Aslan R. Kasimov, Ph.D.

Associate Professor, Skolkovo Institute of Science and Technology
Room E-B5-2014, Bolshoy Boulevard 30 bldg 1, Moscow 121205 Russia a.kasimov@skoltech.ru

Education

- **University of Illinois at Urbana-Champaign** Urbana, IL, USA
  Ph.D. in Theoretical and Applied Mechanics (advisor: D. Scott Stewart) *2004*
- **University of Virginia** Charlottesville, VA, USA
  M.Sc. in Mechanical and Aerospace Engineering *1999*
- **Moscow Engineering Physics Institute (MEPhI)** Moscow, Russia
  Diploma in Physics *1993*

Employment

- **Skolkovo Institute of Science and Technology** Moscow, Russia
  Associate Professor *2018-present*
- **Sechenov University** Moscow, Russia
  Professor of Physics *2018-present*
- **Applied Computational Technologies, Ltd.** Moscow, Russia
  CEO *2022-present*
- **P.N. Lebedev Physical Institute, RAS** Moscow, Russia
  Senior Research Scientist in I. E. Tamm Theoretical Physics Department *2017-2018*
- **King Abdullah University of Science and Technology (KAUST)** Thuwal, KSA
  Adjunct Assistant Professor of Applied Mathematics and Computational Science *2016-2018*
  King Abdullah University of Science and Technology (KAUST) Thuwal, KSA
  Assistant Professor of Applied Mathematics and Computational Science *2009-2016*
- **Massachusetts Institute of Technology (MIT)** Cambridge, MA, USA
  Lecturer in Applied Mathematics *2008-2009*
- **Massachusetts Institute of Technology (MIT)** Cambridge, MA, USA
  Instructor in Applied Mathematics *2005-2008*
- **University of Illinois at Urbana-Champaign** Urbana, IL, USA
  Postdoctoral Researcher *2004-2005*

Awards and Honors

- Young Investigator Program Award, US Air Force Office of Scientific Research, 2007-2009
- Larson Graduate Award, Department of Theoretical and Applied Mechanics, UIUC, 2004
- Mavis Memorial Fund Scholarship, University of Illinois at Urbana-Champaign, 2001 and 2002
- Invited Topical Review Lecture at the 23^{rd} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Irvine, CA, 2011
- Invited Topical Review Lecture at the 25^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Leeds, UK, 2015

Professional membership

- American Physical Society
- Society for Industrial and Applied Mathematics
- American Mathematical Society
- Combustion Institute

Grants

- (PI) Russian Science Foundation, 2022-2023 (#22-21-00902, 3 000 000 roubles)
- (PI) Russian Foundation for Basic Research collaborative grant with Belarussian Foundation for Fundamental Research, 2020-2022 (#20-51-00004, 4 000 000 roubles)
- (PI) Young Investigator Program Award, USA Air Force Office of Scientific Research, 2007-2009 (FA9550-08-1-0035, $300,000)
- (Co-PI) USA National Science Foundation Mathematical Sciences Grant, MIT, 2009-2012 (DMS-0907955, $360,000)
- (Co-PI) KAUST-Stanford Academic Excellence Alliance Grant, 2009-2012

Students supervised

- Vladimir Fanaskov, Ph.D. student, Skoltech, graduated in 2021, defended in Sep. 2022
- Evgenii Sharaborin, Ph.D. student, Skoltech, graduated in 2021
- Andrei Goldin, Ph.D. student, Skoltech, since Nov. 2019
- Diana Gazizova, Ph.D. student, Skoltech, since Nov. 2021
- Shamil Magomedov, Ph.D. student, Skoltech, since Nov. 2022
- Dmitry Kabanov, Ph.D., KAUST, defended in 2018
- Luiz M. Faria, Ph.D., KAUST, defended in 2014
- Vignesh Kumar, MSc student, Skoltech, 2021-2023
- Bintang Alam Semesta, MSc student, Skoltech, 2022-2024
- Ivan But, MSc student, Skoltech, 2020-2022
- Shahzeb Aamir, MSc student, Skoltech, 2020-2022
- Danis Gatiatov, MSc student, Skoltech, 2019-2021
- Tatiana Medvedeva, MSc student, Skoltech, 2019-2021
- Diana Gazizova, MSc student, Moscow State University, defended in 2021
- Andrei Gonchar, B.Sc. student, MIPT, defended in 2018
- Nail Ussembayev, M.Sc. KAUST, graduated in 2014
- Francisco Obando, M.Sc. KAUST, graduated in 2013
- Jesus Sierra, M.Sc. KAUST, graduated in 2012
- Daria Bolbot, M.Sc. KAUST

