CURRICULUM VITAE

Gregory A. Chechkin

AuthorID:
>
> **Scopus:** 6603041562
> **ORCID:** 0000-0002-7654-5803
> **ResearcherID (WEB of Science):** N-1709-2017
> **Science Index (РИНЦ)   SPIN-код:** 9665-9838**, AuthorID:** 5557
> **IstinaResearcherID (IRID) (ИСТИНА):** 506675

Personal:
>
> Date of birth: June 7, 1966
> Marital status: Married. Three children. Four grandchildren.
> Resident of Russia

Education:
>
> **Doctor of Mathematics (Habilitation)**, Moscow State University, 2007, Moscow, Russia.
> > *Research Interests*: Homogenization of boundary — value problems for elliptic
> > Equations in domains with concentrated masses;
> > asymptotic methods; spectral analysis, functional analysis.
>
> **Ph.D.**, Mathematics, Moscow State University, 1992, Moscow, Russia. Thesis Advisor -
> > Academician (real member of RAS) Professor Olga A. Oleinik.
> > *Research Interests*: Homogenization of boundary — value problems for elliptic
> > Equations with rapidly alternating boundary conditions;
> > asymptotic methods; spectral analysis.
>
> **MS**, Mathematics, Moscow State University, 1990.
> **B.Sc.**, Mathematics, Moscow State University, 1988.

Professional career (Appointments / Affiliations):
>
> **Full professor**, 2010 - present, Moscow State University, Faculty of Mechanics and
> > Mathematics, Department of Differential Equations.
>
> **Associate professor**, 1999 - 2010, Moscow State University, Faculty of Mechanics and
> > Mathematics, Department of Differential Equations.
>
> **Assistant professor**, 1991 - 1998, Moscow State University, Faculty of Mechanics and
> > Mathematics, Department of Differential Equations.
>
> **Teaching assistant**, 1988 - 1991, Moscow State University, Faculty of Mechanics and
> > Mathematics, Department of Differential Equations.
>
> **Graduate work**, 1988 - 1991, Moscow State University, Department of Differential
> > Equations, Scientific Advisor - Professor Olga A. Oleinik.

Academic Honors / Awards:
>
> Award for Winners of the Competition of Works Contributing to Solving the Problems of the
> > Lomonosov Moscow State University Development Program (Nomination "Outstanding
> > Publication") (2019, 2020, 2021)

Award for Winners of the Competition of Works Contributing to Solving the Problems of the Lomonosov Moscow State University Development Program (Nomination "Unique Lecture Courses") (2018)

Award for Winners of the Competition among Talented Students, Graduate Students and Young Scientists of the Lomonosov Moscow State University (2008)

Included person to "Who's Who in Science and Engineering" (2006-2007 (9th Edition))

Prize Winner of "Moscow Grants - 2005" of International Soros Science Education Program (ISSEP)

Prize Winner of "Moscow Grants - 2003" of International Soros Science Education Program (ISSEP)

International Scientist of the Year, 2003 (International Biographical Centre, Cambridge, England)

Included Person to "Who's Who in the World" (20-th edition), 2002 (New Providence, NJ, USA); (21-st edition), 2003 (New Providence, NJ, USA)

George Soros scholarship in mathematics, 1993

Prize Winner of the PRO MATHEMATICA grants for Young Scientists, Paris, France (1992-1994, 1996-1998).

Moscow State University International Research Scholar - MUSSIA (Indiana University, Bloomington, 1990.)

Award for the Best Research among Young Scientists (First place in Young Scientists Competition), 1988, Lomonosov Moscow State University.

Award for the Course Paper, 1987, Lomonosov Moscow State University.

Students:

Graduate students (PhD students):

Azhmoldaev Gaziz Fajzullaevich (Astana, 2022-present)

Төлеміс Абылайхан Әзізханұлы (Nur-Sultan, 2020-present)

Төлеубай Алтын Мұқанқызы (Nur-Sultan, 2020-present)

Kisatov Marat Aleksandrovich (2018-2022)
PhD (Candidate of sciences) Thesis "On the Marangoni Boundary Layers of Rheologically Complex Fluids."
(Defended **September 9, 2022**. Vladimir State University named after A. and N. Stoletovs)

Bulatova (Tazitdinova) Regina Rashidovna (2015-2019)
PhD (Candidate of sciences) Thesis "Mathematical Problems of Continuous Medium in Modification of Ladyzhenskaya."
(Defended **September 25, 2020**. Vladimir State University named after A. and N. Stoletovs)

Fadeeva Galina Mikhailovna (2011-2013)

Spiridonov Sergei Viktorovich (2006-2009)
PhD (Candidate of sciences) Thesis "On Stratified Boundary Layer."
(Defended **October 5, 2018**. Vladimir State University named after A. and N. Stoletovs)

Romanov Maxim Sergeevich (2006-2009)
PhD (Candidate of sciences) Thesis "On Asymptotics and Estimates of the Rate of Convergence of Solutions to the System of Prandtl's Equations with Small Parameter for Newtonian and Nonnewtonian Fluids."

(Defended **December 11, 2009**. Lomonosov Moscow State University)
Koroleva (Annenkova) Yulia Olegovna (2006-2009)
    PhD Thesis "Integral Inequalities of Hardy and Friedrichs Types with Applications to Homogenization Theory."
        (Defended **June 16, 2010**. Luleå University of Technology)
    PhD (Candidate of sciences) Thesis "On Asymptotics and Precise Integral Estimates of Solutions to Boundary Value Problems in Domains Perforated Along the Boundary."
        (Defended **April 9, 2010**. Lomonosov Moscow State University)
    Licentiate Thesis "Some New Friedrichs-Type Inequalities in Domains with Microinhomogeneous Structure."
        (Defended **June 12, 2009**. Luleå University of Technology)
Akimova (Pichugina) Elena Anatolievna (2000-2003)
    PhD (Candidate of sciences) Thesis "Weighted Korn's Inequalities and Asymptotic Behavior of Plates."
        (Defended **November 5, 2004**. Lomonosov Moscow State University)
Yablokova (Doronina) Ekaterina Ivanovna (2000-2003)
    PhD (Candidate of sciences) Thesis "Asymptotic Behavior of Spectra to Boundary Value Problems in Domains with Nonperiodic Concentrated Masses."
        (Defended **June 4, 2004**. Lomonosov Moscow State University)

Master students:

Mustafin Anuar Erlanovich (Nur-Sultan, 2021-present)
Apayev Murad Rauf oğlı (Baku, 2020-present)
Qayıbov (Gaibov) Nicat Söhbət oğlı (Baku, 2017-2019)
    Master Thesis "On Spectral Problem of Steklov Sieve Type"
        (Defended **June 8, 2019**. Baku branch of M.V.Lomonosov Moscow State University)
Shakiev Temirlan Nurlanovich (Astana, 2017-2018)
Ağayev (Agaev) Teymur Rabəli (Baku, 2016-2018)
    Master Thesis "Homogenization of the Ginzburg - Landau Equation"
        (Defended **June 9, 2018**. Baku branch of M.V.Lomonosov Moscow State University)
Huseynova Narmina Elman qızı (Baku, 2017-2018)
    Master Thesis "Attractors of a Boundary Layer"
        (Defended **June 9, 2018**. Baku branch of M.V.Lomonosov Moscow State University)
Məmədov (Mamedov) Cavid Şakir oğlı (Baku, 2015-2017)
    Master Thesis "On the Riemann Problem with Several Discontinuity Curves"
        (Defended **June 5, 2017**. Baku branch of M.V.Lomonosov Moscow State University)
Abdullazade Nacafgulu Natig oğlı (Baku, 2014-2017)
    Master Thesis "Asymptotics of Eigenvalues to a Singularly Perturbed Problem"
        (Defended **June 5, 2017**. Baku branch of M.V.Lomonosov Moscow State University)
Sultanov Emil Vugar oğlı (Baku, 2014-2017)
    Master Thesis "On One Weighted Inequality"
        (Defended **June 5, 2017**. Baku branch of M.V.Lomonosov Moscow State University)

Undergraduate students:

Allahverdiyeva Sevinc (Sevindzh) (bachelor, Baku, 2022-present)
Məmmədzade Murad (bachelor, Baku, 2022-present)
Alixanov Çingiz Seyran oğlu (bachelor, Baku, 2021-present)
Gamidova Naira Niyazovna (bachelor, Baku, 2021-present)
Qambarov (Gambarov) Vusal Ilxam oğlu (bachelor, Baku, 2021-present)
Qurbanova (Gurbanova) Arzu Adil qızı (bachelor, Baku, 2021-present)
Qasumova (Gasymova) Kamilla Ruslan qızı (bachelor, Baku, 2021-present)
Abdullayeva Fatimə Ağamirzə qızı (bachelor, Baku, 2020-2022)
Mardanova Samaya Əlihuseyn qızı (bachelor, Baku, 2020-2022)
Bolatov Almaz Samatovich (bachelor, Nur-Sultan, 2019-2021)
Kamzinov Askar Bauyrzhanovich (bachelor, Nur-Sultan, 2019-2021)
Mustafin Anuar Erlanovich (bachelor, Nur-Sultan, 2019-2021)
Abbasova Nəzrin Rovşən qızı (bachelor, Baku, 2019-2021)
Cəfərova Leyla Azər qızı (bachelor, Baku, 2020-2021)
Kalyayev Timur Canbulatoviç (bachelor, Baku, 2019-2021)
Mehdiyeva Adilə Fərhad qızı (bachelor, Baku, 2020-2021)
Sultanov Riad Vahid oğlu (bachelor, Baku, 2020-2021)
Qasımova Nurana Mahir qızı (bachelor, Baku, 2019-2020)
Bekmaganbetov Bekarys Kuanyshevich (bachelor, Nur-Sultan, 2018-2020)
Eynullayeva Şəkər Eynulla qızı (bachelor, Baku, 2018-2020)
Orucova Ülviyə Rufat qızı (bachelor, Baku, 2018-2020)
Gummetov Məməd Rəhim oğlu (bachelor, Baku, 2018-2019)
Minai Mehraban Alihüseyn Mecid oğlu (bachelor, Baku, 2017-2019)
Əliyeva (Alieva) Tunari Arif qızı (bachelor, Baku, 2017-2019)
Qədirli (Gadirli) Nigar Əbdülrəhim qızı (bachelor, Baku, 2017-2019)
Hümbətəlizade (Gumbatalizade) Iradə Hamlet qızı (bachelor, Baku, 2017-2019)
Misrixanova Aysel Telman qızı (bachelor, Baku, 2017-2019)
Barazi Burhan Öndər Mətin oğlu (bachelor, Baku, 2017-2018)
Kubaev Birzhan Bagdatuly (bachelor, Astana, 2016-2018)
Nabiyev Orxan Tahin oğlu (bachelor, Baku, 2016-2020)
Kupenova El'vira Maksatovna (bachelor, Astana, 2015-2017)
Sal'menov Nursultan Kairatovich (bachelor, Astana, 2015-2017)
Shakiev Temirlan Nurlanovich (bachelor, Astana, 2015-2017)
Əliyeva (Alieva) Elmira Bəxtiyar qızı (bachelor, Baku, 2015-2017)
Məmədov (Mamedov) Elnur Səbahəddin oğlu (bachelor, Baku, 2015-2017)
Haciyeva (Gadzhieva) Nərmin Samir qızı (bachelor, Baku, 2015-2017)
Arkhipova Vladislava Denisovna (bachelor, Baku, 2015-2016)
Maksimova Diana Aleksandrovna (bachelor, Baku, 2015-2016)
Yorov Sobir Toirovich (bachelor, Dushanbe, 2014-2016)
Ağayev (Agaev) Teymur Rabəli (bachelor, Baku, 2014-2016)
Cəfərova Lalə Azər qızı (bachelor, Baku, 2014-2016)
Heydərov (Geidarov) Çingiz Yusif oğlu (bachelor, Baku, 2014-2016)
Harris Olga-Kasandra (bachelor, Baku, 2014-2016)
Sadigova Ləman Mehman qızı (bachelor, Baku, 2014-2016)
Asadova Şabnam Tarlan qızı (bachelor, Baku, 2013-2015)
Bagirov Kamran Raxman oğly (bachelor, Baku, 2013-2015)
Kerimov Ramiz Coşgun (bachelor, Baku, 2013-2015)
Kjazimzade Mamedhusein Faik oğlı (bachelor, Baku, 2012-2015)

Məmədov (Mamedov) Cavid Şakir oğlı (bachelor, Baku, 2013-2015)
Mirzoeva Narmina Faikqızı (bachelor, Baku, 2013-2015)
Abdullazade Nacafgulu Natig oğlı (bachelor, Baku, 2012-2014)
Mustafazade Aruz Ilgar oğlı (bachelor, Baku, 2012-2014)
Sultanov Emil Vugar oğlı (bachelor, Baku, 2012-2014)
Orlov Arsenij Dmitrievich (2012-2015)
Tazitdinova Regina Rashidovna (Astana, 2012-2015)
Azhmoldaev Gaziz Fajzullaevich (Astana, 2011-2014)
Almukhametov Rustem Serikovich (Astana, 2011-2014)
Mironova Anastasia Olegovna (2011-2014)
Zakirov Danil Evgenievich (Astana, 2011-2014)
Zhandiyar Aman Ganiuly (Astana, 2010-2013)
Kulisbaev Aset Kairatuly (Astana, 2010-2013)
Rumyancev Roman Olegovich (2010-2013)
Shevchenko Alina Viktorovna (Astana, 2010-2013)
Sydygalieva Gul'naz Serikovna (Astana, 2010-2013)
Tauken Alikhan Arystanbekuly (Astana, 2010-2013)
Fadeeva Galina Mikhailovna (2006-2011)
Mikhailova Valentina Petrovna (2004-2007)
Annenkova Yulia Olegovna (2003-2006)
Romanov Maxim Sergeevich (2003-2006)
Spiridonov Sergei Viktorovich (2003-2006)
Buryakov Denis Viktorovich (2001-2004)
Musina Dina Shakarimovna (2001-2004)
Makshin Aleksei Sergeevich (1999-2002)
Ostrovskaya Eugenia L'vovna (1999-2002)
Danilyuk Sergei Nikolaevich (1998-2001)
Akimov Andrey Sergeevich (1997-2000)
Doronina Ekaterina Ivanovna (1997-2000)
Pichugina Elena Anatolievna (1997-2000)
Kazanovich Artem (1996-1999)

Research Funding / Grants:

Interdisciplinary Scientific and Educational School "Mathematical methods for the analysis of complex systems" (Viktor A. Sadovnichi):
    2020-present
Grants of the Committee of Science of the Ministry of Education and Science of the Republic of Kazakhstan:
    AP14869553 (2022-2024) (Bekmaganbetov Kuanysh A.)
    AP08855579 (2020-2022) (Bekmaganbetov Kuanysh A.)
RSF projects:
    20-11-20272 (Chechkin Gregory A.)
RiP grant of MFO:
    January 11 - 24, 2015 (jointly with A.L.Piatnitski, R.R.Gadyl'shin)
    November 10 - 30, 2013 (jointly with T.A.Mel'nyk)
    April 29 - May 12, 2012 (jointly with T.A.Mel'nyk)
    November 8 - 21, 2009 (jointly with T.A.Mel'nyk)
RFBR projects:
    18-01-00046 (Borisov Denis I.)

16-31-50027 (Chechkin Gregory A.)
15-31-50102 (Chechkin Gregory A.)
15-01-07920 (Gadyl'shin Rustem R. / Chechkin Gregory A.)
12-01-00445 (Gadyl'shin Rustem R.)
09-01-00353 (Chechkin Gregory A.)
09-01-00530 (Gadyl'shin Rustem R.)
06-01-00138 (Gadyl'shin Rustem R.)
06-01-00441 (Shamaev Aleksei S.)
02-01-00693 (Gadyl'shin Rustem R.)
02-01-00868 (Shamaev Aleksei S.)
99-01-00056 (Radkevich Evgeny V.)
99-01-01143 (Gadyl'shin Rustem R.)
98-01-00062 (Veretennikov Aleksandr Yu.)
96-01-00033 (Oleinik Olga A.)
96-01-00461 (Chechkin Gregory A.)
95-01-00165 (Oleinik Olga A.)
93-01-01744 (Oleinik Olga A.)

