

Sergei Andreevich Boronin



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Research Interests

Fluid mechanics, multiphase flows, particle transport, hydrodynamic stability, flow transition, filtration, fines transport in porous media, hydraulic fracturing, fracture clean-up, numerical methods in hydrodynamics, energy transition, ESG

Education and Scientific degrees

- 2008 **Ph.D. in Fluid Mechanics**, Lomonosov Moscow State University, supervisor: prof. Alexander N. Osipov
- 2000-2005 **M. Sc. in Mechanics**, Lomonosov Moscow State University, supervisor: prof. Alexander N. Osipov
- 1997-2000 Lyceum “Second School”, Moscow, Russia

Academic Positions

- 2012-2019 **Part-time Senior Research Scientist** at Institute of Mechanics, Lomonosov Moscow State University, Laboratory of Multiphase Fluid Mechanics
- 2005-2012 **Junior Research Scientist** (2005-2006), **Research Scientist** (2006-2010) and **Senior Research Scientist** (2010-2012) at Institute of Mechanics, Lomonosov Moscow State University, Laboratory of Multiphase Fluid Mechanics
- 2002-2005 **Part-time Assistant** (2002-2005), at Institute of Mechanics, Lomonosov Moscow State University, Laboratory of Multiphase Fluid Mechanics

Visiting Positions

- 2011-2012 **Research Fellow** at University of Brighton, School of Computing, Engineering and Mathematics, Sir Harry Ricardo Laboratories (Brighton, UK)

Industry Positions

- 2012-2016 **Research Scientist** (2012-2013) and **Senior Research Scientist** (2013-2016) at Schlumberger Moscow Research
- 2006-2011 **Part-time Scientific Consultant** (2006-2008) and **Part-time Scientific Consultant Ph.D.** (2008-2011) at Schlumberger Moscow Research

Skoltech

- April 2022-present **Leading Research Scientist**, Project Center for Energy Transition and ESG, Skoltech
- 2019-2022 **Leading Research Scientist**, Multiphase Systems Lab, Center for Hydrocarbon Recovery, Skoltech

2017-2019 **Senior Research Scientist**, Center for Hydrocarbon Recovery, Skoltech

Honors and Awards

- 2018 Academician **G.I. Petrov Prize** for the study “Development of hydrodynamic stability theory of multiphase and particle-laden flows” (<http://hit-conf.imec.msu.ru/2018/contest.php>)
- 2015 **Diploma for best oral presentation** at “Multiphase Fluid Mechanics” session of “XI all-Russia Congress on Fundamental Problems in Theoretical and Applied Mechanics”, 20-24 August 2015, Kazan’, Russia
- 2012 **The 2-nd degree Diploma** for the study “Optimal disturbances to dusty-gas boundary-layer flow with a non-uniform particle distribution”, Conference-competition for young scientists, Institute of mechanics, MSU, October, 2012
- 2011 **Invited to chair the Session “Visualization/Imaging Techniques”** at 22nd International Symposium on Transport Phenomena, November 8-11, 2011, Delft, Netherlands
- 2009 **Russian Federation Presidential Grant** for young Ph.D. researchers “Problems of stability and development of local structures in dispersed flows” (MK-622.2009.1)
- 2009 **Lomonosov Moscow State University Grant** for talented students, post-docs and young scientists
- 2009 **Lomonosov Moscow State University Scholarship** for talented young scientists for the study “Development of the hydrodynamic stability theory for dispersed flows”
- 2007 **The 3-rd degree Diploma** for the study “Hydrodynamic stability of two-phase flows with a finite volume fraction of inclusions”, Conference-competition for young scientists, Institute of mechanics, MSU, October, 2007
- 2005 **The 2-nd degree Diploma** for the study “Stability of plane-parallel flows of a dusty gas”, Conference-competition for young scientists, Institute of mechanics, MSU, October, 2005.