Postdoctoral researchers supervised

- Oleg Rogozin, 2018-present, Skoltech.
- Rana Parshad, 2011-2012, KAUST.

- Belkacem Said-Houari, 2011-2014, KAUST.
- Hamid Abderrahmane, 2012-14, KAUST.
- Svyatoslav Korneev, 2012-2015, KAUST.
- Roman Semenko, 2011-2015, KAUST.
- Aliou Sow, 2015-2016, KAUST.

Service to Skoltech

- Program Coordinator for Masters Program in Advanced Manufacturing Technologies (2018-2020)
- Member of the Educational Committee of Skoltech (2018-2021)

Service to profession

- Co-Chair of the Colloquium on Detonation, Explosion, and Supersonic Combustion at the 39^{th} International Symposium on Combustion, Vancouver, Canada, 24-29 July 2022. (http://www.combustionsymposia.org/2022/page/program/program-co-chairs)
- Program Co-Chair for the 25^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Leeds, UK, 2015 (http://www.icders.org)
- Program Committee Member for the 26^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Boston, MA, 2017 (http://www.icders.org)
- Program Committee Member for the 28^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Napoli, Italy, 2022 (http://www.28icders.stems.cnr.it)
- Referee for: Physical Review Letters, Physical Review E, Physics of Fluids, Journal of Fluid Mechanics, Combustion Theory and Modelling, International Symposium on Combustion, Combustion Science and Technology, Combustion and Flame

Teaching (UG – undergraduate, all others – graduate level)

- Mathematical Methods in Engineering and Applied Science, Skoltech, Fall 2019-2020
- Numerical Methods in Engineering and Applied Science, Skoltech, Spring 2019-2021
- Essential Engineering Toolbox, Skoltech, Fall 2019-2020
- Asymptotic Methods of Applied Math., AMCS 354, Spring 2013, Fall 2015, KAUST
- Mathematical Fluid Dynamics, AMCS 334, Fall 2012, Spring 2014, KAUST
- Stability and Bifurcation Theory, AMCS 390D, Fall 2014, Fall 2015, KAUST
- Numerical Analysis of Differential Equations, AMCS 252, Spring 2015, KAUST
- Applied Partial Differential Equations I, AMCS 231, Fall 2009-2011,2013, KAUST
- Applied Partial Differential Equations II, AMCS 331, Spring 2010-2012, KAUST
- Principles of Applied Mathematics (UG), 18.311, 2009, MIT
- Mathematical Methods for Engineers, 18.085, 2006, 2007, 2008, MIT

- Linear Partial Differential Equations (UG), 18.303, 2007, MIT
- Linear Algebra (UG), 18.06, 2006, Recitation Instructor, MIT
- Differential Equations (UG), 18.03, 2005, 2006, Recitation Instructor, MIT
- Introduction to Fluid Mechanics (UG), 2002. Instructor, UIUC