Government grant of the Russian Federation under the Resolution No. 220 "On measures designed to attract leading scientists to Russian institutions of higher learning" under the agreement No. 11.G34.31.0054, signed between the Ministry of education and science of the Russian Federation, a leading scientist, and Federal State Budget Educational Institution of Higher Professional Education Lomonosov Moscow State University (Leading scientist – Tudor S. Ratiu)

2011 - 2013

Leading Scientific Schools:
НШ-1698.2008.1   (Kondratiev Vladimir A.)
НШ-2538.2006.1   (Kondratiev Vladimir A.)
НШ-1464.2003.1   (Kondratiev Vladimir A.)

ISSEP grants:
D28-2005   (Chechkin Gregory A.)
D96-2003   (Chechkin Gregory A.)

INTAS grants:
INTAS-96-1061   (Oleinik Olga A.)

ISF grants:
MIE000   (Oleinik Olga A.)

Universities of Russia:
ур.04.01.484   (Gadyl'shin Rustem R.)

Joint Projects of the A.M.Lyapunov French – Russian Institute:
00-01 (Kondratiev Vladimir A., Nazarov Sergei A., Sokolowski Jan)

Publications:

Submitted:

1. "Attractors of Ginzburg-Landau Equations with Oscillating Terms in Porous Media. Homogenization Procedure." (Jointly with K. A. Bekmaganbetov, A.A. Tolemis) *Applicable Analysis* **00** (00, 2022): 00—00. (`doi:`)
2. "Strong Convergence of Attractors to Reaction—Diffusion System with Rapidly Oscillating Terms in Orthotropic Porous Medium." (Jointly with K. A. Bekmaganbetov, V. V. Chepyzhov) *Izvestia:Mathematics* **00** (0, 2022): 000—000 (Translated from

2022:

1. "On Meyers Estimates" In: Book of Abstracts of the International O. A. Ladyzhenskaya Centennial Conference on PDE's (July 16 – 22, 2022, SPb, Russia), 24, Saint-Petersburg: BBM Press, 2022.

2. "Bojarskij-meyers estimates of solutions to zaremba problem on a fractal for laplacian" (Jointly with Yu. A. Alkhutov).) In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (June 30 – July 5, 2022, Suzdal, Russia), 20-21, Vladimir: Arkaim, 2022. ISBN 978-5-93767-460-9.

3. "On Meyers Estimates for Zaremba Problem" In: Book of Abstracts of the 9th International Conference on Differential and Functional Differential Equations (June 28 - July 5, 2022, Moscow, Russia), 28-29. Moscow: Peoples' Friendship University of Russia Press, 2022. ISBN 978-5-209-11108-5.

4. "On the Boyarsky—Meyers Estimate of a Solution to the Zaremba Problem." (Jointly with Yu.A. Alkhutov, V.G. Maz'ya) *Arch Rational Mech Anal* **245** (2, 2022): 1197—1211. (doi: 10.1007/s00205-022-01805-0)

5. " First Order Partial Differential Equations " (Jointly with A.Yu. Goritsky). Classical Textbook of Lomonosov Moscow State University Series. Moscow: LENAND (URSS group), 2022, 168 pp. ISBN 978-5-9710-9878-2.

6. "Homogenization of Attractors to Navier-Stockes System in Perforated Domain with Rapidly Oscillating Boundary Condition " (Jointly with K.A. Bekmaganbetov, A.M. Toleubay). Materials of International Scientific Conference "Modern Problems of Mathematics and its Applications" (June 3-4, 2022, Dushanbe, Tadzhikistan), 41-45. Dushanbe: Branch of M.V. Lomonosov Moscow State University in Dushanbe Press, 2022.

7. "On the Meyers Estimates for Solutions to Zaremba Problem" (Jointly with Yu. A. Alkhutov). In: Book of Abstracts of the International Conference "Differential Equations and Related Topics" dedicated to prominent mathematician Ivan G. Petrovskii (XXIV Joint Session of Petrovskii Seminar and Moscow Mathematical Society) (December 26-30, 2021, Moscow, Russia), 158-159, Moscow: LENAND (URSS group), 2022. ISBN 978-5-9710-9783-9.

8. "Homogenization of Trajectory Attractors For Reaction-Diffusion Systems in Perforated Domains" (Jointly with K.A. Bekmaganbetov, V.V. Chepyzhov). In: Book of Abstracts of the International Conference "Differential Equations and Related Topics" dedicated to prominent mathematician Ivan G. Petrovskii (XXIV Joint Session of Petrovskii Seminar and Moscow Mathematical Society) (December 26-30, 2021, Moscow, Russia), 28-29, Moscow: LENAND (URSS group), 2022. ISBN 978-5-9710-9783-9.

9. "On Thermal Boundary Layer in a Viscous Nonnewtonian Medium." (Jointly with M.A. Kisatov, V.N. Samokhin) *Russian Academy of Sciences. Doklady Mathematics* **105** (1, 2022): 23—27 (Translated from *Doklady Akademii Nauk* **502** (1, 2022): 28—33. (doi: 10.1134/S1064562422010070)

10. "Attractors of the Navier–Stokes Equations in a Two-Dimensional Porous Medium" (Jointly with K.A. Bekmaganbetov, A.M. Toleubai) *Journal of Mathematical Sciences* **262** (3, 2022): 246 —261 (Translated from *Problemy mat. Analiza* **115** (2022): 15—28). (doi: 10.1007/s10958-022-05814-y)

11. "On Solutions to Equations of Magnetohydrodynamic Boundary Layer with Injection of a Medium Obeying the Ladyzhenskaya Rheological Law" (Jointly with M.A. Kisatov, V.N. Samokhin) *Journal of Mathematical Sciences* **260** (6, 2022): 774 —797 (Translated from *Problemy mat. Analiza* **113** (2022): 61—80).

(doi: `10.1007/s10958-022-05727-w`)

2021:

1. "The Meyers Estimates for Domains Perforated Along the Boundary" *Mathematics* **9** (23, 2021), Art. # 3015. (doi: `10.3390/math9233015`)

2. "Homogenization of Attractors of Reaction–Diffusion System with Rapidly Oscillating Terms in an Orthotropic Porous Medium" (Jointly with K. A. Bekmaganbetov, V. V. Chepyzhov) *Journal of Mathematical Sciences* **259** (2, 2021): 148 —166 (Translated from *Problemy mat. Analiza* **112** (2021): 35—50. (doi: `10.1007/s10958-021-05607-9`)

3. "On the Meyers Estimates for the Problem in Domain Perforated Along the Boundary." (Jointly with T.P. Chechkina) In: Book of Program and Abstracts of the Conference of World-Class International Mathematical Centers (August 9 – 13, 2021, Sochi, Sirius, Russia), 52 - 53, Sochi: FT "Sirius", 2021.

4. "On Attractors of Reaction–Diffusion Equations in a Porous Orthotropic Medium. " (Jointly with K. A. Bekmaganbetov, V. V. Chepyzhov) *Russian Academy of Sciences. Doklady Mathematics* **103** (3, 2021): 103—107 (Translated from *Doklady Akademii Nauk* **498** (3, 2021): 10—15). (doi: `10.1134/S1064562421030030`)

5. "The Meyer's Estimate of Solutions to Zaremba Problem for Second-order Elliptic Equations in Divergent Form" (Jointly with Yu.A. Alkhutov) *C R Mécanique* **349** (2, 2021): 299—304. (doi: `10.5802/crmeca.97`).

6. "On elliptic operators with Steklov condition perturbed by Dirichlet condition on a small part of boundary" (Jointly with D.I. Borisov, G. Cardone, Yu.O. Koroleva) *Calculus of Variations and Partial Differential Equations* **60** (2021), Art. # 48. (doi: `10.1007/s00526-020-01847-w`)

7. "On the Meyers Estimates for Problems with Rapid Oscillation of Boundary Conditions" (Jointly with Yu.A. Alkhutov) In: Book of Conference materials of the International Scientific and Practical Conference ``Problems of Modern Fundamental and Applied Mathematics'', dedicated to the 30th anniversary of the independence of the Republic of Kazakhstan and the 20th anniversary of the Kazakhstan branch of M.V. Lomonosov Moscow State University (June 4, 2021, Nur-Sultan, Kazakhstan), 123--127. Nur-Sultan: Kazakhstan branch of M.V. Lomonosov Moscow State University Press, 2021, 293 pp. ISBN 978-601-7804-98-5

8. "Increased Integrability of the Gradient of the Solution to the Zaremba Problem for the Poisson Equation. " (Jointly with Yu.A. Alkhutov) *Russian Academy of Sciences. Doklady Mathematics* **103** (2, 2021): 69—71 (Translated from *Doklady Akademii Nauk* **497** (2, 2021): 3—6). (doi: `10.1134/S1064562421020022`)

9. "On the Eringen model for nematic liquid crystals" (Jointly with T.S. Ratiu, M.S. Romanov) *C R Mécanique* **349** (1, 2021): 21—27. (doi: `10.5802/crmeca.67`).

2020:

1. ""Strange Term" in Homogenization of Attractors of Reaction--Diffusion Equation in Perforated Domain" (Jointly with K.A. Bekmaganbetov, V.V. Chepyzhov) *Chaos, Solitons & Fractals* **140** (2020), Art. # 110208. (doi: `10.1016/j.chaos.2020.110208`)

2. "Attractors and a "strange term" in homogenized equation" (Jointly with K.A. Bekmaganbetov, V.V. Chepyzhov) *C R Mécanique* **348** (5, 2020): 351—359. (doi: `10.5802/crmeca.1`).

3. "On an Unsteady Boundary Layer of a Viscous Rheologically Complex Fluid" (Jointly with R.R. Bulatova, V.N. Samokhin) *Proceedings of the Steklov Institute of Mathematics* **310** (1, 2020): 32—69 (Translated from *Trudy Mat. Insist. V.A. Steklov* **310** (2020): 40—77).

(doi: `10.1134/S0081543820050041`)

4. "Nonstationary Boundary Layer of Fluid with O.A.Ladyzhenskaya Rheological Law" (Jointly with R.R. Bulatova, V.N. Samokhin) *Journal of Mathematical Sciences* **249** (6, 2020): 850 —863 (Translated from *Problemy mat. Analiza* **103** (2020): 31—42). (doi: `10.1007/s10958-020-04979-8`)

5. "Random Homogenization in a Domain with Light Concentrated Masses" (Jointly with T.P. Chechkina) *Mathematics* **8** (5, 2020), Art. # 788. (doi: `10.3390/math8050788`)

6. "Strong Convergence of Trajectory Attractors for Reaction—Diffusion Systems with Random Rapidly Oscillating Terms" (Jointly with K.A. Bekmaganbetov, V.V. Chepyzhov) *Communications in Pure and Applied Analysis* **19** (5, 2020): 2419—2443. (doi: `10.3934/cpaa.2020106`)

7. "On the Boundary Layer in the Case of Viscous Fluid Flowing Around Confuser with the Ladyzhenskaya Rheological Law." (Jointly with V.N. Samokhin, T.P. Chechkina) *Journal of Mathematical Sciences* **244** (3, 2020): 524—539 (Translated from *Problemy mat. Analiza* **100** (2019): 145—157). (doi: `10.1007/s10958-019-04632-z`)

8. "Vasilii Vasilievich Zhikov" (Jointly with Yu. A. Alkhutov, V. F. Butuzov, V. V. Kozlov, A. A. Kon'kov, A. V. Mikhalev, E. I. Moiseev, E. V. Radkevich, N. Kh. Rozov, V. A. Sadovnichii, I. N. Sergeev, M. D. Surnachev, V. M. Tikhomirov, V. N. Chubarikov, T. A. Shaposhnikova, and A. A. Shkalikov) *Journal of Mathematical Sciences* **244** (2, 2020): 113—115 (Translated from *Trudy Seminara imeni I. G Petrovskogo* **32** (2019): 5—7. (doi: `10.1007/s10958-019-04608-z`)

9. "Equations of Symmetric MHD-Boundary Layer of Viscous Liquid with the O.A.Ladyzhenskaya Rheological Law." (Jointly with R.R. Bulatova, V.N. Samokhin) *Journal of Mathematical Sciences* **244** (2, 2020): 158—169 (Translated from *Trudy Seminara imeni I. G. Petrovskogo* **32** (2019): 72—90. (doi: `10.1007/s10958-019-04611-4`)

2019:

1. "System of Equations for Boundary Layer of Rheologically Complex Media. The Crocco Variables. " (Jointly with R.R. Bulatova, V.N. Samokhin) *Russian Academy of Sciences. Doklady Mathematics* **100** (1, 2019): 1—7 (Translated from *Doklady Akademii Nauk* **487** (2, 2019): 119—125). (doi: `10.1134/S1064562419040045`)

2. "Equations of Symmetric Boundary Layer for the Ladyzhenskaya Model of a Viscous Medium in the Crocco Variables." (Jointly with R.R. Bulatova, V.N. Samokhin) *Journal of Mathematical Sciences* **242** (1, 2019): 85—118 (Translated from *Problemy mat. Analiza* **98** (2019): 73—100). (doi: `10.1007/s10958-019-04468-7`)

3. "About the O. A. Ladyzhenskaya modification of liquids." In: Book of Abstracts of the International Conference on Elliptic and Parabolic Problems (May 20 - 24, 2019, Gaeta, Italy), 42, Zürich: Institut für Mathematik Press, 2019.

4. "On the Steklov Sieve." *Modern Problems of Mathematics and Mechanics.* Proceedings of the International Conference Dedicated to the 80th Anniversary of Academician V.A.Sadovnichy (May 13 – 15, 2019, Moscow, Russia), 399—402, Moscow: MAKS Press, 2019, ISBN 978-5-317-06111-1

5. "Ladyzhenskaya Model of Viscous Incompressible Fluid and the System of Equations of MHD Boundary Layer" (Jointly with R.R. Bulatova, V.N. Samokhin) In: *Science, Engineering, Pedagogy. New technologies of high school.* Proceedings of the Conference *"Science – Society – Technology – 2019"* (February 26, 2019, Moscow, Russia), 5—8, Moscow: Moscow Polytech Press, 2019.

6. "Equation of a Symmetric Boundary Layer of a Modified Fluid of O.A. Ladyzhenskaya." (Jointly with R.R. Bulatova, V.N. Samokhin) In: *Science, Engineering, Pedagogy. New*

technologies of high school. Proceedings of the Conference *"Science – Society – Technology – 2019"* (February 26, 2019, Moscow, Russia), 8—13, Moscow: Moscow Polytech Press, 2019.

7. "System of Equations for Symmetric Boundary Layer of O.A. Ladyzhenskaya Modified Fluid in the Crocco Variables." (Jointly with R.R. Bulatova, V.N. Samokhin) In: Contamporary Methods of the Theory of Functions and Related Topics: Materials of the International Conference: Voronezh Winter Mathematical School (January 28 – February 2, 2019, Voronezh, Russia), 57 - 58, Voronezh: Publishing House VSU, 2019. ISBN 978-5-9273-2724–9

8. "Weak Convergence of Attractors of Reaction-Diffusion Systems with Randomly Oscillating Coefficients" (Jointly with K.A. Bekmaganbetov, V.V. Chepyzhov) *Applicable Analysis* **98** (1-2, 2019): 256—271. (doi: 10.1080/00036811.2017.1400538).

9. "*Lecture Notes on PDE. Textbook for University Students*" (Jointly with T.O. Kapustina and T.P.Chechkina). Moscow: KURS, 2019. ISBN 978-5-907064-58-4

2018:

1. "On the Asymptotic Behaviour of Eigenvalues of a Boundary-Value Problem in a Planar Domain of Steklov Sieve Type." (Jointly with R.R. Gadyl'shin, A.L. Piatnitski) *Izvestia: Mathematics* **82** (6, 2018): 1108—1135 (Translated from *Izvestija RAN. Ser. Mat.* **82** (6, 2018): 37—64). (doi: 10.1070/im8674)

2. "Vibrations of a Fluid Containing a Wide Spaced Net with Floats Under Its Free Surface" (Jointly with S.T.Erov) *Journal of Mathematical Sciences* **234** (4, 2018): 407—422 (Translated from *Trudy Seminara imeni I. G. Petrovskogo* **31** (2016): 38—62. (doi: 10.1007/s10958-018-4019-2).