Contribution to Grants and Research Projects

Fundamental Research in MSU and Brighton University

- 2012-2013 Study of Formation, Movement and Instability of Interfaces in Multiphase Flows Typical for Technological Processes [in Russian] (Principal investigator, RFBR 12-08-31420)
- 2011-2012 Modelling of breakup processes in transient Diesel fuel sprays (Principal investigator, EPSRC project EP/F069855/1)
- 2011-2013 Modeling of Multiphase Flows: Stability, Convection and Formation of Structures [in Russian] (Principal investigator, RFBR 11-01-00483-a)
- 2011-2012 Development of Eulerian-Lagrangian Methods for Modeling of Dispersed Flows [in Russian] (Principal investigator, MK-3582.2011.1)
- 2009-2010 Problems of Stability and Development of Local Structures in Dispersed Flows [in Russian] (**Project leader**, MK-622.2009.1)
- 2008-2010 Development of models and methods in Multiphase Fluid Mechanics [in Russian] (Principal investigator, RFBR 08-01-00195-a)
- 2005-2007 Aerodynamic Problems in Mechanics of Dispersed Flows [in Russian] (Investigator, RFBR 05-01-00502-a)
- 2002-2004 Development of Lagrangian Approach in Mechanics of Dispersed Flows [in Russian] (Investigator, RFBR 02-01-00770-a)

Applied Research Projects at Schlumberger

- 2015-present Development of innovative simulator for modeling of flowback in multifractured horizontal wells in shale formations involving detailed description of flow in the well and in attached hydraulic fractures (Principal investigator);
- 2014-present Development and implementation of novel 2D model for fracture flowback in shale

- formations (**Project Leader**);
- 2014-present Development of novel model for fines migration in proppant pack and associated dynamics of fracture conductivity during fracture flowback (**Project Leader**);
- 2012-2013 Development of mathematical model for innovative proppant placement into hydraulic fractures with yield-stress rheology of the proppant-laden slurry, implementation into Research Code (**Project Leader**);
- 2010-2011 Development of model for rock permeability damage in the near-wellbore zone due to invasion of drilling mud including formation of external and internal filter cakes (Investigator);
- 2008-2009 Development of novel model for proppant transport and settling in hydraulic fractures during injection, implementation into Research Code and a commercial simulator (Investigator);
- 2007 Studied the effect of particle concentration non-uniformity along the fracture width formed during proppant placement on the suspension stability and laminar-turbulent flow transition (Investigator);
- 2006 Lattice-Boltzmann simulations of multiphase filtration through artificial proppant packs made of elongated particles, study effect of particle shape on relative permeabilities (Investigator);

Industrial & Governmental Research projects at Skoltech

- 07.2021 –
04.2022 Development of a fast model for drilling hydraulics and cuttings transport (investigator)
(ongoing)
- 08.2021 –
11.2021 Laboratory experiments on characterization of mixtures: analysis of methods for correct measurements of rheological fluid properties, derivation of proppant transport model for viscoelastic hydraulic fracturing fluids (investigator)
- 08.2020 –
07.2021 Development of the model for wellbore-fracture cleanup, methodology supervising of field experiment on hydraulic fracturing and flowback, development of the model for acid hydraulic fracturing (principal investigator)
- 12.2019 –
09.2021 Analysis, development and programming implementation of physics and mathematics models describing flows during well drilling and wellbore operations. Development of hybrid algorithms combining physics-mathematics models and machine learning methods (investigator)
- 09.2019 –
06.2020 Development of the model for wellbore-fracture cleanup, methodology supervising of field experiment on hydraulic fracturing and flowback, development of methods for analysis of digital database of field data related to hydraulic fracturing (principal investigator)
- 11.2018–
04.2019 Development of mathematical model for fracture clean-up after hydraulic fracturing and algorithm of finding optimum hydraulic fracture design on the basis of machine learning with the aim to maximize cumulative production (principal investigator)
- 11.2018–
07.2019 Development and validation of technologies for predicting the effect of mineralization and fines transport on the flooding of terrigenous reservoirs (project leader and principal investigator)
- 09-12.2017 Modelling of injectivity decline in flooding wells due to fines trapping and mobilization in the formation (principal investigator)
- 11.2017-
12.2019 Development of proppant transport module for Cyber-Frac hydraulic fracturing simulator; implementation of novel models for proppant transport (principal investigator)

Scientific Advising

Doctoral Advising/Co-advising

- Since 2018 Dmitry Derbyshev (4th-year PhD student, Skoltech, CHR)
- Since 2015 Tolmacheva Kristina (MSU, Ph.D. defense is planned for 2022)