Publications

- A. Yu. Goldin, T. O. Medvedeva, and A. R. Kasimov, Mode locking in gaseous detonation propagation in a channel with periodically varying friction. *Physics of Fluids*, 34(9), 096104 (2022). https://doi.org/10.1063/5.0103370
- A. Yu. Goldin, A. R. Kasimov, Synchronization of detonations: the Arnold tongues and devils staircases. *Journal of Fluid Mechanics*, 946, R1, (2022). https://doi.org/10.1017/jfm.2022.581
- A. R. Kasimov and A. Yu. Goldin. Resonance and mode locking in gaseous detonation propagation in a periodically nonuniform medium. *Shock Waves (2021): 31, 841-849*, (https://doi.org/10.1007/s00193-021-01049-z)
- E. L. Sharaborin, O. A. Rogozin, and A. R. Kasimov. Computational Study of the Dynamics of the Taylor Bubble. *Fluids 6.11 (2021): 389.* (https://doi.org/10.3390/fluids6110389)
- E. L. Sharaborin, O. A. Rogozin, and A. R. Kasimov. The Coupled Volume of Fluid and Brinkman Penalization Methods for Simulation of Incompressible Multiphase Flows. *Fluids, 2021, 6, 334*, (https://doi.org/10.3390/fluids6090334)
- P. N. Krivosheyev, A. O. Novitski, K. L. Sevrouk, O. G. Penyazkov, I. I. But, A. R. Kasimov, Experimental and numerical investigation of gaseous detonation in a narrow channel with obstacles. *Fluids 2021, 6, 224.* (https://doi.org/10.3390/fluids6060224)
- A. R. Kasimov, A. R. Gonchar, Reactive Burgers model for detonation propagation in a non-uniform medium, *Proceedings of the Combustion Institute, 2021, 38(3), pp. 37253732.* (https://doi.org/10.1016/j.proci.2020.07.149)
- A. R. Kasimov, A. R. Gonchar, Analog modeling of detonation in periodic medium, *Proceedings of* 27^{th} *ICDERS, Beijing, China, July 28 - Aug. 3, 2019.* (http://www.icders.org/ICDERS2019/abstracts/ICDERS2019-168.pdf)
- D. I. Kabanov, A. R. Kasimov, A minimal hyperbolic system for unstable shock waves, *Communications in Nonlinear Science and Numerical Simulation*, 70, 282–301, 2019; https://doi.org/10.1016/j.cnsns.2018.10.022
- D. I. Kabanov, A. R. Kasimov, Linear stability analysis of detonations via numerical computation and dynamic mode decomposition, *Physics of Fluids*, 30, 036103 (2018); (https://dx.doi.org/10.1063/1.5020558) preprint: http://arxiv.org/abs/1712.03276
- A. Sow, R. Semenko, and A.R. Kasimov, On a stabilization mechanism for low-velocity detonations, *Journal of Fluid Mechanics*, 816, 539–553, 2017 (https://dx.doi.org/10.1017/jfm.2017.70)
- R. Semenko, L. Faria, A. Kasimov, B. Ermolaev, Set-valued solutions for non-ideal detonation, *Shock Waves*, 26(2), 141–160, 2016 (http://dx.doi.org/10.1007/s00193-015-0610-3) preprint: http://arxiv.org/abs/1312.2180)

- L. Faria, A. Kasimov, R. R. Rosales, Study of a model equation in detonation theory: multidimensional effects, *SIAM J. Appl. Math.*, 76(3), 887–909, 2016 (https://dx.doi.org/10.1137/15M1039663).

- A. R. Kasimov, R. E. Semenko, On modeling gaseous detonation in porous media by the one-dimensional reactive Euler equations, *Gorenie i Vzryv (Moskva) – Combustion and Explosion*, 9(4), 19–26, 2016.

- L. Faria, A. Kasimov, R. R. Rosales, Theory of weakly nonlinear self-sustained detonations, *Journal of Fluid Mechanics*, 784, 163–198, 2015 (https://dx.doi.org/10.1017/jfm.2015.577)

- L. Faria, A. Kasimov, Qualitative modeling of the dynamics of detonations with losses, *Proceedings of the Combustion Institute, 35(2), 2015–2023*, 2015 (http://dx.doi.org/10.1016/j.proci.2014.07.006) preprint: http://arxiv.org/abs/1407.8475

- J. Sierra, A. Kasimov, P. Markowich, R.-M. Weishäupl, On the Gross-Pitaevskii equation with pumping and decay: stationary states and their stability, *Journal of Nonlinear Science*, 25(3), 709–739, 2015 (https://dx.doi.org/10.1007/s00332-015-9239-8) preprint: http://arxiv.org/abs/1310.2388

- A. Kasimov, Detonation analogs revisited, *Proceedings of* 25^{th} *ICDERS, Leeds, UK, 2015.* (http://www.icders.org/ICDERS2015/abstracts/ICDERS2015-312.pdf)