3. "Equations of Boundary Layer for a Generalized Newtonian Medium Near a Critical Point" (Jointly with V.N.Samokhin) *Journal of Mathematical Sciences* **234** (4, 2018): 485—496 (Translated from *Trudy Seminara imeni I. G. Petrovskogo* **31** (2016): 158—176. (doi: 10.1007/s10958-018-4024-5).

4. "On the Influence of a Magnetic Field on the Separation of the Boundary Layer of a Non—Newtonian MHD Medium (Jointly with Bulatova R.R., Chechkina T.P. and Samokhin V.N.) *C R Mécanique* **346** (9, 2018): 807—814. (doi: 0.1016/j.crme.2018.06.010).

5. "Equations for Symmetric Boundary Layer of O.A. Ladyzhenskaya Modified Fluid in the Crocco Variables." (Jointly with R.R. Bulatova, V.N. Samokhin) In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (July 6 – 11, 2018, Suzdal, Russia), 274, Vladimir: Arkaim, 2018. ISBN 978-5-93767-285-8

6. "Random homogenization of Ginzburg-Landau system" (Jointly with V.V. Chepyzhov). Abstracts of International Scientific Conference "Modern Problems of Mathematics and its Applications" (June 21-22, 2018, Dushanbe, Tadzhikistan), 120. Dushanbe: Branch of M.V. Lomonosov Moscow State University in Dushanbe Press, 2018.

7. "On Convergence of Trajectory Attractors of 3D Navier-Stokes System with Random Rapidly Oscillating External Forces." (Jointly with A.Yu. Goritsky, V.V. Chepyzhov). Proceedings s of International Scientific Conference "Modern Methods and Problems of Mathematical Hydrodynamics." (May 3-8, 2018, Voronezh, Russia), 11-28. Voronezh: Voronezh State Pedagogical University Press, 2018. ISBN 978-5-00044-632-4

8. "*Lecture Notes on ODE. Textbook for University Students*" Third edition. (Jointly with T.O. Kapustina and T.P.Chechkina). Moscow: LENAND (URSS group), 2018. ISBN 978-5-9710-5492-4

9. "A computational study of the influence of surface roughness on material strength" (Jointly with A. McMillan, R. Jones, D. Peng) *Meccanica* **53** (9, 2018): 2411—2436.

(doi: `10.1007/s11012-018-0830-6`).

10. "Moderation of Surface Oscillations in Hydraulic Systems" (Jointly with A.P. Ibragimov, A.Yu. Linkevich, V.V. Rumyantsev, V.N. Samokhin, P.N. Silenko) *Proceedings of the Universities. Problems of Printing Arts and Publishing* **1** (2018): 75—81.

11. "Equations of Magnetohydrodynamic Boundary Layer for a Modified Incompressible Viscous Medium. Boundary Layer Separation" (Jointly with R.R. Bulatova, V.N. Samokhin) *Journal of Mathematical Sciences* **232** (3, 2018): 299—321 (Translated from *Problemy mat. Analiza* **92** (2018): 83—100).

12. "Homogenization of Trajectory Attractors of Ginzburg-Landau equations with Randomly Oscillating Terms" (Jointly with V.V. Chepyzhov, L.S. Pankratov) *Discrete and Continuous Dynamical Systems - Series B (DCDS-B)* **23** (3, 2018): 1133—1154. (doi: `10.3934/dcdsb.2018058`).

2017:

1. "*Introduction to Homogenization Theory.*" In Stochastic Geometric Mechanics (CIB, Lausanne, Switzerland, January-June 2015). Springer Proceedings in Mathematics & Statistics. Volume **202**, Editors: Albeverio Sergio, Cruzeiro Ana Bela, Holm Darryl (Eds.) Berlin-Heidelberg: Springer Verlag, 2017-p. 191–218. (doi: `10.1007/978-3-319-63453-1_9`).

2. "On MHD Boundary Layer for the O.A.Ladyzhenskaya Modification of the Navier-Stokes system" (Jointly with R.R. Bulatova, V.N. Samokhin). Abstracts of VI Congress of the Turkic World Mathematical Society (October 2-5, 2017, Astana, Kazakhstan), 55. Astana: L.N. Gumilyov Eurasian National University, 2017. ISBN 978-9965-31-907-5

3. "Homogenization of Random Attractors for Evolutionary Equations". Abstracts of VI Congress of the Turkic World Mathematical Society (October 2-5, 2017, Astana, Kazakhstan), 58. Astana: L.N. Gumilyov Eurasian National University, 2017. ISBN 978-9965-31-907-5

4. "Asymptotic Behavior of Spectrum of an Elliptic Problem in a Domain with Aperiodically Distributed Concentrated Masses" (Jointly with T.P. Chechkina) *C R Mécanique* **345** (10, 2017): 671—677. (doi: `10.1016/j.crme.2017.06.010`).

5. "On Homogenization of Random Attractors" (Jointly with V.V. Checpyzhov). Abstracts of the Eighth International Conference on Differential and Functional Differential Equations (August 13-20, 2017, Moscow, Russia), 44-45. Moscow: Peoples' Friendship University of Russia Press, 2017. ISBN 978-5-209-08130-2

6. "Homogenization of random trajectory attractors to evolutionary equations" In: Program of the International Conference "Multiscale Methods and Large-scale Scientific Computing" (July 31 - August 3, 2017, Yakutsk, Russia), 7-8, Yakutsk: Ammosov North-Eastern Federal University Press, 2017.

7. "Homogenization of random trajectory attractors for reaction–diffusion systems" (Jointly with V.V. Checpyzhov). In: Book of abstract of the International Conference-School "Dynamics, Bifurcations and Chaos 2017"' (DBS IV) and workshop "Infinite-dimensional dynamics, dissipative systems and attractors" (IDDSA2) (July 3-8, 2017, Nizhny Novgorod, Russia) 4-7, Nizhny Novgorod: Lobachevsky State University Press, 2017.

8. "On Steklov problem in Domain Perforated Along Part of the Boundary" (Jointly with C.D'Apice, U.De Maio, R.R.Gadyl'shin) *Modélisation Mathématique et Analyse Numérique (M ^{2}AN)* **51** (4, 2017): 1317—1342. (doi: `10.1051/m2an/2016063`).

9. "Random Homogenization of Attractors." In: Book of Abstracts of the International Conference on Elliptic and Parabolic Problems (May 22 - 26, 2017, Gaeta, Italy), 34, Zürich: Institut für Mathematik Press, 2017.

10. "Existence and Uniqueness Theorems for Full Three-Dimensional Ericksen-Leslie System"

(Jointly with Ratiu T.S., Romanov M.S., Samokhin V.N.) *Mathematical Models and Methods in Applied Sciences (M ^{3}AS)* **27** (5, 2017): 807—843. (doi: 10.1142/S0218202517500178)

11. "Homogenization of Trajectory Attractors of 3D Navier-Stokes system with Randomly Oscillating Force" (Jointly with K.A. Bekmaganbetov, V.V. Chepyzhov, A.Yu. Goritsky) *Discrete and Continuous Dynamical Systems - Series A (DCDS-A)* **37** (5, 2017): 2375—2393. (doi: 10.3934/dcds.2017103).

12. "To the Theory of Boundary Homogenization" *Bulletin of the Branch of M.V.Lomonosov Moscow State University in Dushanbe* **1** (1, 2017): 6—35.

2016:

1. "Homogenization of Random Attractors for Reaction-Diffusion Systems" (Jointly with K.A. Bekmaganbetov, V.V. Chepyzhov) *C R Mécanique* **344** (11-12, 2016): 753—758. (doi: 10.1016/j.crme.2016.10.015).

2. "Existence and Uniqueness Theorems for the Two-Dimensional Ericksen-Leslie System" (Jointly with Ratiu T.S., Romanov M.S., Samokhin V.N.) *Journal of Mathematical Fluid Mechanics* **18** (2016): 571—589. (doi: 10.1007/s00021-016-0250-0).

3. "Nematodynamics and Random Homogenization" (Jointly with T.P. Chechkina, T.S. Ratiu, M.S. Romanov) *Applicable Analysis* **95** (10, 2016): 2243—2253. (doi: 10.1080/00036811.2015.1036241).

4. "Nematic Liquid Crystals." In: Book of Abstracts of the 14-th International Conference on Integral Methods in Science and Engineering (July 25 – 29, 2016, Padova, Italy), 68, Padova: Università degli studi di Padova Press, 2016.

5. "Homogenization of O.A. Ladyzhenskaya Modified Fluid Penetrating Through a Porous Barrier" (In Russian) (Jointly with Linkevitch A.Yu., Samokhin V.N., Spiridonov S.V.) *Proceedings of the Universities. Problems of Printing Arts and Publishing* **2** (2016): 25—35.

6. "Homogenization of Nematic Liquid Crystals." (Jointly with T.P.Chechkina) In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (July 8 – 12, 2016, Suzdal, Russia), 247, Moscow: Steklov Mathematical Institute Press, 2016. ISBN 978-5-98419-068-8

7. "Existence and Uniqueness Theorems in Plane Nematodynamics" (Jointly with T.S. Ratiu, M.S. Romanov, V.N. Samokhin) In book of abstracts of the XXIV International Conference "*Mathematics. Economics. Education*" (May 27 – June 3, 2016, Rostov-on-Don, Russia), 94, Rostov-on-Don: Science and Education Fund Press, 2016, 219 p. ISBN 978-5-9908134-9-6

8. "Attractors of a System of Equations for Boundary Layer of Nonnewtonian Luquid" In book of abstracts of the Conference "*Alexandroff Readings*" (May 22 – 26, 2016, Moscow, Russia), 30, Moscow: Instant Printing Division of Geological Department, 2016.

9. "On Unique Solvability of the Full Three-Dimensional Ericksen-Leslie System" (Jointly with Ratiu T.S., Romanov M.S., Samokhin V.N.) *C R Mécanique* **344** (7, 2016): 459—463. (doi: 10.1016/j.crme.2016.02.010).

10. "Spectral Problem with Steklov Condition on a Thin Perforated Interface" (Jointly with R.R. Gadyl'shin, A.L. Piatnitski) *Russian Academy of Sciences. Doklady Mathematics* **93** (1, 2016): 52—57 (Translated from *Doklady Akademii Nauk* **466** (4, 2016): 389—394). (doi: 10.1134/S1064562416010191).

11. "Asymptotics of a spectral-sieve problem" (Jointly with Y. Amirat, O. Bodart, A.L.Piatnitski *Journal of Mathematical Analysis and Applications (JMAA)* **435** (2, 2016): 1652—1671. (doi: 10.1016/j.jmaa.2015.11.014).

12. "On Singularly Perturbed Steklov problem in Domain Perforated Along the Boundary" (Jointly with C.D'Apice, U.De Maio, R.R.Gadyl'shin) *C R Mécanique* **344** (1, 2016): 12-18. (doi: 10.1016/j.crme.2015.09.001).

2015:

1. "Scientific Heritage of Vladimir Mikhailovich Millionshchikov" (Jointly with I.V.Astashova, A.V.Borovskikh, V.V.Bykov, A.N.Vetokhin, A.Yu.Goritsky, N.A.Izobov, Yu.S.Il'ashenko, T.O.Kapustina, V.V.Kozlov, A.A.Kon'kov, I.V.Matrosov, V.V.Palin, N.Kh.Rozov, M.S.Romanov, I.N.Sergeev, E.V.Radkevich, O.S.Rozanova, I.V.Filimonova, A.V.Filinovskii, A.S.Shamaev, T.A.Shaposhnikova) *Journal of Mathematical Sciences* **210** (2, 2015): 115—134 (Translated from *Trudy Seminara imeni I. G. Petrovskogo* **30** (2014): 5—41. (doi: 10.1007/s10958-015-2551-x).

2. "On the Existence and Uniqueness Theorem in 2D Nematodynamics. Finite Speed of Propagation of Perturbations" (Jointly with M.S.Romanov, T.S.Ratiu, V.N.Samokhin) *Russian Academy of Sciences. Doklady Mathematics* **91** (3, 2015): 354—358 (Translated from *Doklady Akademii Nauk* **462** (5, 2015): 519—523. (doi: 10.1134/S106456241503028X).

3. "Approximation of Thin Three-Dimensional Plates with Smooth Lateral Boundary by Polyhedral" (Jointly with Nazarov S.A.) *Journal of Mathematical Sciences* **210** (4, 2015): 399—428 (Translated from *Problemy mat. Analiza* **81** (2015): 55—80). (doi: 10.1007/s10958-015-2573-4).

4. "Department of Differential Equations" (Jointly with V.V. Kozlov) In: Contemporary Problems in Mathematics and Mechanics. **IX**. Mathematics. No 3. To thy 80-th aniversary of Mechanical and Mathematical Faculty. Differential Equations. (Eds. I.V. Astashova, I.N. Sergeev), 4—24. Moscow: The Board of Trustees of Mechanics and Mathematics Faculty of Lomonosov Moscow State University Press, 2015. - 179 p. ISBN 978-5-7038-4205-8

5. "The state of Rest Perturbed by Steklov–Type Boundary Condition" (Jointly with N.N. Abdullazade) In: Contemporary Problems in Mathematics and Mechanics. **IX**. Mathematics. No 3. To thy 80-th aniversary of Mechanical and Mathematical Faculty. Differential Equations. (Eds. I.V. Astashova, I.N. Sergeev), 25—31. Moscow: The Board of Trustees of Mechanics and Mathematics Faculty of Lomonosov Moscow State University Press, 2015. - 179 p. ISBN 978-5-7038-4205-8

6. "Asymptotic Behavior of Solutions to Equations of Boundary Layer for Generalized Newtonian Medium" (Jointly with V.N.Samokhin and G.M.Fadeeva) In: Contemporary Problems in Mathematics and Mechanics. **IX**. Mathematics. No 3. To thy 80-th aniversary of Mechanical and Mathematical Faculty. Differential Equations. (Eds. I.V. Astashova, I.N. Sergeev), 150—162. Moscow: The Board of Trustees of Mechanics and Mathematics Faculty of Lomonosov Moscow State University Press, 2015. - 179 p. ISBN 978-5-7038-4205-8

7. "Cleaning of pipelines from parietal deposits with the help of the cavitation chamber" (In Russian) (Jointly with Ibragimov A.P., Linkevitch A.Yu., Samokhin V.N., Silenko P.N.) *Proceedings of the Universities. Problems of Printing Arts and Publishing* **3** (2015): 37—43.

