

## List of publications

### Peer-reviewed articles in international journals

- IJ1. 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.
- IJ2. Aranovskiy S., Ryadchikov I., Nikulchev E., Wnag J., Sokolov D., "Experimental comparison of velocity observers: a scissored pair control moment gyroscope case study," *IEEE Access*, vol. 8, pp. 21694-21702, 2020.
- IJ3. Aranovskiy, S., Ryadchikov, I., Nikulchev, E., Wnag, J., Sokolov, D., "Bias Propagation and Estimation in Homogeneous Differentiators for a Class of Mechanical Systems," *IEEE Access*, vol. 8, pp. 19450-19459, 2020.
- IJ4. Wang J., Efimov D., Aranovskiy S., Bobtsov A. "Fixed-time estimation of parameters for non-persistent excitation," *European Journal of Control*, 2019. (available online, doi: 10.1016/j.ejcon.2019.07.005).
- IJ5. Pyrkin A., Bobtsov A., Ortega R., Vedyakov A., Aranovskiy S. “Adaptive State Observer Design Using Dynamic Regressor Extension and Mixing”, *Systems and Control Letters*, 2019. (available online, doi: 10.1016/j.sysconle.2019.104519).
- IJ6. 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*, 2019. (available online, doi: 10.1016/j.conengprac.2019.07.011).
- IJ7. 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.
- IJ8. 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.
- IJ9. Aranovskiy S., Ushirobira R., Efimov D., Casiez G., “A switched dynamic model for pointing tasks with a computer mouse”, *Asian Journal of Control*, 2019. (available online, doi: 10.1002/asjc.2063).
- IJ10. 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
- IJ11. 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.
- IJ12. 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.
- IJ13. 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.
- IJ14. 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.
- IJ15. Alexey Vedyakov A., Anastasiia O. VEDIKOVA, Bobtsov A. A., Anton Pyrkin A., Stanislav V. Aranovskiy, “A globally convergent frequency estimator of a sinusoidal signal with a time-varying amplitude”, *European Journal of Control*, vol. 38, pp. 32-38, 2017.
- IJ16. 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.
- IJ17. 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.
- IJ18. Wang J., Gritsenko P. A., Aranovskiy S.V., Bobtsov A. 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.
- IJ19. 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.
- IJ20. Bobtsov Alexey, Bazylev Dmitriy, Pyrkin Anton, Aranovskiy Stanislav, Ortega R.. "A robust nonlinear position observer for synchronous motors with relaxed excitation conditions", *International Journal of Control*, no 4, pp. 813-824, 2017.
- IJ21. 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.
- IJ22. 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.
- IJ23. Aranovskiy S., Bobtsov A, Pyrkin A., Gritsenko, 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.

## Aranovskiy S. – List of publications

- IJ24. 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.
- IJ25. 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.
- IJ26. 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.
- IJ27. 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.
- IJ28. Damm G, Aranovskiy S., Bobtsov A., Kremlev A., Nikolaev N., Slita O., “Discussion on: “Identification of frequency of biased harmonic signal”, *European Journal of Control*, no. 2, pp. 140-143, 2010.
- IJ29. 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.
- IJ30. 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.
- IJ31. 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.
- IJ32. 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.
- IJ33. 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 (*accepted*).
- 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 (*accepted*).
- IC3. Bobtsov A., Pyrkin A., Aranovskiy S., Nikolaev N., Slita O., Kozachek O. "Stator flux and load torque observers for PMSM", IFAC World Congress, 2020, Berlin, Germany (*accepted*).
- IC4. Efimov D., Aranovskiy S., Bobtsov A., Raissi T. "On fixed-time parameter estimation under interval excitation", European Control Conference, 2020, Saint-Petersburg, Russia (*accepted*).
- 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 (*accepted*).
- 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 (*accepted*).
- 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 (*accepted*).
- 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 Kingdom, 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.
- 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.

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- 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.
- 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.

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- 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. V. T. Le, M. Korotina M., Bobtsov A. A., S. V. Aranovskiy, Q. D. Vo, 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.
- NJ2. Le Van Tuan, Korotina M.M., Bobtsov A.A., Aranovskiy S.V. 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.
- NJ3. 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.
- NJ4. Aranovskiy S., Losenkov A. "Direct adaptive method for multisinusoidal disturbance compensation", *Instrumentation Technologies (in Russian: Приборостроение)*, no. 9, pp. 694-700, 2015.
- NJ5. 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.
- NJ6. 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.
- NJ7. 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.
- NJ8. 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.
- NJ9. 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.
- NJ10. 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.
- NJ11. 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.
- NJ12. 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.

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- NJ13. 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.
- NJ14. 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.
- NJ15. 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.
- NJ16. 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.
- NJ17. 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.
- NJ18. 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.
- NJ19. 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.
- NJ20. 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.
- NJ21. 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.
- NJ22. 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.
- NJ23. 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.
- NJ24. 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.
- NJ25. 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.
- NJ26. 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.
- NJ27. 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.
- NJ28. 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.
- NJ29. 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.
- NJ30. 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.
- NJ31. 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.