Master Thesis Advising

- 2020 - present Artem Galliamov (Skoltech, will graduate from MSc Petroleum Engineering program in 2021-2022 academic year)
- 2019 - 2021 Ildar Abdrakhmanov (Skoltech, graduated from MSc Petroleum Engineering program in 2020-2021 academic year)
- 2018 - 2020 Ekaterina Serkova (Skoltech, graduated from MSc Petroleum Engineering program in 2019-2020 academic year)
- 2012-2015 Dorofeeva Polina (MSU, Mechanics and Mathematics Faculty), defended M.Sc. Thesis in May 2015
- 2012-2015 Tolmacheva Kritsina (MSU, Mechanics and Mathematics Faculty), defended M.Sc. Thesis in May 2015

Professional Service

Reviewer for the following journals

Journal of Natural Gas Science & Engineering
Journal of Petroleum Science and Engineering
Physics of Fluids
Fluid Dynamics
Processes
Computers in Industry
Energies

Service

- 2012 - 2016 Member of SPE
2008 - 2009 Member of Euromech

Software Development Skills

C/C++ and Fortran programming languages
Strong experience in implementation of mathematical models into Research Codes and numerical solution of differential equations
Linking external numerical libraries to Research Codes
Development of Dynamically-linked libraries (DLL)
Mixed-language programming (C++/Fortran)

Peer-Reviewed Publications

1. Khmelenko, P., Shel, E., Boronin, S., Paderin, G., & Osiptsov, A. (2022). Proppant Packing Near the Fracture Tip during Tip Screenout: Asymptotic Models for Pressure Buildup Calibrated on Field Data and Verified with Two-Continua Simulations. SPE Journal, 1-19.
2. Redekop, E. P., Boronin, S. A., Tolmacheva, K. I., Burukhin, A. A., Osiptsov, A. A., & Belonogov, E. V. (2021). Effects of salinity and rock clogging on injectivity dynamics of flooding wells: Experiments, modeling and validation on field data. Journal of Petroleum Science and Engineering, 202, 108504.
3. Muravleva, E. A., Derbyshev, D. Y., Boronin, S. A., & Osiptsov, A. A. (2021). Multigrid pressure solver for 2D displacement problems in drilling, cementing, fracturing and EOR. Journal of Petroleum Science and Engineering, 196, 107918.
4. Osiptsov, A. A., Garagash, I. A., Boronin, S. A., Tolmacheva, K. I., Lezhnev, K. E., & Paderin, G. V. (2020). Impact of flowback dynamics on fracture conductivity. Journal of