8. "On Inhomogeneous Liquid Crystals" (Jointly with T.P. Chechkina) In: Book of Abstracts of the Fifth International Conference Multiscale Modeling and Methods: Upscaling in Engineering and Medicine (June 25-26, 2015, Moscow, Russia), 12. Moscow: Bauman Moscow State Technical University Press, 2015. ISBN 978-5-7038-4205-8

9. "Eigenvibrations of Thick Cascade Junctions with "Super Heavy" Concentrated Masses." (Jointly with T.A.Mel'nyk) *Izvestia: Mathematics* **79** (3, 2015): 467—511 (Translated from *Izvestija RAN. Ser. Mat.* **79** (3, 2015): 41—86 (doi: 10.4213/im8238))

10. "Plane Scalar Analog of Linear Degenerate Hydrodynamic Problem with Nonperiodic Microstructure of Free Surface" (Jointly with Chechkina T.P.) *Journal of Mathematical Sciences* **207** (2, 2015): 336—349 (Translated from *Problemy mat. Analiza*

78 (2015): 201—213). (doi: 10.1007/s10958-015-2375-8)

2014:
1. "On the Scientific Heritage of V.M. Millionshtchikov" (Jointly with Astashova I.V., Borovskikh A.V., Bykov V.V., Vetokhin A.N., Goritsky A. Yu., Izobov N.A., Il'yashenko Yu.S., Kapustina T.O., Kozlov V.V., Kon'kov A.A., Matrosov I.V., Palin V.V., Rozov N. Kh., Romanov M.S., Sergeev I.N., Radkevich E.V., Rozanova O.S.., Filimonova I.V., Filinovsky A.V., Shamaev A.S., Shaposhnikova T.A.) *Journal of Mathematical Sciences* **210** (2, 2015): 115—134 (Translated from *Trudy seminara imeni I.G.Petrovskogo* **30** (2014): 5—41). (doi:10.1007/s10958-015-2551-x)
2. "On Homogenization of Liquid Crystals" (Jointly with T.P. Chechkina) In: Book of Abstracts of the International Conference on Numerical and Mathematical Modeling of Flow and Transport in Porous Media (Dubrovnik, Croatia, September 29 - October 3, 2014), 3.
3. "Existance and Uniqueness Theorems for the Full Three-Dimensional Ericksen-Leslie System" (Jointly with T.S.Ratiu, M.S.Romanov, V.N.Samokhin). Abstracts of the Sixth International Conference on Differential and Functional Differential Equations (August 26-28, 2014, Moscow, Russia), 31. Moscow: Peoples' Friendship University of Russia Press, 2014. ISBN 978-5-209-05787-1
4. "Concentrated Masses and Thick-Skin Effect." (Jointly with T.P.Chechkina) In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (July 4 – 9, 2014, Suzdal, Russia), 181—182, Moscow: Steklov Mathematical Institute Press, 2014. ISBN 978-5-98419-055-8
5. "Self-similar Solutions to Hydrodynamics Equations of Generalized Newtonian Medium." (Jointly with V.N.Samokhin) *Mathematics. Economics.Education.* Abstracts of the XXII International Conference (May 27 – June 3, 2014, Rostov-on-Don, Russia), 62—63, Rostov-on-Don: SKNC VSh YuFU Press, 2014. ISBN 978-5-87872-757-0
6. "On the Rate of Convergence of Solutions in Domain with Random Multilevel Oscillating Boundary" (Jointly with C. D'Apice, U. De Maio, A.L. Piatnitski) *Asymptotic Analysis* **87** (1-2, 2014): 1—28. (doi: 10.3233/ASY-131194)
7. "High Frequency Cell-Vibrations and Spatial Skin-Effect in Thick Cascade Junction with Heavy Concentrated Masses" (Jointly with T.A.Mel'nyk) *C R Mécanique* **342** (4, 2014): 221—228. (doi: 10.1016/j.crme.2014.01.002)
8. "Spatial-Skin Effect for Eigenvibrations of a Thick Cascade Junction with "Heavy" Concentrated Masses" (Jointly with T.A. Mel'nyk) *Mathematical Methods in Applied Sciences* **37** (1, 2014): 56—74. (doi: 10.1002/mma.2785)

2013:
1. "On Perturbation of a Steklov problem on a Small Part of the Boundary" (Jointly with Abdullazade N.N.) *Journal of Mathematical Sciences* **196** (4, 2014): 441—451 (Translated from *Problemy mat. Analiza* **74** (2013): 3—16). (doi: 10.1007/s10958-014-1667-8)
2. "On a Spectral problem in Domain Perforated Along the Boundary. Perturbation of Multiple Eigenvalue" (Jointly with Gadyl'shin R.R., Kozhevnikov D.V.) *Journal of Mathematical Sciences* **196** (3, 2014): 276—292 (Translated from *Problemy mat. Analiza* **73** (2013): 31—45). (doi: 10.1007/s10958-014-1658-9)
3. "Enhanced Spatial Skin-Effect for Free Vibrations of a Thick Cascade Junction with ``Super Heavy" Concentrated Masses" (Jointly with T.A. Mel'nyk). Oberwolfach preprints OWP 2013 – 26, Oberwolfach – Walke, MFO, Germany, 2013.
4. "The Motion of Viscous Continuum with Solid Inclusions in a Tube of Variable Section" (In Russian) (Jointly with Ibragimov A.P., Linkevitch A.Yu., Samokhin V.N., Silenko P.N.) *Proceedings of the Universities. Problems of Printing Arts and Publishing* **4** (2013): 12—19.

5. "Homogenization of Stratified Dilatant Fluid" (Jointly with A.Yu.Linkevich, S.V.Spiridonov) *Journal of Mathematical Sciences* **202** (6, 2014): 849—858 (Translated from: *Sovremennaya Matematika. Fundamental'nye Napravleniya (Contemporary Mathematics. Fundamental Directions)* **48** (2013) *Proceedings of the Sixth International Conference on Differential and Functional Differential Equations (Moscow,Russia, 14–21 August, 2011).Part 4*: 75—83). (doi: 10.1007/s10958-014-2081-y)

6. "Mathematical Aspects of the Hydrodynamics of Non-Newtonuian Media" (Jointly with T.P.Chechkina) Abstracts of the International Conference "Differential Equations, Function Spaces, Approximation Theory" Dedicated to the 105th Anniversary of the birthday of Sergei L'vovich Sobolev (August 18-24, 2013, Novosibirsk, Russia), 69. Novosibirsk: Sobolev Institute of Mathematics SB RAS Press, 2013. ISBN 978-586134-139-4

7. "To the Computation of Fluid Flow in Pipes of Complex Shape" (In Russian) (Jointly with V.N.Samokhin, P.N. Silenko) *Vestnik MGUP* **3** (2013): 256—263.

8. "On New Types of Vibrations of Thick Cascade Junctions with Concentrated Masses" (Jointly with T.A. Mel'nyk) *Russian Academy of Sciences. Doklady Mathematics* **87** (1, 2013): 102—106 (Translated from *Doklady Akademii Nauk* **448** (6, 2013): 642—647). (doi: 10.1134/S1064562413010389)

9. "On a Thin Layer of Non-Newtonian Fluid on Rough Surface Percolating through Perforated Obstacle" (Jointly with A.Yu.Linkevitch, S.V.Spiridonov, T.S.Ratiu) *Journal of Mathematical Sciences* **189** (3, 2013): 525—535 (Translated from *Problemy mat. Analiza* **68** (2013): 173—182). (doi: 10.1007/s10958-013-1204-1)

2012:

1. "Nematic Liquid Crystals. Existence and Uniqueness of Periodic Solutions to Ericksen-Leslie Equations" (Jointly with T. Ratiu, M.S.Romanov, V.N.Samokhin) *Vestnik Ivan Fedorov MGUP* **12** (2012): 139—151.

2. "On Boundary Value Problem with Singular Inhomogeneity Concentrated on the Boundary" (Jointly with D.Cioranescu, A.Damlamian, A.L.Piatnitski) *Journal de Mathématiques Pures et Appliquées* **98** (2, 2012): 115—138. (doi:10.1016/j.matpur.2011.11.002)

3. "Homogenization of the equations of the dynamics of nematic liquid crystals with inhomogeneous density" (Jointly with T.S.Ratiu, M.S.Romanov) *Journal of Mathematical Sciences* **186** (2, 2012): 322—329 (Translated from *Problemy mat. Analiza* **66** (2012): 167—173).

4. "On Filtration of Nonnewtonian Fluid Passing Rough Surface, Through Perforated Obstacle." (Jointly with A.Yu. Linkevitch, S.V.Spiridonov) In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (June 29 – July 4, 2012, Suzdal, Russia), 106—107, Moscow: Steklov Mathematical Institute Press, 2012. ISBN 978-5-98419-046-6

5. "*Lecture Notes on ODE. Textbook for University Students*" Second edition. (Jointly with T.O. Kapustina and T.P.Chechkina). Baku: Branch of Lomonosov Moscow State University in Baku Press, 2012, 123 p.

6. "Spatial-Skin Effect for a Spectral Problem with "Slightly Heavy" Concentrated Masses in a Thick Cascade Junction" (Jointly with T.A. Mel'nyk). Oberwolfach preprints OWP 2012 – 10, Oberwolfach – Walke, MFO, Germany, 2012.

7. "Asymptotics of Eigenelements to Spectral Problem in Thick Cascade Junction with Concentrated Masses" (Jointly with T.A.Mel'nyk) *Applicable Analysis.* **91** (6, 2012): 1055—1095. (doi:10.1080/00036811.2011.602634)

8. "On Multiscale Homogenization Problems in Boundary Layer Theory" (Jointly with Y. Amirat, M.S.Romanov) *Zeitschrift für angewandte Mathematik und Physik.* **63** (3, 2012): 475—502. (doi:10.1007/s00033-011-0167-7)

2011:

1. "On the Asymptotics of a Solution of a Boundary Value problem in a Domain Perforated Along the Boundary" (Jointly with Gadyl'shin R.R., Koroleva Yu.O) *Bulletin of the Chelyabinsk State University. Mathematics. Mechanics. Computer Sciences* **14** (2011): 27—36.

2. "On Spectrum of the Laplacian in a Circle Perforated Along the Boundary. Application to a Friedrichs-Type Inequality" (Jointly with Koroleva Yu.O., Persson L.-E., Wall P.) *International Journal of Differential Equations.* **2011** (2011) Article ID 619623, 22 pages.
(doi:10.1155/2011/619623)

3. "On Boundary Layer of Newtonian Fluid Passing Rough Surface and Penetrating Through Perforated Wall" (Jointly with A.Yu.Linkevitch, S.V.Spiridonov). *Ufa Mathematical Journal* **3** (3, 2011): 90—101 (Translated from *Ufim. Matemat. Journal* **3** (3, 2011): 93—104).

4. "Equations of the Boundary Layer for a Modified Navier—Stokes System" (Jointly with V.N.Samokhin, G.M.Fadeeva). *Journal of Mathematical Sciences* **179** (4, 2011): 557—577 (Translated from *Trudy seminara imeni I.G.Petrovskogo* **28** (2011): 329—361).

5. "Vladimir Alexandrovich Kondratiev. July 2, 1935–March 11, 2010" (Jointly with M.S.Agranovich, I.V.Astashova, L.A.Bagirov, V.V.Vlasov, V.V.Zhikov, Yu.S.Ilyashenko, V.V.Kozlov, A.A.Kon'kov, S.I.Pohozaev, E.V.Radkevich, N.Kh.Rozov, I.N.Sergeev, A.L.Skubachevskij, A.S.Shamaev, T.A.Shaposhnikova). *Journal of Mathematical Sciences* **190** (1, 2013): 1—7 (Translated from *Sovremennaya Matematika. Fundamental'nye Napravleniya (Contemporary Mathematics. Fundamental)* **39** (2011): 5—10).
(doi: 10.1007/s10958-013-1243-7)

6. "On Estimates of Solutions to a Prandtl System of Equations for Microinhomogeneous Stratified Magnetic Fluid" (Jointly with A.Yu.Linkevitch, S.V.Spiridonov) Abstracts of the Sixth International Conference on Differential and Functional Differential Equations (August 14-21, 2011, Moscow, Russia), 97 - 98. Moscow: Peoples' Friendship University of Russia Press, 2011.

7. "Asymptotics of solutions to boundary layer equations for a generalized newtonian medium under a close to symmetric external flow" (Jointly with G.M.Fadeeva, V.N.Samokhin) *Journal of Mathematical Sciences* **1**77 (1, 2011): 141—147 (Translated from *Problemy mat. Analiza* **59** (2011): 123—128).

8. "On the Asymptotics of a Simple Eigenvalue to Boundary Value Problem in Domain Perforated Along the Boundary" (Jointly with R.R.Gadyl'shin, Yu.O.Koroleva) *Differential Equations* **47** (6, 2011): 822—831 (Translated from *Differentsial'nye Uravneniya* **47** (6, 2011): 819—828).

9. "On the Asymptotic Behavior of Solutions to a Prandtl System of Equations for a Stratified Magnetic Fluid" (Jointly with A.Yu.Linkevitch, S.V.Spiridonov). In: Book of Abstracts of the International Conference ``Differential Equations and Related Topics" dedicated to the 110-th Anniversary of prominent mathematician Ivan G. Petrovskii (XXIII Joint Session of Petrovskii Seminar and Moscow Mathematical Society) (May 30- June 4, 2011, Moscow, Russia), 256-257, Moscow: Moscow University Press & "INTUIT.RU", 2011.

10. "On Spectrum of the Laplacian in a Circle Perforated Along the Boundary. Application to a Friedrichs-Type Inequality" (Jointly with Koroleva Yu.O., Persson L.-E., Wall P.) Research report № 8, Department of Engineering Sciences and Mathematics, Luleå University of Technology, 2011.

11. "Attractors to a System of Equations of Boundary Layer of Generalized Newtonian Medium" (Russian) (Jointly with G.M.Fadeeva, V.N.Samokhin) *Vestnik MGUP* **1** (2011): 245—249.

12. "A new Weighted Friedrichs–type Inequality for a Perforated Domain with a Sharp Constant"

(Jointly with Koroleva Yu.O., Persson L.-E., Wall P.) *Eurasian Mathematical Journal* **2** (1, 2011): 81—103.

13. "Homogenization Effects in Domains with Oscillating Boundaries" (Jointly with Chechkina T.P.) In Final Program and Abstracts of SIAM Conference on Mathematics & Computational Issues in the Geosciences (Long Beach, California, 21-24 March 2011), 126.

14. "Asymptotic Behavior of the Eigenvalues and Eigenfunctions to a Spectral Problem in a Thick Cascade Junction with Concentrated Masses" (Jointly with T.A. Mel'nyk). Oberwolfach preprints OWP 2011 – 12, Oberwolfach – Walke, MFO, Germany, 2011.

15. "Boundary homogenization in domains with randomly oscillating boundary" (Jointly with Y.Amirat, O.Bodart, A.L.Piatnitski) *Stochastic Processes and their Applications* **121** (2011): 1—23. (doi:10.1016/j.spa.2010.08.011)

2010:

1. "On the Rate of Convergence of Solutions in Domain with Periodic Multilevel Oscillating Boundary" (Jointly with Ciro D'Apice, Umberto De Maio) *Mathematical Methods in the Applied Sciences (M2AS).* **33** (17, 2010): 2019—2036.

2. "Spectral Boundary Homogenization in Domains with Oscillating Boundaries" (Jointly with Y.Amirat, R.R.Gadyl'shin) *Nonlinear Analysis: Real World Applications*. **11** (6, 2010): 4492—4499.

3. "Homogenization of Stratified Boundary Layer of Viscous Fluid Percolated Through Perforated Obstacle." (Jointly with S.V.Spiridonov) In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (July 2 – July 7, 2010, Suzdal, Russia), 76—77, Moscow: Steklov Mathematical Institute Press, 2010.

4. "On the Convergence of Solutions and Eigenelements of a Boundary Value Problem in a Domain Perforated Along the Boundary" (Jointly with R.R.Gadyl'shin, Yu.O.Koroleva) *Differential Equations* **46** (5, 2010): 667—680 (Translated from *Differentsial'nye Uravneniya* **46** (5, 2010): 665—677).

5. "Boundary Layer Equations for the O.A.Ladyzhenskaya Modification of the Navier-Stokes System." (Jointly with V.N.Samokhin and G.M.Fadeeva) *Mathematics. Economics. Education.* Abstracts of the XVIII International Conference (May 25 – June 1, 2010, Rostov-on-Don, Russia), 53—54, Rostov-on-Don: SKNC VSh YuFO Press, 2010.

6. "Thick Junctions with Heavy Transmission Layer." (Jointly with T.A.Mel'nyk) *Asymptotic Methods and Mathematical Physics.* Abstracts of the Conference Dedicated to the 60th Anniversary of S.Yu.Dobrokhotov (AMMP-2010) (May 12 – 14, 2010, Moscow, Russia), 54—56, Moscow: IPMech RAS Press, 2010.

7. "On Continuous Dependence of Solution to Equations of Boundary Layer Theory of the Profile of Initial Velocities" (Russian) (Jointly with G.M.Fadeeva, V.N.Samokhin) *Vestnik MGUP* **5** (2010): 64—71.

8. "Asymptotic Approximation of Eigenelements of the Dirichlet Problem for the Laplacian in a Domain with Shoots" (Jointly with Y.Amirat, R.R.Gadyl'shin) *Mathematical Methods in the Applied Sciences (M2AS).* **33** (7, 2010): 811—830.

9. "On the Eigenvalue of the Laplacian in a Domain perforated Along the Boundary" (Jointly with R.R.Gadyl'shin, Yu.O.Koroleva) *Russian Academy of Sciences. Doklady Mathematics* **81** (3, 2010): 337—341 (Translated from *Doklady Akademii Nauk* **432** (1, 2010): 7—11).

10. "Percolation of the Boundary Layer of a Newtonian Fluid through a Perforated Obstacle" (Jointly with S.V.Spiridonov) *Journal of Mathematical Sciences* **166** (3, 2010): 328—337 (Translated from *Problemy mat. Analiza* **45** (2010): 93—102).