- L. Faria, A. Kasimov, R. R. Rosales, A toy model for multi-dimensional cellular detonations, *Proceedings of* 25^{th} *ICDERS, Leeds, UK, 2015* (http://www.icders.org/ICDERS2015/abstracts/ICDERS2015-294.pdf)

- L. Faria, A. Kasimov, R. R. Rosales, Weakly nonlinear dissipative detonations, *Proceedings of* 25^{th} *ICDERS, Leeds, UK, 2015* (http://www.icders.org/ICDERS2015/abstracts/ICDERS2015-296.pdf)

- A. Kasimov and S. Korneev, Detonation in supersonic radial outflow, *Journal of Fluid Mechanics*, 760, 313-341, 2014 (https://dx.doi.org/10.1017/jfm.2014.598)(highlighted on the journal cover).

- L. Faria, A. Kasimov, R. R. Rosales, Study of a model equation in detonation theory, *SIAM Journal on Applied Mathematics*, 74(2), 547-570, 2014 (https://dx.doi.org/10.1137/130938232)

- L. M. Faria, A. R. Kasimov, R. R. Rosales, From Zeldovich–von Neumann–Doering model to theories of pulsating and cellular detonations, *Proceedings of the* 3^{rd} *International Conference on Combustion and Detonation "Zel'dovich Memorial"*, Moscow, Russia, 2014

- A. R. Kasimov, S. Korneev, Detonation in supersonic radial outflow, *Proceedings of the* 21^{st} *International Conference on Nonlinear Problems of Hydrodynamic Stability and Turbulence*, Moscow State University, Russia, 2014

- R. Parshad, M. Beauregard, A. Kasimov, B. Said-Houari, Global existence and finite-time blowup in a class of stochastic nonlinear wave equations, *Communications in Stochastic Analysis*, 8(3), 381-411, 2014

- R. Parshad, N. Kumari, A. Kasimov, H. Ait Abderrhamane, Turing patterns and long-time behavior in a three-species food-chain model, *Mathematical Biosciences*, 254, 83-102, 2014

- A. Kasimov, R. Racke, B. Said-Houari, Global existence and decay of solutions of the Cauchy problem in thermoelasticity with second sound, *Applicable Analysis*, 93(5), 2014

- B. Said-Houari, A. Kasimov, Damping by heat conduction in the Timoshenko system: Fourier and Cattaneo are the same, *Journal of Differential Equations*, 255(4), 611-632, 2013

- A. Kasimov, L. Faria, R. R. Rosales, Model for shock wave chaos, *Physical Review Letters*, 110, 104104, 2013 (https://dx.doi.org/10.1103/PhysRevLett.110.104104) (preprint: http://arxiv.org/abs/1202.2989)
- B. Seibold, M. Flynn, A. Kasimov, R. Rosales, Constructing set-valued fundamental diagrams from jamiton solutions in second order traffic models, *Networks and Heterogeneous Media*, 8(3), 745-772, 2013
- B. Said-Houari, A. Kasimov, Decay property of Timoshenko system in thermoelasticity, *Mathematical Methods in Applied Sciences*, 35, 314-333, 2012
- M. R. Flynn, A. R. Kasimov, J.-C. Nave, R.R. Rosales, B. Seibold, Self-sustained nonlinear waves in traffic flow, *Physical Review E* 79, 056113, 2009
- B. Taylor, A. R. Kasimov, D.S. Stewart, Mode selection in weakly unstable two-dimensional detonations, *Combustion Theory and Modelling*, 13:6, 973-992, 2009
- M. R. Flynn, A. R. Kasimov, J.-C. Nave, R. R. Rosales, B. Seibold, On jamitons, self-sustained nonlinear traffic waves, *arXiv:0809.2828v2*, 2008
- A. R. Kasimov, A stationary circular hydraulic jump, the limits of its existence and its gasdynamic analogue, *Journal of Fluid Mechanics*, 601, 189-198, 2008
- D. S. Stewart and A. R. Kasimov, State of detonation stability theory and its application to propulsion, *Journal of Propulsion and Power*, 22, No. 6, 1230-1244, 2006
- D. S. Stewart and A. R. Kasimov, Theory of detonation with an embedded sonic locus, *SIAM Journal on Applied Mathematics*, 66, No. 2, 384-407, 2005
- A. R. Kasimov and D. S. Stewart, Asymptotic theory of evolution and failure of self-sustained detonations, *Journal of Fluid Mechanics*, 525, 161-192, 2005
- A. R. Kasimov and D. S. Stewart, On the dynamics of self-sustained detonations: A numerical study in the shock-attached frame, *Physics of Fluids*, 16(10), 3566-3578, 2004
- A. R. Kasimov and D. S. Stewart, Theory of detonation initiation and comparison with experiment, *TAM Report №1035, Theoretical & Applied Mechanics*, UIUC, 2004
- A. R. Kasimov and D. S. Stewart, Spinning instability of gaseous detonations, *Journal of Fluid Mechanics*, 466, 179-203, 2002
- A.A. Borisov, O.I. Mel'nichuk, A.R. Kasimov, B.A. Khasainov, K.Ya. Troshin, and V. Kosenkov, On the energy evolution in gaseous detonation waves, *Journal de Physique IV*, C4, Vol. 5, 1995