- Petroleum Science and Engineering, 188, 106822.
5. Boronin, S. A., & Osiptsov, A. N. (2020). Stability of a vertical Couette flow in the presence of settling particles. *Physics of Fluids*, 32(2), 024104.
 6. Dontsov, E. V., Boronin, S. A., Osiptsov, A. A., & Derbyshev, D. Y. (2019). Lubrication model of suspension flow in a hydraulic fracture with frictional rheology for shear-induced migration and jamming. *Proceedings of the Royal Society A*, 475(2226), 20190039.
 7. Tolmacheva, K. I., Boronin, S. A., & Osiptsov, A. A. (2019). Formation damage and cleanup in the vicinity of flooding wells: Multi-fluid suspension flow model and calibration on lab data. *Journal of Petroleum Science and Engineering*, **178**, 408-418
 8. Garagash, I. A., Osiptsov, A. A., Boronin, S. A. (2019). Dynamic bridging of proppant particles in a hydraulic fracture. *International Journal of Engineering Science*, 135, 86-101.
 9. Boronin, S. A. and Osiptsov, A. N. (2018) Effect of settling particles on the stability of a particle-laden flow in a vertical plane channel. *Physics of Fluids* **30**(3), 034102.
 10. Osiptsov, A.A., Boronin, S.A., Zilonova, E.M., Desroches, J. (2018) Managed Saffman-Taylor Instability During Overflush in Hydraulic Fracturing. *Journal of Petroleum Science and Engineering* **162**, 513-523.
 11. Boronin, S. A., Osiptsov, A. A. and Desroches, J. (2017). Flow of viscoplastic suspensions in a hydraulic fracture: implications to overflush. *J. Phys.: Conf. Ser.* **894**(1), 012014
 12. Boronin, S. A., Tolmacheva, K. I., Osiptsov, A. A., Sitnikov, A. N., Yakovlev, A. A., Belozеров, B. V., Belonogov, E. V. and Galeev, R. R. (2017). Damage to formation surrounding flooding wells: modelling of suspension filtration with account of particle trapping and mobilization. *J. Phys.: Conf. Ser.* **925**, 012009
 13. Boronin, S. A., and Osiptsov, A. N. (2016). Nonmodal instability of a stratified plane-channel suspension flow with fine particles. *Physical Review E*, **93**(3), 033107.
 14. Tolmacheva, K. I., Boronin S. A. and Osiptsov, A. A. (2015). Multi-Fluid Model of Suspension Filtration in a Porous Medium. *Fluid Dynamics* **50**(6), 759–768.
 15. Boronin, S. A., Osiptsov, A. A. and Desroches, J. (2015). Displacement of yield-stress fluids in a fracture. *Intl. J. Multiphase Flow*, **76**, 47–63.
 16. Boronin, S. A. and Osiptsov, A. N. (2014). Modal and Non-Modal Stability of Dusty-Gas Boundary Layer Flow. *Fluid Dynamics*, **49**(6), 770–782.
 17. Boronin, S. A. and Osiptsov A. A. (2014). The Effects of Particle Migration on Suspension Flow in a Hydraulic Fracture. *Fluid Dynamics*, **49**(2), 208–221.
 18. Boronin, S. A., Healey, J. J. and Sazhin, S. S. (2013). Non-modal stability of round viscous jets. *J. Fluid Mech.*, **716**, 96–119.
 19. Boronin, S. A. (2012). Optimal disturbances of a dusty-gas plane-channel flow with a nonuniform distribution of particles. *Fluid Dynamics*, **47**(3), 351–363.
 20. Boronin, S. A. (2011). Stability of plane Couette dispersed flow with a finite volume fraction of inclusions. *Fluid Dynamics*, **46**(1), 64–71.
 21. Boronin, S. A. and Osiptsov, A. A. (2010). Two Continua Model of Suspension Flow in a Hydraulic Fracture. *Doklady Physics*, **55**(4), 199–202.
 22. Boronin, S. A. (2009). Hydrodynamic stability of stratified suspension flow in a plane channel. *Doklady Physics*, **54**(12), 536–539.
 23. Boronin, S. A. (2008). Investigation of the stability of a plane-channel suspension flow with account for finite particle volume fraction. *Fluid Dynamics*, **43**(6), 873–884.
 24. Boronin, S. A. and Osiptsov, A. N. (2008) Stability of a disperse-mixture flow in a boundary layer. *Fluid Dynamics*, **43**(1), 66–76.

Conference Proceedings

1. Boronin S.A., Stability of a dusty gas boundary layer flow, Proceedings of Conference-competition for young scientists [in Russian]. October 2004. MSU Publishing, 2004. pp. 79–86.