11. "Asymptotic Analysis of Perturbed Boundary-Value Problems in a 3D Thick Cascade Junction

with the Random Transmission Zone Periodic in One direction" (Jointly with Tatiana P. Chechkina, Ciro D'Apice, Umberto De Maio, Taras Mel'nyk) *Russian Journal of Mathematical Physics* **17** (1, 2010): 35—55.

12. "*Operator Pencil in a Domain with Concentrated Masses. A Scalar analogue of Linear Hydrodynamics*" In: Arround the Research of Vladimir Maz'ya **II**. PDEs. Ed. A. Laptev. International mathematical Series. Vol. **12**, 61—94, Dordrecht: Springer; Novosibirsk: Tamara Rozhkovskaya Publisher, 2010.

13. *"Collection of Problems in Partial Differential Equations"* [In Russian] (Jointly with T.D.Wentzel, A.Yu.Goritski, T.O.Kapustina, V.A.Kondratiev, E.V.Radkevich, O.S.Rozanova, A.S.Shamaev, T.A.Shaposhnikova). *Second Edition.* Moscow: BINOM. Laboratoria znanij, 2010, 158 p. ISBN: 978-5-94774-721-8

2009:

1. "Boundary Value Problem in a Cascade Thick Junction with a Random Transmission Zone" (Jointly with Tatiana P. Chechkina, Ciro D'Apice, Umberto De Maio, Taras Mel'nyk) *Applicable Analysis.* **88** (10-11, 2009): 1543—1562.

2. "Asymptotic Behavior of Solution to Boundary – Value problem in a Domain with Randomly Oscillating Boundary. " (Jointly with Y.Amirat, O.Bodart, and A.L.Piatnitski) R&D Report № 3/2009. Narvik, Narvik University College, Norway, July 2009.

3. "Homogenization in Domains Randomly Perforated Along the Boundary" (Jointly with C. D'Apice, T.P.Chechkina, U. De Maio) *Discrete and Continuous Dynamical Systems, Ser. B (DCDS-B)* **12** (4, 2009): 713—730.

4. "*S.N.Kruzhkov's lectures on first-order quasilinear PDEs*" (Jointly with Goritsky A.Yu.) In: Analytical and Numerical Aspects of Partial Differential Equations. Eds. E. Emmrich, P.Wittbold. Notes of a Lecture Series. Berlin--New York: Walter de Gruyter, 2009, 1—67.

5. "The O.A.Ladyzhenskaya Modification of the Navier-Stokes Equations and the Boundary Layer Theory" (Russian) (Jointly with G.M.Fadeeva, V.N.Samokhin) *Vestnik MGUP* **5** (2009): 127—143.

6. "On the Rate of Convergence of Solutions to the Prandtl Equations in Rapidly Oscillating Magnetic Field" (Jointly with M.S.Romanov, V.N.Samokhin) *Russian Academy of Sciences. Doklady Mathematics* **79** (3, 2009): 384—389 (Translated from *Doklady Akademii Nauk* **426** (4, 2009): 450—456).

7. "Convergence Theorems for Solutions and Energy Functionals of Boundary Value Problems in Thick Multilevel Junctions of a New Type with Perturbed Neumann Conditions on the Boundary of Thin Rectangles" (Jointly with T.A.Mel'nyk, T.P.Chechkina) *Journal of Mathematical Sciences* **159** (1, 2009): 113—132 (Translated from *Problemy mat. Analiza* **40** (2009): 113—131).

8. "On the Rate of Convergence of Solutions to the Prandtl System of Equations Depending on Small Parameter." (Jointly with M.S.Romanov and V.N.Samokhin) *Modern Problems of Mathematics, Mechanics and their Applications.* Abstracts of the International Conference Dedicated to the 70th Anniversary of the Rector of Moscow State University Acad. V.A.Sadovnichy (March 30 – April 02, 2009, Moscow, Russia), 196—197, Moscow: University book, 2009, ISBN 978-5-91304-078-7

9. "Asymptotic Expansion of Eigenelements of the Laplace Operator in a Domain with a Large Number of "Light" Concentrated Masses Sparsely Situated on the Boundary. Two–Dimensional Case." *Trans. Moscow Math. Soc.* (2009): 71—134 (Translated from *Trudy Moskovskogo Matematicheskogo Obshchestva* **70** (2009): 102—182).

10. "Homogenization of a Boundary-Value Problem in a Thick 3-Dimensional Multilevel Junction" (Jointly with T.A.Mel'nyk) *Russian Academy of Sciences. Sbornik. Mathematics*

   200 (3, 2009): 357—383 (Translated from *Matematicheskii Sbornik* **200** (3, 2009): 49—74).
11. "On the Friedrichs inequality in a domain perforated along the boundary. Homogenization procedure. Asymptotics in parabolic problems (Jointly with Yu.O.Koroleva, A.Meidell, L.-E.Persson) *Russian Journal of Mathematical Physics* **16** (1, 2009): 1—16.
12. "Asymptotic Approximation of Eigenelements of the Dirichlet Problem for the Laplacian in a Periodic Junction with Straight Symmetric Shoots. " (Jointly with R.R.Gadyl'shin, Y.Amirat) R&D Report № 1/2009. Narvik, Narvik University College, Norway, January 2009. (`http://hal.archives-ouvertes.fr/hal-00282229/fr/`)
13. *"Collection of Exercises in Partial Differential Equations"* [In Chinese] (Jointly with T.D.Wentzel, A.Yu.Goritski, T.O.Kapustina, V.A.Kondratiev, E.V.Radkevich, O.S.Rozanova, A.S.Shamaev, T.A.Shaposhnikova). *Second Edition*. Beijing: Higher Education Press, 2009, 132 p.

2008:
1. "On the Sapondzhyan - Babuška Paradox" (Jointly with D.Lukkassen, A.Meidell) *Applicable Analysis* **87** (12, 2008): 1443—1460.
2. "Homogenization of Random Multilevel Junctions" (Jointly with T.P.Chechkina) Abstracts of the International Conference "Scaling Up and Modeling for Transport and Flow in Porous Media" (October 13-16, 2008, Dubrovnik, Croatia), 15-17. Zagreb, 2008
3. "Averaging of a Boundary Value Problem in a Thick Multilevel Junction" Abstracts of the International Conference "Differential Equations, Function Spaces, Approximation Theory" Dedicated to the 100th Anniversary of Sergei L'vovich Sobolev (October 5-12, 2008, Novosibirsk, Russia), 230. Novosibirsk: Sobolev Institute of Mathematics SB RAS Press, 2008. ISBN 978-586134-146-2
4. "Asymptotic Analysis of Boundary-Value Problems in Thick Cascade Junctions" (Jointly with T.A.Mel'nyk) *Dopovidi Nats. Akad. Nauk Ukr., Mat. Pryr. Tekh. Nauky* **9** (2008): 16—22 (In Russian).
5. "Asymptotics of the Solution of a Dirichlet Spectral Problem in a Junction with Highly Oscillating Boundary" (Jointly with Y.Amirat, R.R.Gadyl'shin) *C R Mécanique*. **336** (9, 2008): 693—698.
6. "Advantages of the Course "Equations of Mathematical Physics" at the Mechanical and Mathematical Department of Lomonosov Moscow State University Over Corresponding Courses of Leading Universities of Other Countries " (Russian) (Jointly with T.P.Chechkina) *Mathematics in Higher Education.* **6** (2008): 33—42.
7. "Homogenization of a Boundary-Value Problem in a Thick Cascade Junction" (Jointly with T.A.Mel'nyk) *Journal of Mathematical Sciences* **154** (1, 2008): 50—77 (Translated from *Problemy mat. Analiza* **37** (2008): 47—72).
8. "Asymptotics of Solutions to Boundary Value Problems in Multilevel Junction" Abstracts of the Fifth International Conference on Differential and Functional Differential Equations (August 17-24, 2008, Moscow, Russia), 120. Moscow: Peoples' Friendship University of Russia Press, 2008.
9. "*Homogenization Problem in Random Multilevel junction*" (Jointly with Chechkina T.P.) In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (June 27 – July 2, 2008, Suzdal, Russia), 257—258, Vladimir: Vladimir State University Press, 2008.

2007:
1. "On the Precise Asymptotics of the Constant in the Friedrich`s Inequality for Functions, Vanishing on the Part of the Boundary with Microinhomogeneous Structure" (Jointly with

Yu.O.Koroleva, L.-E.Persson) *Journal of Inequalities and Applications.* Volume 2007 (2007). Article ID 34138, 13 pages. (`doi:10.1155/2007/34138`)

2. "Asymptotics for Eigenelements of Laplacian in Domain with Oscillating Boundary: Multiple Eigenvalues" (Jointly with R.R.Gadyl'shin, Y.Amirat) *Applicable Analysis* **86** (7, 2007): 873—897.

3. *"On Problems in Unbounded Domains with Concentrated Masses"* In: Book of Abstracts of the International Conference "Differential Equations and Related Topics" dedicated to Ivan G. Petrovskii (XXII Joint Session of Petrovskii Seminar and Moscow Mathematical Society) (May 21-26, 2007, Moscow, Russia), 61—63, Moscow: Moscow University Press, 2007.

4. "*Homogenization: Methods and Applications*" Translations of Mathematical Monographs V. 234. (Jointly with A. L. Piatnitski, A. S. Shamaev). Providence: AMS, 2007 ISBN: 978-0-8218-3873-0 (Translated from "*Homogenization: Methods and Applications*". Novosibirsk: Tamara Rozhkovskaya Publisher, 2007 ISBN 978-5-901873-14-4).

5. "On Boundary — Value Problems for the Laplacian In Bounded Domains with Micro Inhomogeneous Structure of the Boundaries" (Jointly with R.R.Gadyl'shin) *Acta Mathematica Sinica* **23** (2, 2007): 237—248.

6. "Asymptotics of Eigenvalues and Eigenfunctions for the Laplace Operator in a Domain with Oscillating Boundary. Multiple Eigenvalue Case" (Jointly with R.R.Gadyl'shin, Y.Amirat) Preprint No 1/2007. Narvik, Narvik University College, Norway, January 2007. (`http://arxiv.org/PS_cache/math/pdf/0612/0612764.pdf`)

2006:

1. "*On Some Topics of Boundary Homogenization*" Synopsis of Doctoral (Doctor of physical and mathematical sciences) Thesis. Moscow: CPI Press at the Mech & Math Department of Moscow State University, 2006.

2. "*Homogenization in perforated domains*" In: Topics on Concentration Phenomena and Problems with Multiple Scales. Edited by A.Braides, V. Chiadò Piat. Lecture Notes of the Unione Matematica Italiana. Vol. **2**. Berlin: Springer—Verlag, 2006, 189—208.

3. "*Behavior of Bodies with Singular Perturbation of Density*" In: Book of Abstracts of the International Conference on Differential Equations, Dedicated to the 100-th Anniversary of Ya.B.Lopatynsky (ICL--100) (September 12--17, 2006, Lviv, Ukraine), 80—81, Lviv: Ivan Franko National University of Lviv Press, 2006.

4. "Homogenization of Solutions to Problems for the Laplace Operator in Unbounded Domains with Many Concentrated Masses on the Boundary." *Journal of Mathematical Sciences* **139** (1, Nov 2006): 6351—6362 (Translated from *Problemy mat. Analiza* **33** (2006): 103—111).

5. "*On Behavior of Spectrum to Boundary-Value Problems in Domains with Concentrated Masses*" In: Book of Abstracts of the International Conference on Differential Equations and Dynamical Systems (July 10-15, 2006, Suzdal, Russia), 224—226, Vladimir: "SOBOR" Press, 2006.

6. "*On Prandtl's Equations in Domain with Oscillating Boundary* " (Jointly with M.S.Romanov). In: Book of Abstracts of the International Conference "Tikhonov and Contemporary Mathematics" (June 14-25, 2006, Moscow, Russia), Section "Functional Analysis and Differential Equations", 219—220. Moscow: MAKS Press, 2006.

7. "*Asymptotic Behavior of Solutions to Stationary System of Equations of Boundary Layer for Magnetic Fluid*" (Jointly with S.V.Spridonov). In: Book of Abstracts of the III-d International Conference "Chebyshev's Mathematical Ideas and Applications to the Modern Sciences" (May 14-18, 2006, Obninsk, Russia), 121—122. Obninsk: Obninsk State Technical University of Nuclear Power Press, 2006.

8. "Homogenization of a Model Spectral Problem for the Laplace Operator in a Domain with

Many Closely Located "Heavy" and "Intermediate Heavy" Concentrated Masses." *Journal of Mathematical Sciences* **135** (6, Jun 2006): 3485—3521 (Translated from *Problemy mat. Analiza* **32** (2006): 45—76).

9. "Asymptotics of Simple Eigenvalues and Eigenfunctions for the Laplace Operator in a Domain with Oscillating Boundary" (Jointly with R.R.Gadyl'shin, Y.Amirat) *Computational Mathematics and Mathematical Physics* **46** (1, 2006): 97—110 (Translated from *Zh. Vychisl. Mat. i Mat. Fiz.* **46** (1, 2006): 102—115).

2005:

1. *"Spectrum of Homogenized Problem in a Circle Domain with Many Concentrated Masses"* In Multi Scale Problems and Asymptotic Analysis. Edited by D.Cioranescu, A.Damlamian, P.Donato, and A.L.Piatnitski. Vol. 24, GAKUTO International Series. Mathematical Sciences and Applications. Tokyo: Gakkōtosho, 2005, 49—62.

2. "On Boundary — Value Problems for the Laplacian in Bounded and in Unbounded Domains with Perforated Boundaries" (Jointly with R.R.Gadyl'shin) *Journal of Differential Equations* **216** (2005): 502—522.

3. "Asymptotic Expansion of Eigenvalues and Eigenfunctions of the Laplace Operator in a Domain with Many "Light" Concentrated Masses Closely Located on the Boundary. Multi-Dimensional Case." *Journal of Mathematical Sciences*) **128** (5, Aug 2005): 3263—3305 (Translated from *Problemy mat. Analiza* **30** (2005): 87—119).

4. "Some Applied Topics of the Theory of Boundary Homogenization" (Jointly with T.P.Chechkina) *Soros Educational Journal* **9** (1, 2005): 123—127.

5. "Asymptotic Expansion of Eigenvalues and Eigenfunctions of an Elliptic Operator in a Domain with Many "Light" Concentrated Masses Situated on the Boundary. Two-Dimensional Case." *Izvestia: Mathematics* **69** (4, 2005): 805—846 (Translated from *Izvestija RAN. Ser. Mat.* **69** (4, 2005): 161—204).

6. "Non-Periodic Boundary Homogenization and "Light" Concentrated Masses" (Jointly with M.E.Pérez, E.I.Yablokova) *Indiana University Mathematics Journal* **54** (2, 2005): 321—348.

7. *"Collection of Exercises in Partial Differential Equations"* [In Russian] (Jointly with T.D.Wentzel, A.Yu.Goritski, T.O.Kapustina, V.A.Kondratiev, E.V.Radkevich, O.S.Rozanova, A.S.Shamaev, T.A.Shaposhnikova). Moscow: BINOM. Laboratoria znanij, 2005, 158 p. ISBN: 5-94774-260-8

2004:

1. "On Vibration of Partially Fastened Membrane with Many "Light" Concentrated Masses on the Boundary *C R Mécanique* **332** (12, 2004): 949—954.

2. "Splitting of a Multiple Eigenvalue in a Problem on Concentrated Masses" *Russian Mathematical Survey* **59** (4, 2004): 790—791 (Translated from *UMN* **59** (4, 2004): 205—206).

3. *"Spectrum of Homogenized Problem in a Domain with Many Heavy Concentrated Masses"* In: Book of Abstracts of the Midnight Sun Narvik Conference "Multiscale Problems and Asymptotic Analysis" (June 22-26, 2004, Narvik, Norge), 16—18, Narvik: Narvik University College Press, 2004.

4. "Estimation of Solutions of Boundary — Value Problems in Domains with Concentrated Masses Located Periodically along the Boundary: Case of Light Masses." *Mathematical Notes* **76** (6, 2004): 865—879 (Translated from *Math. Zametki* **76** (6, 2004): 928—944).

5. *"Homogenized Spectrum of a Boundary Value Problem for the Laplacian in a Domain with Many Concentrated Masses of Critical Density on the Boundary"* In: Book of Abstracts of

the International Conference "Differential Equations and Related Topics" dedicated to the 103-d Anniversary of Ivan G. Petrovskii (XXI Joint Session of Petrovskii Seminar and Moscow Mathematical Society) (May 16-22, 2004, Moscow, Russia), 44—45, Moscow: Moscow University Press, 2004.

