time-Varying Parameters of Nonstationary Systems, *Mechatronics, automation and control (in Russian: Мехатроника, автоматизация и управление)*, vol. 20, no. 5, pp. 259—264, 2019.
- NJ4. Le V. T., Korotina M., Bobtsov A., **Aranovskiy S.**, New identification algorithm for linearly varying frequency of sinusoidal signal. *Scientific and Technical Journal of Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no. 1, pp. 52–58, 2019.
- NJ5. **Aranovskiy S.**, Bobtsov A., Wang J., Nikolaev N., Pyrkin A., "Identification properties enhancement algorithm for problems of parameters estimation of linear regression model", *Scientific and Technical Journal of Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no. 3, pp. 565–567, 2016.
- NJ6. **Aranovskiy S.**, Losenkov A. "Direct adaptive method for multisinusoidal disturbance compensation", *Instrumentation Technologies (in Russian: Приборостроение)*, no. 9, pp. 694-700, 2015.
- NJ7. Gritsenko P., **Aranovskiy S.**, Bobtsov S., Pyrkin A. "Improving accuracy of frequency identification by using a cascade of adaptive filters", *Instrumentation Technologies (in Russian: Приборостроение)*, no. 8, pp. 587-592, 2015.
- NJ8. **Aranovskiy S.**, Losenkov A., Vazquez C. "Tracking control for a hydraulic drive with a pressure compensator", *Scientific and Technical Journal of Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no. 4, pp. 615-622, 2015.
- NJ9. Kapitonov A., **Aranovskiy S.** "Identification of nonlinear model parameters for rapid thermal processes", *Scientific and technical bulletin of the Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no. 4, pp. 176-178, 2014.
- NJ10. Kapitonov A., **Aranovskiy S.**, Ortega R. "Robust regulation for systems with polynomial nonlinearity applied to rapid thermal processes", *Scientific and technical bulletin of the Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no. 4, pp. 41-47, 2014.

Aranovskiy S. – List of publications

- NJ11. Gritcenko P., **Aranovskiy S.**, “An optimal trajectory along a given path for a redundant manipulator”, *Mechatronics, automation and control (in Russian: Мехатроника, автоматизация и управление)*, no 1, pp. 40–44, 2014.
- NJ12. Losenkov A., **Aranovskiy S.**, “Control system for a hydraulic drive with a compensation of a static nonlinearity”, *Scientific and technical bulletin of the Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no. 5, pp. 77-81, 2013.
- NJ13. **Aranovskiy S.**, Bobtsov A., Pyrkin A., “Control algorithm for a linear plant with uncertain parameters, input delay and unknown constant disturbance”, *Mechatronics, automation and control (in Russian: Мехатроника, автоматизация и управление)*, no. 5, pp. 5-9, 2013.
- NJ14. **Aranovskiy S.**, Freidovich L., Nikiforova L., Losenkov A., “Modeling and identification of a spool dynamics of a electro-hydraulic valve. Part I: Modeling”, *Instrumentation Technologies (in Russian: Приборостроение)*, no. 4, pp. 52-57, 2013.
- NJ15. **Aranovskiy S.**, Freidovich L., Nikiforova L., Losenkov A., “Modeling and identification of a spool dynamics of a electro-hydraulic valve. Part II: Identification”, *Instrumentation Technologies (in Russian: Приборостроение)*, no. 4, pp. 57-61, 2013.
- NJ16. Lovlin S., **Aranovskiy S.**, Smirnov N., Tsvetkova M., “Comparison of linear control systems for high-precision drives”, *Systems and Instruments. Control and diagnostic (in Russian: Приборы и системы. Управление, контроль, диагностика)*, no. 3, pp. 31-38, 2013.
- NJ17. **Aranovskiy S.**, Bobtsov A., Pyrkin A., “Cascade reduction for identification”, *Scientific and technical bulletin of the Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no. 3, pp. 149-150, 2012.
- NJ18. **Aranovskiy S.**, Bobtsov A., Pyrkin A., “Identification of the linearly varying frequency of the sinusoidal signal”, *Scientific and technical bulletin of the Information Technologies, Mechanics and Optics (in Russian: Научно-технический вестник информационных технологий, механики и оптики)*, no 1, pp. 28-32, 2012.