2. Boronin S.A., Stability of a dusty-gas flow in a vertical channel, Proceedings of Conference-competition for young scientists [in Russian]. October 2005. MSU Publishing, 2005 pp. 41–47.
3. Boronin S.A., Stability problems for plane-parallel dusty-gas flows, Proceedings of Institute of mechanics, Ufa Research Center RAS [in Russian]. 2007. Iss. 5. pp. 121–126
4. Boronin S.A., Stability of upward and downward dusty-gas flows in the channel in the presence of gravity, Proceedings of Conference-competition for young scientists [in Russian]. October 2006. MSU Publishing, 2007. pp. 79–86.
5. Boronin S.A., Hydrodynamic stability of two-phase flows with finite volume fraction of inclusions, Proceedings of Conference-competition for young scientists [in Russian]. October 2007. MSU Publishing, 2008. pp. 47–54.
6. Boronin S.A., On the development of the stability theory for dispersed flows, Proceedings of XVI International conference on computational mechanics and modern applied program systems, May 25-31, 2009, Alushta. MAI-Print publishing. 2009. pp. 146-149
7. Boronin S.A., Stability of the stratified plane-channel suspension flow, Proceedings of Conference-competition for young scientists [in Russian]. October 2008. MSU Publishing, 2009. pp. 74–80.
8. Boronin S.A., Osiptsov A.N. Stability of plane Couette suspension flow with nonuniform particle concentration profile, ILASS-Europe 2010, Brno, Czech Republic. Conference Proceedings. ISBN 978-80-7399-997-1. pp. 289-290.
9. Boronin S.A., Stability of plane Couette suspension flow with the non-uniform particle concentration distribution, Proceedings of Conference-competition for young scientists [in Russian]. October 2009. MSU Publishing, 2011. pp. 77–84.
10. Boronin S.A., Study of optimal perturbations of shear dispersed flows, Proceedings of Conference-competition for young scientists [in Russian]. October 2010. pp. 76-83.
11. Boronin S.A. Stability of shear dispersed flows [in Russian], Vestnik of Lobachevsky State University of Nizhni Novgorod. 2011. N. 4. Pt. 3. pp. 656-658.
12. S. A. Boronin, J. Healey, S. S. Sazhin Transient unstable round jets: mathematical analysis and applications, In: Proceedings of International Symposium on Transport Phenomena 22 (ISTP-22). November 8-11, 2011, Delft, Netherlands. 10 pages.
13. Osiptsov A.N., Boronin S.A., New results in hydrodynamic stability of two-phase flows, Proceedings of Institute of mechanics UNC RAN [in Russian], 2012, Iss. 9, Pt. 1, pp. 125-130.
14. Boronin S.A., Optimal disturbances to dusty-gas boundary-layer flow with a non-uniform particle distribution, Proceedings of Conference-competition for young scientists October 2012 [in Russian]. MSU publishing, pp. 33-40.
15. Sazhin S.S., Boronin S.A., Begg S., Crua C., Healey J., Lebedeva N.A., Osiptsov A.N., Kaplanski F., Heikal M.R., Jet and Vortex Ring-Like Structures in Internal Combustion Engines: Stability Analysis and Analytical Solutions. Procedia IUTAM. 2013. V. 8. pp. 196-204.
16. Boronin S., Osiptsov A., Desroches J., Flows of particle-laden Bingham fluids in a Hele-Shaw cell, WIT Transactions on Engineering Sciences 2013, V. 79, pp. 135-146. ISSN 1743-3533 (online).
17. Boronin S.A., Study of optimal disturbances to dusty-gas boundary-layer flow with account for lift force, Proceedings of Conference-competition for young scientists, October 2014 MSU publishing (in press).
18. Boronin S.A., Osiptsov A.N. Non-modal stability of dispersed flows [in Russian]. In Proceedings of All-Russia Conference on Fundamental Problems in Theoretical and Applied Mechanics 2015, pp. 555-557.
19. Osiptsov, A., Zilonova, E., Boronin, S., Desroches, J., Lebedeva, N., Willberg, D. (2016) Insights on Overflushing Strategies from a Novel Modeling Approach to Displacement of Yield-Stress Fluids in a Fracture, SPE 181454-MS, 18 pages.
20. Osiptsov, A.A., Boronin, S.A., Tolmacheva, K.I., Orlov, D.M., Koroteev, D.A.,

- Sitnikov, A.N., Yakovlev, A.A., Belozerov, B.V., Belonogov, E.V., Galeev, R.R. (2017). Modelling of well injectivity with account for permeability damage and recovery in the near-wellbore zone. In SPE Russian Petroleum Technology Conference. Society of Petroleum Engineers. SPE-187806-MS.
21. Tolmacheva, K.I., Boronin, S.A., Osiptsov, A.A., Galeev, R.R., Belozerov, B.V., Yakovlev, A.A., Sitnikov, A.N. (2017) Multi-fluid modelling of suspension filtration in the near-wellbore zone of injection wells. In Proceedings of XLV International Summer School – Conference APM 2017, 458-466.
 22. Tolmacheva K.I., Boronin S.A., Osiptsov A.A. (2017) Multi-fluid model for suspension filtration in porous media: effects of particle trapping and mobilization. WIT Transactions on Engineering Science **115**, 153. ISBN 978-1-78466-196-0.
 23. Osiptsov, A.A., Boronin, S.A., Dontsov, E.V. (2018), Proppant Transport Modeling With Effects Of Suspension Yield Stress, Jamming, And Filtration Through The Proppant Pack, In ECMOR XVI-16th European Conference on the Mathematics of Oil Recovery.
 24. Osiptsov, A.A., Boronin, S.A., Tolmacheva, K.I. (2018) Improving Well Injectivity by Interchanging Injection and Production When Flooding to Maintain Reservoir Pressure. In Proceedings of Saint Petersburg 2018 conference (EAGE).
 25. Osiptsov, A., Vainshtein, A., Boronin, S., Faizullin, I., Paderin, G., Shurunov, A., ... & Chebykin, N. (2019, October). Towards Field Testing of the Flowback Technology for Multistage-Fractured Horizontal Wells: Modeling-Based Design and Practical Implications. In SPE Russian Petroleum Technology Conference. OnePetro.
 26. Vainshtein, A., Fisher, G., Boronin, S., Osiptsov, A., Faysullin, I., Paderin, G. & Chebykin, N. (2020, October). Field Testing of the Flowback Technology for Multistage-Fractured Horizontal Wells: Test Results and Primary Interpretation of the Results. In SPE Russian Petroleum Technology Conference. OnePetro.
 27. Albert Vainshtein, Georgii Fisher, Gleb Strizhnev, Sergei Boronin, Andrei Osiptsov, Ildar Abdrakhmanov, Gregory Paderin, Alexander Prutsakov, Ruslan Uchuev, Igor Garagash, Kristina Tolmacheva, Egor Shel, Dmitry Prunov, Nikolay Chebykin, Ildar Fayzullin (2021, October). Field Testing of the Flowback Technology for Multistage-Fractured Horizontal Wells: Generalization to Find an Optimum Balance Between Aggressive and Smooth Scenarios. In SPE Russian Petroleum Technology Conference. OnePetro.
 28. Ildar Abdrakhmanov, Evgenii Kanin, Sergei Boronin, Evgeny Burnaev, Andrei Osiptsov (2021, October) Development of Deep Transformer-Based Models for Long-Term Prediction of Transient Production of Oil Wells. In SPE Russian Petroleum Technology Conference. OnePetro.