6. "*Asymptotics of the Solution of the Problem of Deformation of an Arbitrary Locally Periodic Thin Plate*" (Jointly with E.A.Akimova and S.A.Nazarov) *Trans. Moscow Math. Soc.* (2004): 1— 29 (Translated from *Trudy Moskovskogo Matematicheskogo Obshchestva* **65** (2004): 3—34.

7. "*Homogenization Models and Methods in Microbiology*" (Jointly with T.P.Chechkina) Proceedings of the Sixth Hellenic -- European Conference on Computer Mathematics and its Applications (HERCMA 2003) (September 25-27, 2003, Athens, Hellas). Volume 1, 173—174. Athens: LEA Publisher, 2004.

2003:

1 "*Homogenization Problems in Domains with Concentrated Masses*" Book of Abstracts of the 5 th International Congress on Industrial and Applied Mathematics (ICIAM 2003) (July 7 - 11, 2003, Sydney, Australia), 147, Sydney: Sydney University of Technology Press, June 2003.

2 "Boundary Homogenization in Domains with Singular Density" *Differential Equations* **39** (6, 2003): 904 (Translated from *Differentsial'nye Uravneniya* **39** (6, 2003): 855).

3 "*Asymptotics of Simple Eigenvalues and Eigenfunctions for the Laplace operator in a Domain with Oscillating Boundary*" (Jointly with Y.Amirat and R.R.Gadyl'shin) Prépublications du Laboratoire de Mathématiques Appliquées No 2003-06. Clermont – Ferrand : Université Blaise Pascal, Centre National de la Recherche Scientifique. Juin 2003.
(`http://wwwlma.univ-bpclermont.fr/preprint`)

4."Homogenization Theorem for Problems in Domains of the "Infusorian" Type with Uncoordinated Structure" (Jointly with T.P.Chechkina). *Journal of Mathematical Sciences* **123** (5, Oct 2004): 4363—4380 (Translated from *Itogi Nauki i Tekhniki. Sovrem. Mat. Prilozh. Tematicheskie obzory. Differ. Uravn. Chast. Proizvod. (Progress in Science and Technology. Series on Contemporary Mathematics and its Applications. Thematic Surveys. Partial Differential Equaions). VINITI* **2** (2003): 139—154).

5. "On Homogenization of Problems in Domains of the "Infusorium" Type" (Jointly with T.P.Chechkina). *Journal of Mathematical Sciences* **120** (3, Mar 2004): 1470—1482 (Translated from *Trudy seminara imeni I.G.Petrovskogo* **23** (2003): 386—407).

6."On Asymptotics of Solutions of the Lavrentiev-Bitsadze Equation in Partially Perforated Domain" (Jointly with V.A.Kondratiev) *Differential Equations* **39** (5, 2003): 681—693 (Translated from *Differentsial'nye Uravneniya* **39** (5, 2003): 645—655).

7."*On Boundary — Value Problems for the Laplacian in Bounded and in Unbounded Domains with Perforated Boundaries*" (Jointly with R.R.Gadyl'shin) Prépublications du Laboratoire de Mathématiques Appliquées No 2003-04. Clermont – Ferrand : Université Blaise Pascal, Centre National de la Recherche Scientifique. Mars 2003.
(`http://wwwlma.univ-bpclermont.fr/preprint`)

8. "Singular Double Porosity Model" (Jointly with A.Bourgeat, A.L.Piatnitski) *Applicable Analysis* **82** (2, 2003): 103—116.

9."Oleinik Olga Arsenievna" (Jointly with T.D.Wentzel, V.S.Vladimirov, V.V.Zhikov, A.M.Il'in, V.A.Il'in, V.A.Kondratiev, L.D.Kudryavcev, E.F.Mishchenko, S.M.Nikolskij, Yu.S.Osipov, E.V.Radkevich, N.Kh.Rozov, V.A.Sadovnichij, L.D.Faddeev, A.S.Shamaev, T.A.Shaposhnikova, A.A.Shkalikov) *Russian Mathematical Surveys* **58** (1, 2003): 161—172 (Translated from *UMN* **58** (1, 2003): 165—174).

2002:

1. "On Eigenvibrations of a Body with "Light" Concentrated Masses on the Surface" (Jointly with M.E.Pérez, E.I.Yablokova (Doronina)) *Russian Mathematical Surveys* **57** (6, 2002): 1240—1242 (Translated from *UMN* **57** (6, 2002): 195—196).

2. "*Homogenization Problems in Microbiology*" (Jointly with T.P.Chechkina). Abstracts of the 5th International Symposium on Mathematical Analysis and its Applications (MAA5) (October 2-6, 2002, Niška Banja, Yugoslavia), 3—4.

3. "Homogenization of the Lavrent'ev-Bitsadze Equation in a Partially Perforated Domain" (Jointly with V.A.Kondratiev) *Differential Equations* **38** (10, 2002): 1481—1487 (Translated from *Differentsial'nye Uravneniya* **38** (10, 2002): 1390—1396).

4. "*Homogenization Theory in Microbiology*" (Jointly with T.P.Chechkina). Abstracts of the Thirteen International Colloquium on Differential Equations (August 18-23, 2002, Plovdiv, Bulgaria), 13.

5. "*Tetris--Procedure and the Korn's Inequality for an Arbitrary Plate*" (Jointly with E.A.Akimova, S.A.Nazarov). Abstracts of the International Conference on Differential and Functional Differential Equations (August 11-17, 2002, Moscow, Russia), 3—4. Moscow: Moscow Aviation Institute Press, 2002.

6. "*Vibration of a Thin Plate with a "Rough" Surface*" (Jointly with D.Cioranescu). In: Nonlinear Partial Differential Equations and their Applications. Collège de France Seminar. Volume XIV. Studies in Mathematics and its Applications. Amsterdam — London — New York — Tokyo: Elsevier, 2002.- p. 147—169 (doi: 10.1016/S0168-2024(02)80009-1).

7. "*Vibration of a Body with Nonperiodically Situated Heavy Concentrated Masses*" (Jointly with E.I.Yablokova). In: Book of Abstracts of the International Conference "Mathematical Ideas of P.L.Chebyshev and their Applications to Modern Problems of Natural Sciences" (May 14-18, 2002, Obninsk, Russia), 88-90, Obninsk: Obninsk Institute of Nuclear Power Engineering Press, 2002.

8. "On Homogenization of Networks and Junctions " (Jointly with V.V.Jikov, D.Lukkassen, A.L.Piatnitski) *Asymptotic Analysis* **30** (1, 2002): 61—80. (http://www.hin.no/~dl/dl-pub.html)

9. "*On Eigenvibrations of a Body with Many "Light" Concentrated Masses Located Nonperiodically Along the Boundary*" (Jointly with M.E. Pérez and E.I.Yablokova). Preprint of Universidad de Cantabria Núm. 1/2002, Santander, Abril 2002, 31 p.

10. "On Natural Oscillations of a Body with Many Concentrated Masses Located Nonperiodically Along the Boundary" (Jointly with E.I.Doronina). Dedicated to the 80th anniversary of Academician Evgeniĭ Frolovich Mishchenko (Russian) (Suzdal, 2000) *Proc. Steklov Inst. Math.* **236** (2002): 148—156 (Translated from *Trudy Matematicheskogo Instituta RAN im V.A.Steklova* **236** (2002): 158—166).

11. "On the Weighted Korn Inequality for a Thin Nonsymmetric Plate" (Jointly with E.A.Pichugina (Akimova)). Dedicated to the 80th anniversary of Academician Evgeniĭ Frolovich Mishchenko (Russian) (Suzdal, 2000) *Proc. Steklov Inst. Math.* **236** (2002): 334—340 (Translated from *Trudy Matematicheskogo Instituta RAN im V.A.Steklova* **236** (2002): 347—353).

12. "Olga Arsenievna Oleinik. 1925 – 2001" (jointly with G.Tronel). *MATAPLI SMAI* **67** (January 2002): 23—25.

2001:

1. "*To the 100 Anniversary of Ivan Georgievich Petrowsky*" In: Modern Investigations in Mathematics and Mechanics. (Proceedings of the XXIII Conference of Young Scientists. Faculty of Mechanics and Mathematics, Moscow State university (April 9-14, 2001)), 9—17, Moscow: Moscow University press, 2001.

2. *"Singular Double Porosity Model"* (Jointly with A.Bourgeat, A.L.Piatnitski) MPS: Applied Mathematics/0110012, October 22, 2001, 19 pp.
    (http://www.mathpreprints.com/math/Preprints/alp/20011022/1/double.pdf)
3. *"Modeling of Transonic Flow of Fluid with Small Bubbles and Gas in a Jet Engine"* Abstracts of the International Conference "Homogenization and Applications to Material Sciences" (September 15-19, 2001, Timişoara, Romania), 16, Timisoara: University of the West Timishoara Press, 2001.
4. "Weighted Korn Inequality: The "Tetris" Procedure for an Arbitrary Periodic Plate" (Jointly with E.A.Akimova, S.A.Nazarov) *Russian Academy of Sciences. Doklady Mathematics* **64** (2, 2001): 205—207 (Translated from *Doklady Akademii Nauk* **380** (4, 2001): 439—442).
5. "Averaging in a Perforated Domain with an Oscillating Third Boundary Condition" (Jointly with A.G.Belyaev and A.L.Piatnitski) *Russian Academy of Sciences. Sbornik. Mathematics* **192** (7, 2001): 933—949 (Translated from *Matematicheskii Sbornik* **192** (7, 2001): 3—20).
6. *"On Behavior of a Body Randomly Perforated Along the Boundary"* (Jointly with E.L.Ostrovskaya) In: Book of Abstracts of the International Conference "Differential Equations and Related Topics" dedicated to the Centenary Anniversary of Ivan G. Petrovskii (XX Joint Session of Petrovskii Seminar and Moscow Mathematical Society) (May 22-27, 2001, Moscow, Russia), 88, Moscow: Moscow University Press, 2001.
    ISBN 5-211-04047-3
7. "*On the Asymptotics of the Spectrum of a Boundary Value Problems with Nonperiodic Rapidly Alternating Boundary Conditions*" (Jointly with Doronina E.I.). In Functional Differential Equations (Eds. E.Mitidieri, S.Pohozaev, A.Skubachevskii), Vol. **8**, № 1-2, 111-122. New York: Marcel Dekker, 2001.
8. "On the Averaging of Solutions of a Second — Order Elliptic Equation with Nonperiodic Rapidly Changing Boundary Conditions" (Jointly with E.I.Doronina) *Moscow Univ. Math. Bull*. **56** (1, 2001): 14—19 (Translated from *Vestnik Moskovskogo Universiteta. Ser 1. Mathematics. Mechanics* **1** (2001): 14—19.

2000:
1. "Kalashnikov Anatoli Sergeevich (Obituary)." (Jointly with T.D.Wentzel, Yu.A.Dubinski, A.M.Ilyin, V.A.Kondratiev, A.A.Malcev, V.P.Mikhailov, O.A.Oleinik, S.I.Pohozaev, N.Kh.Rozov, T.A.Shaposhnikova) *Russian Mathematical Surveys* **55** (5, 2000): 977—985 (Translated from *UMN* **55** (5, 2000): 161—168).
2. *"Homogenization of the Lavrentiev-Bitsadze equation in Partially Perforated Domain"* Abstracts of the conference "Multiscale Problems in Science and Technology. Challenges to Mathematical Analysis and Perspectives" (September 3-9, 2000, Dubrovnik, Croatia), 10, Zagreb: Zagreb University Press, 2000. (Proceedings of the conference "Multiscale Problems in Science and Technology" (September 3-9, 2000, Dubrovnik, Croatia), 309, Berlin—Heidelberg: Springer Verlag, 2002.)
3. *"On Eigenfrequencies of a Body with Great Number of Nonperiodically Situated Concentrated Masses"* (Jointly with E.I.Doronina). Abstracts of the International Conference on Differential Equations and Dynamical Systems (August 21-26, 2000, Suzdal, Russia), 201—203, Vladimir: Vladimir State University Press, 2000.
4. *"On a Weighted Korn's Inequality in a Thin Nonsymmetric Plate"* (Jointly with E.A.Pichugina). Abstracts of the International Conference on Differential Equations and Dynamical Systems (August 21-26, 2000, Suzdal, Russia), 203—206, Vladimir: Vladimir State University Press, 2000.
5. "*Homogenization in a Perforated Domain with Oscillating Boundary. General Case*." (Jointly

with A.L.Piatnitski). Abstracts of the International Workshop on Asymptotic and Numerical Analysis of Structures and of Heterogeneous Media (ANASTHEM-2000) (June 26 - 30, 2000, Saint-Petersburg, Russia), 54—57. Moscow: Oil & Gas Research Institute Press, 2000 (ISBN 5-230-06-9640-3).

6. "Weighted Korn's Inequality for a Thin Plate with a Rough Surface" (Jointly with E.A.Pichugina) *Russian Journal of Mathematical Physics.* **7** (3, 2000): 279—287.

7. "*Homogenization Problem in a Perforated Domain with Oscillating Fourier Boundary Condition on Holes*" Proceedings of the International Conference "Complex Analysis, Differential Equations and Related Topics" (May 29 - 31, 2000, Ufa, Russia), v. **II** Differential Equations, 162 - 168. Ufa: Mathematical Institute with Computational Center of the Ufa Scientific Center, Russian Academy of Sciences, 2000 .

8. "Effective membrane permeability: estimates and low concentration asymptotics" (Jointly with A.G.Belyaev and R.R.Gadyl'shin) *SIAM J. Appl. Math.* **60** (1, 2000): 84—108.

1999:

1. "*Homogenization of a Second — Order Elliptic Operator in a Perforated Domain with Oscillating Fourier Boundary Condition*" (Jointly with A.G.Belyaev and A.L.Piatnitski) The Univ. of Aizu Technical Report 99-1-016. Aizu: University of Aizu. November 17, 1999. (`ftp://ftp.u-aizu.ac.jp/u-aizu/doc/Tech-Report/1999/`)

2. "*Partial Differential Equations of the First Order*" (Manual) (Jointly with A.Yu.Goritski and S.N.Kruzhkov). Moscow: Moscow State University Press, 1999, 96 pp.

3. "*On Eigenvalues Behavior to Boundary Value Problem with Nonperiodic Quickly Changing Boundary Conditions*" (Jointly with Doronina E.I.). Abstracts of the International Conference on Differential and Functional Differential Equations (August 16 - 21, 1999, Moscow, Russia), 32. Moscow: Moscow State Aviation Institute Press.

4. "Homogenization of Boundary — Value Problem in a Locally Periodic Perforated Domain" (Jointly with A.L.Piatnitski) *Applicable Analysis* **71** (1 - 4, 1999): 215—235.

5. "Averaging Operators with Boundary Conditions of Fine — Scaled Structure" (Jointly with A.Yu.Beliaev*) Mathematical Notes* **65** (4, 1999): 418—429 (Translated from *Math. Zametki* **65** (4, 1999): 496—510).

6. "A Boundary Value Problem for the Laplacian with Rapidly Changing Type of Boundary Conditions in a Multidimensional Domain" (Jointly with R.R.Gadyl'shin) *Siberian Mathematical Journal* **40** (2, 1999): 229—244 (Translated from *Sibirskii Matematicheskii Zhurnal* **40** (2, 1999): 271—287).

7. "The Boundary Value Problem in Domains with Very Rapidly Oscillating Boundary" (Jointly with A.Friedman and A.L.Piatnitski) *Journal of Mathematical Analysis and Applications (JMAA)* **231** (1, 1999): 213—234.

1998:

1. "S.L.Sobolev. The 90th Anniversary" *Moscow University* **22-bis (3841),** November 1998. - P.2.

2. "On the New Model for the Vibrating of a Thin Plate with Rapidly Oscillating Boundary (Jointly with D.Cioranescu)" *Abstracts of AMS Meetings* **19** (4, 1998): 508.

3. "On Homogenization of Boundary — Value Problem for Linear System of Elasticity in a Thin Plate with Rapidly Oscillating Boundary" *Russian Mathematical Surveys* **53** (4, 1998): 803—804 (Translated from *UMN* **53** (4, 1998): 150).