Invited talks

- A. Kasimov, Weakly nonlinear spin waves in molecular magnets, 7-th International Conference on Problems of Mathematical Physics and Mathematical Modelling, MEPhI, Moscow, Russia, June 25-27, 2018
- A. Kasimov, Weakly nonlinear spin waves in molecular magnets, Solid-State Theory Seminar of the Lebedev Physical Institute, RAS, Moscow, June 5, 2018
- A. Kasimov, Science that begins in the department of Chemical Physics, Popular talk for students in MEPhI, Moscow, Russia, March 12, 2018

- A. Kasimov, Hydraulic jump and its instabilities, 23^{rd} International Conference on Nonlinear Problems of Hydrodynamic Stability, Moscow, Russia, Feb. 25 - Mar. 4, 2018
- A. Kasimov, On the dynamics of detonation-like waves of magnetization in molecular magnets, Annual Conference of the Combustion and Explosion Section of N.N. Semenov Institute of Chemical Physics, RAS, Moscow, Feb 7-9, 2018
- A. Kasimov, Asymptotic models for weakly nonlinear waves in reacting media, 6th International Conference on Problems of Mathematical Physics and Mathematical Modelling, MEPhI, Moscow, Russia, May 25-27, 2017
- A. Kasimov, Gaseous detonation in porous media: steady states and dynamics, 14-th International Conference on Flow Dynamics, Sendai, Japan, Nov. 2, 2017
- A. Kasimov, Unstable detonations: theory and applications, Combustion Workshop at the Far Eastern Federal University, Vladivostok, Oct. 26, 2017
- A. Kasimov, Chaos and pattern formation in weakly nonlinear detonations, Ginzburg Centennial Conference on Physics, Lebedev Physical Institute, Moscow, Russia, June 1, 2017
- A. Kasimov, Detonation analogs and their mathematical models, Fortov's seminar at the Joint Institute of High Temperatures, Moscow, Russia, Jan. 11, 2016.
- A. Kasimov, Theory of weakly nonlinear detonations, Mechanics Seminar, Steklov Mathematics Institute, Moscow, Russia, April 4, 2016
- A. Kasimov, Detonation analogs revisited, Invited Topical Review Lecture, 25^{rd} International Colloquium on the Dynamics of Explosions and Reactive Systems, Leeds, UK, July-Aug 2015
- A. Kasimov, Plenary Lecture at the 3^{rd} International Conference on Combustion and Detonation "Zel'dovich Memorial", Moscow, Russia, 2014
- A. Kasimov, Plenary Lecture at the 9^{th} International Colloquium on Pulsed and Continuous Detonations, St. Petersburg, Russia, May 2014
- A. Kasimov, Plenary Lecture at the Annual Scientific Session of Russian Nuclear Research University (MEPhI), Section on Chemical Physics, Russia, Jan. 2014
- A. Kasimov, Continuum Mechanics Seminar, Institute of Mechanics of Moscow State University, Russia, Feb. 2014
- A. Kasimov, Detonation in radial outflow, invited Minisymposium talk at the 14^{th} International Conference on Numerical Combustion, San Antonio, TX, USA, April 8-10, 2013
- A. Kasimov, Hydraulic jump, invited talk at the Banff workshop (BIRS): Water waves: computational approaches for complex problems, June 30-July 5, 2013
- A. Kasimov, Seminar at the Semenov Institute of Chemical Physics, Moscow, Russia, Oct. 2013
- A. Kasimov, HPC^3 Workshop, KAUST, 2012
- A. Kasimov, J. Sierra, R. Weishäupl, Numerical study of Bose-Einstein condensation of exciton-polaritons, Konstanz University, Germany, March 5, 2012
- A. Kasimov, L. Faria, R. Rosales, Shock wave chaos, Konstanz University, Germany, March 5, 2012
- A. Kasimov, L. Faria, R. Rosales, Shock wave chaos, Workshop on Semiclassical & Multiscale Aspects of Wave Propagation, Greece, May 28-June 1, 2012