Conference Abstracts

1. Boronin S.A., Osiptsov A.N., Hydrodynamic stability of two-phase boundary layer, Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2004. MSU Publishing, 2004. p. 40.
2. Boronin S.A., Osiptsov A.N., Stability of aero-disperse boundary layer with non-uniform particle distribution, European Aerosol Congress 2005. Book of abstracts. p. 683.
3. Boronin S.A., Stability of a dusty-gas flow in a vertical channel in the presence of gravity, Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2006. Mechanics section. MSU Publishing, 2006. p. 31.
4. Boronin S.A., Stability of dusty gas flow in a vertical channel, Euromech Fluid Mechanics Conference 6, Royal Institute of Technology, Stockholm, June 2006. Abstracts, V. 1, p. 140.
5. Boronin S.A., On the new formulation of stability problems for plane-parallel dusty-gas flows, Book of Abstr. for IX All-Russian congress on theoretical and applied mechanics. Nizhnii Novgorod, August 2006. V. 2. p. 38
6. Boronin S.A., Stability problems for plane-parallel dusty-gas flows, Abstracts for XIV seminar "Modern problems of aeromechanics" September 2006. MSU Publishing, 2006 p.

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7. Boronin S.A., Hydrodynamic stability of two-phase flows with finite volume fraction of inclusions, Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2007. Mechanics section. MSU Publishing, 2007. p. 35.
8. Boronin S.A., Osiptsov A.N. Stability of upward and downward dusty-gas flows in a vertical channel, Advances in Turbulence XI. Proceedings of the 11-th EUROMECH European Turbulence Conference. June 2007. Porto, Portugal. p. 759.
9. Boronin S.A., Stability of two-phase flows with finite volume fraction of inclusions, Book of Abstracts for XIV seminar "Contemporary problems in aeromechanics" September 2007. MSU Publishing, 2007. p. 22.
10. Osiptsov A.N., Boronin S.A., Towards the problem of hydrodynamic stability of plane-parallel dusty-gas flows, Book of abstracts for ICIAM 2007. pp. 105 – 106.
11. Boronin S.A., Stability of dispersed flows with finite volume fraction of inclusions, Book of Abstracts for all-Russian conference "Contemporary problems in continua mechanics" November 2007. pp. 29–30.
12. Boronin S.A., Parametric study of the stability of the suspension flow in a plane channel and singularities of two-phase flow in the vicinity of critical layers, Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2007. Mechanics section. MSU Publishing, 2008 p. 38.
13. Boronin S., On hydrodynamic stability of two-phase flow in a channel with a finite volume fraction of inclusions, In: Euromech Fluid Mechanics Conference 7. University of Manchester, United Kingdom. 14–18 September 2008. Abstracts. p. 34.
14. Boronin S.A., Stability of suspension flow in a plane channel with under the presence of particle concentration gradients, In Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2009. Mechanics section. MSU Publishing, 2009 p. 29.
15. Boronin S.A., Osiptsov A.N. Development of the hydrodynamic-stability theory for disperse flows, Fluxes and Structures in Fluids: Physics of Geospheres. International conference. Abstracts. 2009. Moscow State University Publishing. pp. 37-39.
16. Boronin S.A., Hydrodynamic stability of a stratified suspension flow in a plane channel, Advances in Turbulence XII. Proceedings of the 12-th EUROMECH European Turbulence Conference. September 7–10. 2009. Marburg, Germany. p. 913.
17. Boronin S.A., Investigation of optimal disturbances in dispersed flows, Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2010. Mechanics section. MSU Publishing, 2010. p. 40.
18. Boronin S.A., Stability of suspension Couette flow under the presence of particle concentration gradients, In Book of abstracts of international conference "Nonlinear problems of hydrodynamic stability theory and turbulence" [in Russian]. Moscow, MSU publishing, 2010. p. 38-41.
19. Boronin S.A. Study of optimal perturbations of shear dispersed flows, In Book of abstracts of all-Russia conference "Mechanics of inhomogeneous fluids in fields of external forces" [in Russian]. Moscow, RAS publishing, 2010. p. 22-25.
20. Boronin S.A., New results in non-modal stability theory for dispersed flows, Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2013. Mechanics section. MSU Publishing, 2013. p. 26.
21. Boronin S.A., Optimal disturbances to dusty-gas boundary-layer flow with account for lift force, Book of Abstr. Conf. "Lomonosov readings" [in Russian]. April 2014. Mechanics section. MSU Publishing, 2014. p. 35.
22. Osiptsov A.A., Boronin S.A., Viscous fingering in the displacement of Bingham fluids in Hele-Shaw cell, In Book of abstracts of international conference "Nonlinear problems of hydrodynamic stability theory and turbulence" [in Russian]. Moscow, MSU publishing 2014, pp. 191-193.
23. Boronin S.A., Modal and non-modal stability of a dusty-gas boundary-layer flow with a non-uniform particle concentration, In Book of abstracts of international conference