4. "Asymptotic Behavior of a Solution to a Boundary Value Problem in a Perforated Domain with Oscillating Boundary" (Jointly with A.G.Belyaev and A.L.Piatnitski) *Siberian Mathematical Journal* **39** (4, 1998): 621—644 (Translated from *Sibirskii Matematicheskii Zhurnal* **39** (4, 1998): 730—754).

5. "*Asymptotic Behavior of Solution for Boundary — Value Problem in a Perforated Domain with Oscillating Boundary*" (Jointly with A.G.Belyaev, A.L.Piatnitski) Publications du Laboratoire d'Analyse Numérique R 98037. Paris: Université Pierre et Marie Curie, Centre National de la Recherche Scientifique. November 1998.

6. "*Boundary Homogenization of Randomly Perturbed Elliptic Problems*" Abstracts of the Third Siberian International Congress on Applied and Industrial Mathematics (INPRIM-98), dedicated to the memory of S.L.Sobolev (June 22 - 27, 1998, Novosibirsk, Russia), v. **I**, 41—42.

7. "*On Homogenization of Solution to Boundary — Value Problem for the Laplacian in a Perforated Domain with Rapidly oscillating Boundary*" (Jointly with Belyaev A.G. and Piatnitski A.L.) Proceedings of the International Conference "Functional Spaces. Differential Operators. Problems of Mathematical Education", dedicated to Kudriavtsev L.D. 75 – anniversary (March 23 - 27, 1998, Moscow, Russia), v. **2**, 54—59. Moscow: Russia Peoples' Friendship University Press, 1998.

8. "*On Homogenization of Solution to Boundary — Value Problem for the Laplacian in a Perforated Domain with Rapidly oscillating Boundary*" (Jointly with Belyaev A.G. and Piatnitski A.L.) Abstracts of the International Conference "Functional Spaces. Differential Operators. Problems of Mathematical Education", dedicated to Kudriavtsev L.D. 75 – anniversary (March 23 - 27, 1998, Moscow, Russia), 103. Moscow: Russia Peoples' Friendship University Press, 1998.

1997:

1. "*Quazilinear First Order Partial Differential Equations: Generalized Solutions, Shock Waves, Centralized Rarefaction Waves*" (Brief Manual) (Jointly with A.Yu.Goritski and S.N.Kruzhkov). Moscow: Moscow State University Press, 1997, 56 pp.

2. "*Vibration of Fluids in a Vessel with a Net on the Surface*" In Homogenization and Applications to Material Sciences. Edited by D.Cioranescu, A.Damlamian, and P.Donato. Vol. 9, GAKUTO International Series. Mathematical Sciences and Applications. Tokyo: Gakkōtosho, 1997, 95—112.

1996:

1. "*The Boundary Value Problem in Domains with Very Rapidly Oscillating Boundary*" (Jointly with A.Friedman and A.L.Piatnitski) INRIA Rapport de Recherche No 3062. Sophia Antipolis: Unité de Recherche - Institut National de Recherche en Informatique et en Automatique. Décembre 1996.

2. "*Effective Membrane Permeability: Estimates and Low Concentration Asymptotics*" (Jointly with A.G.Belyaev and R.R.Gadyl'shin) The Univ. of Aizu Technical Report 96-4-002. Aizu: University of Aizu. August 1996.

3. "*Boundary Homogenization for Elliptic Operators*" Abstracts of the Junior Mathematical Congress (JMC - 96) (July 29 – August 2, 1996, Miscolc, Hungary), 8.

4. "The Neumann Problem in Domains with Rapidly Increasing Oscillations of the Boundary" (Jointly with A.L.Piatnitski) *Russian Mathematical Surveys* **51** (5, 1996): 938—939 (Translated from *UMN* **51** (5, 1996): 166—167).

5. "On Asymptotics of Solutions and Eigenvalues of the Boundary Value Problems with Rapidly Alternating Boundary Conditions for the System of Elasticity" (Jointly with O.A.Oleinik*). Rendiconti Lincei: Matematica e Applicazioni. Serie IX*, **7** (1, 1996): 5—15.

6. " *On Spectral Properties of Boundary Value Problems in Domains with Many Concentrated Masses Near the Boundary*" Proceedings of the Fifth Crimean Autumn Mathematical School-Symposium on Spectral and Evolutional Problems (KROMSH - V) (September 19 - 30, 1994, Laspi, Crimea, Ukraine), 51—53. Simferopol: Simferopol State

University, Crimean Mathematical Foundation, Crimean Academy of Science, 1996.

7."The Asymptotic Expansion of the Solution of a Boundary — Value Problem with Rapidly Alternating Type of Boundary Conditions." *Journal of Mathematical Sciences* **85** (6, 1997): 2440—2449 (Translated from *Trudy seminara imeni I.G.Petrovskogo* **19**, 323—337, 1996).

1995:

1."*Operator Pencil and Homogenization in the Problem of Vibration of Fluid in a Vessel with a Fine Net on the Surface*» IMA Preprint Series # 1367. Minneapolis: Institute for Mathematics and its Applications, University of Minnesota. November 1995.

2."*On Behavior of Solutions and Eigenvalues of Boundary Value Problems with Rapidly Alternating Boundary Conditions for the System of Elasticity*". (Jointly with O.A.Oleinik) In Modern Problems of Continuous Media Mechanics, 167—172. Rostov-Na-Donu: MP "Kniga", 1995.

3."On Vibrations of Bodies with Concentrated Masses Placed on the Boundary*". Russian Mathematical Surveys* **50** (4, 1995): 763—764 (Translated from *UMN* **50** (4, 1995): 105—106).

4."*On Properties of Eigenelements of Boundary Value Problems in Domains with Many Concentrated Masses on the Boundary*". Abstracts of the Conference "Advanced Mathematics, Computations and Applications" (AMCA - 95) (June 20—24, 1995, Novosibirsk, Russia), 69—70.

5."*Vibration of Fluid in a Vessel with a Net on the Surface*". Abstracts du Colloque EurHomogenization "Homogénéisation et Applications aux Sciences des Matériaux" (June 6 - 10, 1995, Nice, France), 16—17.

6."*Random boundary homogenization*" (Jointly with A.Yu.Beliaev). Abstracts of the International conference "Functional spaces, the approximation theory, nonlinear analysis" (April 27 - May 3, 1995, Moscow, Russia), 296—298.

7."Homogenization of a Mixed Boundary - Value Problem for the Laplace Operator in the Case of an Insoluble "Limit" Problem." (Jointly with A.G.Belyaev*). Russian Academy of Sciences. Sbornik. Mathematics* **186** (4, 1995): 511—525 (Translated from *Matematicheskii Sbornik* **186** (4, 1995): 47—60).

1994:

1."*Homogenization Problems with Random Alternating Boundary Conditions.*" Abstracts of the conference "Singuläre Störungsrechnung" (May 29 – June 4, 1994, Oberwolfach, Germany), 3. (Tagungsbericht 23/1994. Oberwolfach: Mathematisches Forschungsinstitut Oberwolfach).

2."*On homogenization problems*" (Jointly with O.A.Oleinik and A.S.Shamaev) In: Russian Universities. Fundamental Problems of Mathematics and Mechanics, v.1. Moscow: Moscow State University Press, 1994, 223—226.

3."On a Problem of Boundary Averaging for a System of Elasticity Theory." (Jointly with O.A.Oleinik) *Russian Mathematical Surveys* **49** (4, 1994): 113—114 (*UMN* **49** (4,1994): 114).

1993:

1."On Boundary — Value Problems for Elliptic Equations with Rapidly Changing Type of Boundary Conditions" (Jointly with O.A.Oleinik) *Russian Mathematical Surveys* **48** (6, 1993): 173—175 (Translated from *UMN* **48** (6, 1993): 163—164).

2."A Complete Asymptotic Expansion of the Solution of a Boundary — Value Problem with Rapidly Varying Boundary Conditions in a Layer" *Russian Mathematical Surveys* **48** (4, 1993): 233—234 (Translated from *UMN* **48** (4, 1993): 218—219).

3."*On Asymptotics of Solutions and Eigenvalues of an Elliptic Problem with Rapidly*

Alternating Type of Boundary Conditions" (Jointly with O.A.Oleinik) Preprint SMR.719/4. Trieste: ICTP. 1993.

4. "*An Asymptotic Analysis of a Boundary Value Problem with Rapidly Alternating Boundary Conditions in the Case, when the Limit Problem is Unsolvable*." Proceeding of the First Ukrainian - American School "Differential Equations and Applications" (June 1 – 10, 1993, Sudak, Ukraine), v. **I**, 52.

5. "Averaging of Boundary Value Problems with a Singular Perturbation of the Boundary Conditions." *Russian Academy of Sciences. Sbornik. Mathematics* **79** (1, 1994): 191—222 (Translated from *Mat. Sbornik* **184** (6, 1993): 99—150).

6. "*Rate of Growth of the Solution of a Boundary Value Problem with Rapidly Alternating Boundary Conditions in the Case, when the Limit Problem is Unsolvable*." Proceedings of the School "Function Theory. Differential Equations in Mathematical Simulation" (January 25 – February 3, 1993, Voronezh, Russia), 146.

1992:

1. "*The Elliptic Boundary Value Problems with Rapidly Alternating Boundary Conditions*" Synopsis of Ph.D. (Candidate of physical and mathematical sciences) Thesis. Moscow: Moscow State University Press, 1992.

1991:

1. "Homogenization of Solutions of Boundary - Value Problems with Rapidly Alternating Boundary Conditions." *Russian Mathematical Surveys* **46** (6, 1991): 202—203 (Translated from *UMN* **46** (6, 1991): 190—191).

1989:

1. "*On Spectral Properties of Elliptic Problems with Rapidly Oscillating Boundary Conditions*." In Boundary Value Problems for Nonclassical Partial Differential Equations, Ed. Vladimir N. Vragov. Novosibirsk: Institute of Mathematics, Siberian Division of the Academy of Sciences of the USSR (IM SOAN SSSR), 1989, 197—200.

2. "On the Asymptotic Properties of a Partially Fastened Membrane*." Russian Mathematical Surveys* **44** (4, 1989): 197. (Translated from *UMN* **44** (4,1989): 227.)

3. "*A Partially Fastened Membrane*" In Bulletin SMO. Novosibirsk: IM SOAN SSSR, 1989, 30—32.

1988:

1. "*On Boundary — Value Problems for a second — order Elliptic Equation with Oscillating Boundary Conditions*." In Nonclassical Partial Differential Equations, Ed. Vladimir N.Vragov. Novosibirsk: IM SOAN SSSR, 1988, 95—104. (Reported in *Referent. Math*., 1989, 12B442, p.62)

Work in Progress, key words:

Boundary homogenization of PDE in domains with microinhomogeneous structure (rapidly oscillating boundaries, concentrated masses situated on the boundary, rapidly alternating type of boundary conditions, thick multilevel and cascade junctions etc.). Vibration of thin plates, rods and junctions. Homogenization of random structures. Porous media (perforated materials). Equations of changing type. Behavior of domains rapidly oscillating in time. Measure approach to homogenization. The Helmholz resonators. Inequalities in mathematics and mechanics (Inequalities of Hardy type, Korn's type, Friedrichs type, Poincaré type etc.). System of equations in boundary layer theory. Boundary layers of Prandtle and Marangoni type for

inhomogeneous fluids. Rheological law of O.A. Ladyzhenskaya. Nematodynamics, the Ericksen-Leslie system of equations and the Eringen equations for liquid crystals. The Steklov type spectral problems. Asymptotics of eigenelements. Trajectory and global attractors of evolutionary equations with small parameter (Navier-Stockes, reaction-difusion, Ginzburg-Landau equations). The Boyarskii--Meyers estimates, higher (increased) integrability of solutions.

Editorial boards:

Applicable Analysis - member, since 2020
https://www.tandfonline.com/toc/gapa20/current

Mathematics - member, since 2020
https://www.mdpi.com/journal/mathematics/topic_editors

Contemporary Mathematics - member, since 2019
http://ojs.wiserpub.com/index.php/CM/about/editorialTeam

The Scientific World Journal - member, 2013 - 2016
http://www.hindawi.com/journals/tswj/editors/mathematical.analysis/.

University of Istanbul Faculty of Science Journal of Mathematics, Physics and Astronomy, New Series (IUJMPA) - member, since 2012
http://www.journals.istanbul.edu.tr/iusfjm/about/editorialTeam

ISRN Mathematical Physics - member, 2012 - 2015
http://www.isrn.com/journals/mp/editors/

Mathematics in Engineering, Science and Aerospace (MESA) - member, since 2010
http://nonlinearstudies.com/index.php/mesa/about/editorialTeam

Professional organizations (membership) and activities:

Member of the grading committee in Luleå Tekniska Universitet (Luleå, Sweden), May 2021.

Invited Professor of the Shanghai Jiao Tong University (China), May 2017.

Invited Professor of the Ėcole polytechnique fédérale de Lausanne (Swizarland), March 2015.

Invited Professor of the Università degli Studi di Salerno (Italy), August - September 2013.

Professor (40% position of Full Professor) of Sivilingeniør utdanningen i Narvik (Norway), January 2010 – December 2011.

Member of the grading committee in Luleå Tekniska Universitet (Luleå, Sweden), December 2010.

Member of the grading committee in Norwegian University of Life Sciences (Oslo, Norway), December 2010.

Invited Professor of the Università degli Studi di Salerno (Italy), July 2010.

Professor II (20% position of Full Professor) of Sivilingeniør utdanningen i Narvik (Norway), January 2007 – December 2009.

Opponent on PhD thesis in Luleå Tekniska Universitet (Luleå, Sweden),

September 2009.

Invited Professor of the Università degli Studi di Salerno (Italy), July 2009.

Maître des conférences invité (Invited Associate Professor) of Blaise Pascal University, Laboratoire de mathématiques appliquées (Clermont – Ferrand, France), April - May 2009.

Invited Professor of the Università degli Studi di Salerno (Italy), December 2008

Opponent on PhD thesis in Luleå Tekniska Universitet (Luleå, Sweden), September 2008.

Invited Professor of the Università degli Studi di Salerno (Italy), July 2008.

Maître des conférences invité (Invited Associate Professor) of Blaise Pascal University, Laboratoire de mathématiques appliquées (Clermont – Ferrand, France), April - May 2008.

Invited Professor of National Taras Shevchenko University of Kyiv (Ukraine), November - December 2007.

Invited Professor of the Università degli Studi di Salerno (Italy), July - August 2007.

Professeur invité (Invited Professor) of Pierre & Marie Curie University (Paris VI), Laboratoire Jacques-Louis Lions (Paris, France), March - April 2007.

Eksterne professor (External Professor) of Sivilingeniør utdanningen i Narvik (Norway), January – March 2006.

Opponent on PhD thesis in Luleå Tekniska Universitet (Luleå, Sweden), June 2005.

Eksterne professor (External Professor) of Sivilingeniør utdanningen i Narvik (Norway), January – March 2005.

Maître des conférences invité (Invited Associate Professor) of Blaise Pascal University, Laboratoire de mathématiques appliquées (Clermont – Ferrand, France), June - July 2004.

Eksterne professor (External Professor) of Sivilingeniør utdanningen i Narvik (Norway), January – March 2004.

Professeur invité (Invited Professor) of Blaise Pascal University, Laboratoire de mathématiques appliquées (Clermont – Ferrand, France), March - April 2003.

Eksterne professor (External Professor) of Sivilingeniør utdanningen i Narvik (Norway), December 2002 – February 2003.

Member of the grading committee in Luleå Tekniska Universitet (Luleå, Sweden), January 2003.

Eksterne professor (External Professor) of Sivilingeniør utdanningen i Narvik (Norway), October – December 2001.

Visiting Professor of Pierre & Marie Curie University (Paris VI), Laboratoire d'Analyse Numérique (Paris, France), September - October 2001.

Visiting Professor of Politecnico di Torino (Italy), September 2001.

Gjeste professor (Visiting Professor) of Høgskolen i Narvik (Norway), October - November 2000.

Visiting Professor of the Universidad de Cantabria (Spain), July 2000.

Gjeste professor (Visiting Professor) of Høgskolen i Narvik (Norway), September - October 1999.

Invited Professor of the University of Aizu (Japan), February 1999.