- NJ19. **Aranovskiy S.**, Bardov V., “Optimal identification method for the linear dynamic system with disturbances: a multi-mass load drive example”, *Problems of Control (in Russian: Проблемы управления)*, no 3, pp. 35–40, 2012.
- NJ20. **Aranovskiy S.**, Lovlin S., Alexandrova S., “Identification method for electro-mechanical system with varying Columbus friction”, *Information and Control Systems (in Russian: Информационно-управляющие системы)*, no 1, pp. 8-11, 2012.
- NJ21. **Aranovskiy S.**, Bobtsov A., Vedyakov A., Kolubin S., Pyrkin A., “An algorithm with an improved parametric convergence of unknown frequency of a sinusoidal signal using cascade reduction”, *Scientific and technical bulletin of the state university ITMO (in Russian: Научно-технический вестник ИТМО)*, no. 4, pp. 149-151, 2012.
- NJ22. **Aranovskiy S.**, Furtat I., “Robust control of the precision gearless drive of the optical telescope's axis with compensation of the disturbance”, *Mechatronics, automation and control (in Russian: Мехатроника, автоматизация и управление)*, no. 9, pp. 8-13, 2011.
- NJ23. **Aranovskiy S.**, Bobtsov A., Pyrkin A., “Hybrid observer design for the linear plant in the presence of the harmonic disturbance”, *Instrumentation Technologies (in Russian: Приборостроение)*, no. 6, pp. 13-17, 2011.
- NJ24. **Aranovskiy S.**, Bobtsov A., Gorin., “Cascade scheme for the frequency identification”, *Scientific and technical bulletin of the state university ITMO (in Russian: Научно-технический вестник ИТМО)*, no. 1, p. 129, 2011.
- NJ25. **Aranovskiy S.**, “Identification of the electromechanical plant's poles using the phase shifts”, *Informatics and control systems (in Russian: Информатика и системы управления)*, no. 1, pp. 97-107, 2011.
- NJ26. **Aranovskiy S.**, Bobtsov A., Nikiforov V., “Observer synthesis for the nonlinear plant with external harmonic disturbance acting at the output signal”, *Scientific and technical bulletin of the state university ITMO (in Russian: Научно-технический вестник ИТМО)*, no. 3, pp. 32-39, 2010.
- NJ27. **Aranovskiy S.**, Bardov V., “The motor leads two masses equipment system's parameters identification algorithm”, *Mechatronics, automation and control (in Russian: Мехатроника, автоматизация и управление)*, no. 5, pp. 15-18, 2010.
- NJ28. **Aranovskiy S.**, Bardov V., Bobtsov A., Kapitonov A., Pyrkin A., “Synthesis of the observer in the presence of the output measurement disturbance”, *Instrumentation Technologies (in Russian: Приборостроение)*, no. 11, pp. 28-31, 2009.
- NJ29. **Aranovskiy S.**, Bobtsov A., Nikolaev N., “Adaptive observer design for chaotic Duffing system”, *Mechatronics, automation and control (in Russian: Мехатроника, автоматизация и управление)*, no. 11, pp. 9-15, 2009.
- NJ30. **Aranovskiy S.**, “Frequency identification for biased harmonic signal”, *Scientific and technical bulletin of the state university ITMO (in Russian: Научно-технический вестник ИТМО)*, v. 47, pp. 97-104, 2008.
- NJ31. **Aranovskiy S.**, Bobtsov A. “Compensation algorithm for the quasi-harmonic disturbance with irregular part”, *Instrumentation Technologies (in Russian: Приборостроение)*, no. 11, pp. 19-23, 2007.
- NJ32. **Aranovskiy S.**, Bobtsov A., Kremlev A., Luk'anova G., “Identification of the frequency of the harmonic signal acting on a linear plant”, *Instrumentation Technologies (in Russian: Приборостроение)*, no. 1, pp. 22-25, 2007.
- NJ33. Amoskin, **Aranovskiy S.**, Bobtsov A., Nikolaev N., “Adaptive stabilization of the chaos in the Chua circuit”, *Instrumentation Technologies (in Russian: Приборостроение)*, no. 12, pp. 6-13, 2005.