- A. Kasimov, L. Faria, R. Rosales, Shock wave chaos, Moscow Engineering-Physics Institute, Moscow, Russia, Oct. 29, 2012
- A. Kasimov, Invited Mini-Symposium Lecture, International Conference on Numerical Combustion, Corfu, Greece, April 2011
- A. Kasimov, Invited Topical Review Lecture, 23^{rd} International Colloquium on the Dynamics of Explosions and Reactive Systems, Irvine, CA, July 2011
- A. Kasimov, Computing detonation instability, 3^{rd} Symposium on Explosion, Shock Wave, and High-Energy Phenomena, Seoul, S. Korea, Sep. 2010
- A. Kasimov, Computing detonation instability, 7^{th} International Conference on Continuous and Pulsed Detonation, St. Petersburg, Russia, Oct. 2010

Conference talks

- S. Aamir, A. Kasimov, Neural Network Solver for Reactive Burgers Model of Detonation. 28^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), June 19-24, Napoli, Italy, 2022
- A. Goldin, A. Kasimov, Effect of Losses on 2D Cellular Detonations. 28^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), June 19-24, Napoli, Italy, 2022
- A. Goldin, T. Medvedeva, A. Kasimov, Mode locking in gaseous detonation propagation in a channel with periodically varying friction. 28^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), June 19-24, Napoli, Italy, 2022
- A. Goldin, T. Medvedeva, A. Kasimov, Mode locking in gaseous detonation propagation in a channel with periodically varying friction. 39^{th} International Symposium on Combustion, Vancouver, Canada, 2022
- A. Kasimov, A. Gonchar, Reactive Burgers model for detonation propagation in a non-uniform medium. 38^{th} International Symposium on Combustion, Adelaide, Australia, 2020
- A. Kasimov, A. Gonchar, Analog modeling of detonation in a periodic medium. 27^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), July 28 – Aug. 3, Beijing, China, 2019
- A. Kasimov, D. Kabanov, Numerical Computation of Linear Stability of Detonations, 26^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), July 30 – Aug. 4, Boston, USA, 2017
- A. Sow, A. Kasimov, R. Semenko, Nonlinear Dynamics of Gaseous Detonations with Losses, 25^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), July 30 – Aug. 4, Boston, USA, 2017
- D. Kabanov, A. Kasimov, Numerical Computation of Linear Stability of Detonations, 70^{th} Annual Meeting of the APS Division of Fluid Dynamics, November 19?21, Denver, Colorado, 2017
- A. Kasimov, L. Faria, A model for bouncing drops: interactions with boundaries, APS Division of Fluid Dynamics Annual Meeting, Boston, MA, USA, Nov. 2015
- L. Faria, A. Kasimov, R. Rosales, A theory of weakly nonlinear self-sustained detonations, APS Division of Fluid Dynamics Annual Meeting, Boston, MA, USA, Nov. 2015