- “Nonlinear problems of hydrodynamic stability theory and turbulence” [in Russian]. Moscow, MSU publishing 2014, pp. 36-37.
24. Boronin S.A., Tolmacheva K.I., Three-continua model for suspension filtration in a porous medium, In Book of abstracts for XVII conference “Contemporary problems of aero- and hydrodynamics” [in Russian], MSU publishing 2014, pp. 26-27
 25. Boronin S.A., Osiptsov A.A., Displacement of Bingham fluids in a Hele-Shaw cell, In Book of abstracts for XVII conference “Contemporary problems of aero- and hydrodynamics” [in Russian], MSU publishing 2014, pp. 27-28
 26. Boronin S.A., Osiptsov A.N., Non-modal stability of a dusty-gas flow in a boundary layer, In Book of abstracts for XVII conference “Contemporary problems of aero- and hydrodynamics” [in Russian], MSU publishing 2014, pp. 28-29
 27. Boronin S.A., Osiptsov A.A., Desroches J., Displacement of Bingham Suspensions in a Slot, In Euromech Fluid Mechanics Conference 10. Technical University of Copenhagen, Denmark. 14-18 September 2014. Book of Abstracts. pp. 144.
 28. Boronin S.A., Osiptsov A.N., Non-modal stability of a dusty-gas boundary layer flow, In Euromech Fluid Mechanics Conference 10. Technical University of Copenhagen, Denmark. 14-18 September 2014. Book of Abstracts. pp. 344.
 29. Osiptsov A.A., Zilonova E., Boronin S.A., Willberg D., Desroches J., Interplay between fingering instability and slumping in displacement of yield-stress fluids in a Hele-Shaw cell. In Book of abstracts of XXII International Conference “Nonlinear problems of hydrodynamic stability theory and turbulence” [in Russian]. Moscow, MSU publishing 2016, pp. 36-37.
 30. Boronin S.A., Non-modal stability of a stratified suspension flow in a plane channel, in Book of abstracts for XVIII conference “Contemporary problems of aero- and hydrodynamics” [in Russian], MSU publishing 2016, pp. 28-29
 31. Boronin S.A., Chuprakov D.A., A novel model for multiphase flow in a hydraulic fracture during production of hydrocarbons, In Book of abstracts for XVIII conference “Contemporary problems of aero- and hydrodynamics” [in Russian], MSU publishing 2016, pp. 29-30
 32. Boronin S.A., Non-modal stability of a stratified suspension flow in a plane channel, in Book of abstracts of conference “Lomonosov readings” Mechanics section [in Russian]. MSU Publishing, 2016. pp. 33-34
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