- L. Faria, A. Kasimov, R. Rosales, A toy model for multidimensional cellular detonations, 25^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Leeds, UK, 2015
- L. Faria, A. Kasimov, R. Rosales, Weakly nonlinear dissipative detonations, 25^{th} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Leeds, UK, 2015
- A. Kasimov, S. Korneev, 15th International Conference on Numerical Combustion, Avignon, France, 2015
- L. Faria, A. Kasimov, R. Rosales, 15th International Conference on Numerical Combustion, Avignon, France, 2015
- A. Kasimov, On gaseous detonation in porous inert media, 9^{th} International Colloquium on Pulsed and Continuous Detonations, St. Petersburg, Russia, May 2014
- A. Kasimov, Qualitative modeling of detonation with losses, 9^{th} International Colloquium on Pulsed and Continuous Detonations, St. Petersburg, Russia, May 2014
- A. Kasimov, Detonation in radial outflow, 21^{st} International Conference on Nonlinear Problems of Hydrodynamic Stability, Moscow, Russia, Feb. 2014
- A. Kasimov, Lecture at the Annual Scientific Session of Russian Nuclear Research University (MEPhI), Section on Applied Mathematics, Russia, Jan. 2014
- L. Faria, A. Kasimov, R. Rosales, A nonlocal hyperbolic PDE for chaotic shocks, SIAM Conference on Analysis of PDE, Orlando, Florida, USA, Dec. 2013
- A. Kasimov and H. Ait Abderrahmane, Spinning hydraulic jump. APS Division of Fluid Dynamics Annual Meeting, Pittsburgh, USA, Nov. 2013
- A. Kasimov, L. Faria, A qualitative model for detonation with losses, APS Division of Fluid Dynamics Annual Meeting, Pittsburgh, USA, Nov. 2013
- A. Kasimov, J. Sierra, R. Weishäupl, APS March Meeting, March 2012
- A. Kasimov, L. Faria, R. Rosales, Shock-wave chaos, 14^{th} International Conference on Hyperbolic Problems: Theory, Numerics, and Applications, HYP2012, Padova, Italy, July 2012
- H. Ait Abderrahmane and A. Kasimov, On the stability of circular hydraulic jump. APS Division of Fluid Dynamics Annual Meeting, San-Diego, CA, Nov. 18, Nov. 2012
- A. Kasimov and S. Korneev, On gaseous detonation in a radially expanding flow, APS Division of Fluid Dynamics Annual Meeting, San-Diego, CA, Nov. 19, Nov. 2012
- R. Semenko and A. Kasimov, On the dynamics of gaseous detonation in porous inert media, APS Division of Fluid Dynamics Annual Meeting, San-Diego, CA, Nov. 20, 2012
- A. Kasimov, R. Rosales, M. Flynn, B. Seibold, Existence of jamitons in second-order hyperbolic systems of traffic flow, KAUST Workshop on PDE and Traffic Modeling, June 3, 2012
- A. Kasimov, V. Shargatov, On the detonation structure in ozone, 23^{rd} International Colloquium on the Dynamics of Explosions and Reactive Systems (ICDERS), Irvine, CA, 2011
- A. Kasimov, Saudi Arabian Section of the Combustion Institute, KAUST, Jan 2011
- A. Kasimov, Technical University of Denmark, Summer School on Complex Fluids, August 2011

- A. Kasimov, Instability of Shallow-Water Shock Waves with Application to a Circular Hydraulic Jump, 7^{th} International Congress on Industrial and Applied Mathematics, Vancouver, 2011
- A. Kasimov, B. Taylor, D. Stewart, Shock-fitting simulations of detonation instability in gaseous mixtures, 13th International Conference on Numerical Combustion, Corfu, Greece, 2011
- A. Kasimov, Wave phenomena IV, Edmonton, Canada, June 2010
- A. Kasimov, J. Bush, R. Rosales, 63^{rd} APS Division of Fluid Dynamics Meeting, Long Beach, CA, USA, Nov 2010
- A. Kasimov, B. Taylor, D. Stewart, Accurate Direct Numerical Computation of Detonation Instability, 22^{nd} ICDERS. Minsk, Belarus, 2009
- A. Kasimov, Detonation Analogues, 22^{nd} ICDERS. Minsk, Belarus, 2009