Invited Associate Professor of Bauman Moscow Higher Technical School (Moscow State Technical University), Department of Computational Mathematics and Mathematical Physics (Moscow, Russia), 1998 - 1999.

Research visitor of Høgskolen i Narvik (Norway), May 1998.

Professeur invité (Invited Professor) of Pierre & Marie Curie University (Paris VI),

Laboratoire d'Analyse Numérique (Paris, France), March - April 1997.
Invited Professor of Plekhanov Moscow Economical Academy, Center for Manager Training (Moscow, Russia), 1994 - 1995.
Member of Moscow Mathematical Society, from 1992.
Member and Executive Secretary of the Organizing Committee of Annual Petrovskii Conferences, from 1991.
International research program, fall, 1990, Indiana University, Department of Mathematics. Scientific Advisor - Professors Ciprian Foias, Vinai Deodar.
Research program, November, 1990, University of Minnesota, Department of Mathematics. Scientific Advisor - Professor Hans F. Weinberger.

Special Presentations:

Invited talk at the International O. A. Ladyzhenskaya Centennial Conference on PDE's (July 16 – 22, 2022, Saint-Pitersburg, Russia)

Plenary lecture at the International Conference on Differential Equations and Dynamical Systems (June 30 – July 5, 2022, Suzdal, Russia)

Invited talk at the 9th International Conference on Differential and Functional Differential Equations (June 28 - July 5, 2022, Moscow, Russia)

Plenary lecture at the International Saint-Petersburg Conference in Spectral Theory and Mathematical Physics, dedicated to the memory of M.Sh. Birman (June 22 – 26, 2022, Saint-Pitersburg, Russia)

Invited talk at the International Scientific Conference "Modern Problems of Mathematics and its Applications" (June 3-4, 2022, Dushanbe, Tadzhikistan)

Plenary lecture at the International conference "Voronezh Winter Mathematical Krein School – 2022" (Voronezh, Russia, January 22 – 26, 2022)

Invited talk at the Bilateral Conference on Integrable Systems and Geometry (Moscow, Russia, December 20 – 22, 2021)

Invited talk at the Conference of world-class international mathematical centers (Sirius, Sochi, Russia, August 9 – 13, 2021)

Invited talk at the International Conference «Problems of modern fundamental and applied mathematics», Dedicated to the 20th anniversary of Kazakhstan Branch of Lomonosov Moscow State University (Nur-Sultan, Kazakhstan, June 4, 2021)

Invited talk at the International Conference «Qualitative Theory of Differential Equations» (The creative legacy of outstanding mathematicians V.A. Kondratiev and O.A. Oleinik), Dedicated to the 85th anniversary of the birth of Professor of the Department of Differential Equations of Lomonosov Moscow State University V.A. Kondratiev and to the 95th anniversary of the birth of Professor of the Department of Differential Equations of Lomonosov Moscow State University Academician O.A. Oleinik (Moscow, Russia, December 27 – 28, 2020)

Plenary lecture at the International conference "Classical mechanics, dynamical systems and mathematical physics" on the occasion of V. V. Kozlov 70th birthday (Moscow, Russia, January 20 – 24, 2020)

Invited talk at the International Conference on Elliptic and Parabolic Problems (Gaeta, Italy, May 20 – 24, 2019)

Presentation at the International Conference "Contamporary Problems of Mathematics and Mechanics" dedicated to the 80-th anniversary of academician V.A.Sadovnichy (Moscow, Russia, May 13 – 15, 2019)

Presentation at the International Conference "Contamporary Methods of the Theory of Functions and Related Topics". Voronezh Winter Mathematical School (Voronezh, Russia, January 28 – February 2, 2019)

Plenary lecture at the International Conference "Spectral Theory and Related Topics" (Ufa, Russia, October 1 – 4, 2018)

Invited talk at the International Scientific Conference "Modern Problems of Mathematics and its Applications" (June 21-22, 2018, Dushanbe, Tadzhikistan)

Plenary lecture at the International Conference "Modern Methods and Problems of Mathematical Hydrodynamics." (Voronezh, Russia, May 3-8, 2018)

Presentation at the VI Congress of the Turkic World Mathematical Society (Astana, Kazakhstan, October 2 – 5, 2017)

Presentation at the Seventh International Conference on Differential and Functional Differential Equations (Moscow, Russia, August 13 – 20, 2017)

Invited talk at the International "Conference Multiscale Methods and Large-scale Scientific Computing" (Yakutsk, Russia, July 31 - August 3, 2017)

Invited talk at the 4th annual International Conference-School "Dynamics, Bifurcations, and Strange Attractors" (Nizhny Novgorod, Russia, July 2-9, 2017)

Invited talk at the International Conference on Elliptic and Parabolic Problems (Gaeta, Italy, May 22-26, 2017)

Plenary lecture at the 14-th International Conference on Integral Methods in Science and Engineerng (Padova, Italy, July 25 – 29, 2016)

Plenary lecture at the International Conference on Differential Equations and Dynamical Systems (Suzdal, Russia, July 8 – 12, 2016)

Invited talk at the Fifth International Conference Multiscale Modeling and Methods: Upscaling in Engineering and Medicine (Moscow, Russia, June 25-26, 2015)

Plenary lecture at the International Conference "Scaling Up and Modeling for Transport and Flow in Porous Media" (Dubrovnik, Croatia, September 29 to October 3, 2014)

Presentation at the Seventh International Conference on Differential and Functional Differential Equations (Moscow, Russia, August 22 – 29, 2014)

Presentation at the International Conference on Differential Equations and Dynamical Systems (Suzdal, Russia, July 4 – 9, 2014)

Colloquial presentation at Kharkiv Mathematical Society (Kharkiv, Ukraine, November 5, 2013)

Invited talk at the International Conference "Differential Equations, Function Spaces, Approximation Theory" Dedicated to the 105th Anniversary of Birthday of Sergei L'vovich Sobolev (Novosibirsk, Russia, August 18 – 24, 2013)

Presentation at the International Conference on Differential Equations and Dynamical Systems (Suzdal, Russia, June 29 to July 4, 2012)

Presentation at the Sixth International Conference on Differential and Functional Differential Equations (Moscow, Russia, August 14 – 21, 2011)

Plenary lecture at the Conference "Spectral Theory of Operators and its Applications" dedicated to the Memory of Professor A.G.Kostyuchenko (Ufa, Russia, June 13 – 15, 2011)

Plenary lecture at the Conference "Asymptotic Methods in the Theory of Differential Equations" (Chelyabinsk, Russia, June 8 – 12, 2011)

Minisimposium presentation at the SIAM Conference on Geosciences (Long Beach, CA, USA, March 21 to 24, 2011)

Presentation at the Conference "Functional Analysis and Differential Equations" Dedicated to the 70th Anniversary of V.V.Jikov (Vladimir, Russia, September 24 to 25, 2010)

Plenary lecture at the International Conference on Differential Equations and Dynamical Systems (Suzdal, Russia, July 2 to 7, 2010)

Presentation at the Conference "Days on Diffraction" Dedicated to the 80th Anniversary of

V.M.Babich (St.Petersburg, Russia, June 8 to 11, 2010)

Presentation at the Conference "Asymptotic Methods and Mathematical Physics" Dedicated to the 60th Anniversary of Sergei Yurievich Dobrokhotov (AMMP-2010) (Moscow, Russia, May 12 to 14, 2010)

Plenary lecture at the International Conference "Analysis, Inequalities and Homogenization Theory. Midnight sun conference in honour of Lars-Erik Persson on the occasion of his 65th birthday" (Luleå, Sweden, June 8 to 11, 2009)

Presentation at the International Workshop on Multiscale Modeling (Saint-Etienne, France, May 14 to 15, 2009)

Presentation at the International Conference "Modern Problems in Mathematics, Mechanics and their Applications" Dedicated to the 70th Anniversary of V.A.Sadovnichi (Moscow, March 30 to April 2, Russia, 2009)

Plenary lecture at the International Conference "Scaling Up and Modeling for Transport and Flow in Porous Media" (Dubrovnik, Croatia, October 13 to 16, 2008)

Presentation at the International Conference "Differential Equations, Function Spaces, Approximation Theory" Dedicated to the 100th Anniversary of Sergei L'vovich Sobolev (Novosibirsk, Russia, October 5 to 12, 2008)

Presentation at the Fifth International Conference on Differential and Functional Differential Equations (Moscow, Russia, August 17 to 24, 2008)

Plenary lecture at the International Conference on Differential Equations and Dynamical Systems (Suzdal, Russia, June 27 to July 2, 2008)

Colloquial presentation at Kyiv Mathematical Society (Kyiv, Ukraine, November 23, 2007)

Plenary lecture at the International Conference "Multiscale Problems in Science and Technology. Challenges to Mathematical Analysis and Perspectives" (Dubrovnik, Croatia, October 1 to 6, 2007)

Presentation at The Russian Conference "Mathematics in the Modern World" Dedicated to the Fiftieth Anniversary of the Sobolev Institute of Mathematics (Novosibirsk, Russia, September 17 to 23, 2007)

Plenary lecture at the International Conference "Function Theory, Differential Equations, Numerical Mathematics" (Alexei Leontiev Memorial Conference) (Ufa, Russia, May 28 to June 1, 2007)

Presentation at the International Conference "Actual Problems of Computational Mathematics", dedicated to the Memory of academician N.S.Bakhvalov (Moscow, Russia, August 28 to 29, 2006)

Plenary lecture at the International Conference on Differential Equations and Dynamical Systems (Suzdal, Russia, July 10 to 15, 2006)

Presentation at the International Conference "Tikhonov and Contemporary Mathematics" (Moscow, Russia, June 19 to 25, 2006)

Presentation at the III-d International Conference "Chebyshev's Mathematical Ideas and Applications to the Modern Sciences" (Obninsk, Russia, May 14 to 18, 2006)

Plenary lecture at the International Ufa Winter Mathematical & Physical School – Conference (Ufa, Russia, November 30 to December 6, 2005)

Presentation at the Workshop on Reactive Flow and Transport Through Complex Systems (Oberwolfach, Germany, October 30 to November 5, 2005)

Presentation at the Midnight Sun Narvik Conference "Multiscale Problems and Asymptotic Analysis" (Narvik, Norway, June 22 to 26, 2004)

Minisimposium presentation at the 6th Hellenic – European Conference on Computer Mathematics and its Applications (HERCMA 2003) (Athens, Hellas, September 25 to 27, 2003)

Minisimposium presentation at the 5th International Congress on Industrial and Applied Mathematics (ICIAM 2003) (Sydney, Australia, July 7 to 11, 2003)

Plenary lecture at the 5th International Symposium on Mathematical Analysis and its Applications (MAA5) (Niška Banja, Yugoslavia, October 2 to 6, 2002)

Plenary lecture at the Thirteen International Colloquium on Differential Equations (Plovdiv, Bulgaria, August 18 to 23, 2002)

Presentation at the International Conference on Differential and Functional Differential Equations (Moscow, Russia, August 11 to 17, 2002)

Presentation at the International Conference "Asymptotics of Solutions to Differential Equations" (Ufa, Russia, May 26 to 30, 2002)

Presentation at the International Conference "Mathematical Ideas of P.L.Chebyshev and their Applications to Modern Problems of Natural Sciences" (Obninsk, Russia, May 14 to 18, 2002)

Plenary lecture at the International Conference "Homogenization and Applications to Material Sciences" (HMS 2001) (Timişoara, Romania, September 15 to 19, 2001)

Invited lecture at the Conference "Multiscale Problems in Science and Technology. Challenges to Mathematical Analysis and Perspectives" (Dubrovnik, Croatia, September 3 to 9, 2000)

Presentation at the International Conference on Differential Equations and Dynamical Systems (Suzdal, Russia, August 21 to 26, 2000)

Poster Presentation at the 3rd European Congress of Mathematics (3ecm) (Barcelona, Spain, July 10 to 14, 2000)

Invited lecture at the International Workshop on Asymptotic and Numerical Analysis of Structures and of Heterogeneous Media (ANASTHEM-2000) (Saint-Petersburg, Russia, June 26 to 30, 2000)

Plenary lecture at the International Conference "Complex Analysis, Differential Equations and Related Topics" (Ufa, Russia, May 29 to 31, 2000)

Invited lecture at the Workshop "Multiscale Problems and Homogenization" (Heidelberg, Germany, November 29 to December 4, 1999)

Presentation at the Conference "Forskningsdagene-99" (Narvik, Norway, September 27 to 28, 1999)

Presentation at the International Conference on Differential and Functional Differential Equations (Moscow, Russia, August 16 to 21, 1999)

Special session lecture at 937th AMS Meeting (State College, Pennsylvania, USA, October 24 to 25, 1998)

Presentation (shrot communication) at the International Congress of Mathematicians (ICM-98) (Berlin, Germany, August 18 to 27, 1998)

Presentation at the Third Siberian Congress on Applied and Industrial Mathematics (INPRIM-98) (Novosibirsk, Russia, June 22 to 27, 1998)

Presentation at the International Conference "Functional Spaces. Differential Operators. Problems of Mathematical Education" (Moscow, Russia, March 23 to 27, 1998)

Presentation at the Junior Mathematical Congress (JMC-96) (Miskolc, Hungary, July 29 to August 2, 1996)

Invited lecture at the Colloque "Homogénéisation et Milieux Aléatoires" (Marseille, France, June 24 to 28, 1996)

Presentation at the International Conference "Complex Analysis, Differential Equations and Related Topics" (Ufa, Russia, May 28 to 30, 1996)

Presentation at the Workshop on material sciences (Minneapolis, Minnesota, USA, November 1995)

Presentation at the International Conference "Advanced Mathematics, Computations and

Applications" (Novosibirsk, Russia, June 20 to 24, 1995)

Invited lecture at the Colloque EurHomogenization "Homogénéisation et Applications aux Sciences des Matériaux" (Nice, France, June 6 to 10, 1995)

Presentation at the International Conference "Functional Spaces, the Approximation Theory, Nonlinear Analysis" (Moscow, Russia, April 27 to May 3, 1995)

Plenary lecture at the Scientific Conference "Lomonosov Recital" (Moscow State University, Moscow, Russia, April 18 to 27, 1995)

Presentation at the Workshop on Singular Perturbations (Oberwolfach, Germany, May 29 to June 4, 1994)

Presentation at the Second Workshop on Composite Media and Homogenization (Trieste, Italy, September 20 to October 1, 1993)

Presentation at the First Ukrainian – American School on Differential Equations and their Applications (Sudak, Ukraine, June 1 to 10, 1993).

Presentation at the School "Function Theory. Differential Equations in Mathematical Simulation" (Voronezh, Russia, January 25 to February 3, 1993).

Presentation at the Conference on Nonclassical Equations of Mathematical Physics (Novosibirsk, Russia, June 27 to 30, 1989).

Presentation at the Session of the Siberian Mathematical Society, Dedicated to 80-th Anniversary of S.L.Sobolev (Novosibirsk, Russia, November 1 to 2, 1988).

Colloquial and seminar presentations at

Shanghai Jiao Tong University (Shanghai, China) (2017), Universitetet i Stavanger (Stavanger, Norge) (2016), L.N.Gumilyov Eurasian National University (Astana, Kazakhstan) (2015, 2020, 2022), Nazarbayev University (Astana, Kazakhstan) (2015), V. N. Karazin Kharkiv National University (Kharkiv, Ukraine) (2013), Università degli Studi di Salerno (Fisciano, Italy) (2008), Institute of Mathematics (National Academy of Sciences of Ukraine) (Kyiv, Ukraine) (2007), Petersburg Department of V.A.Steklov Institute of Mathematics (PDMI) (St.Petersburg, Russia) (2005, 2007, 2021), Institute of Mathematics with Computing Center (Russian Academy of Sciences) (Ufa, Russia) (2004, 2022), Université Blaise Pascal (Cermont-Ferrand, France) (2003, 2007, 2012), Beograd University (Beograd, Yugoslavia) (2002), Pennsylvania State University (State College, USA) (2002), Università di Roma I ("La Sapienza") (Roma, Italy) (2001), Université Jean Monnet (Saint-Etienne, France) (2001, 2003), Politecnico di Torino (Torino, Italy) (2001), Oulun Yliopisto; Matematiikan Laitos (University of Oulu; Mathematical Department, Oulu, Finland) (2001, 2003, 2009, 2010, 2011), Luleå Tekniska Universitet (Luleå, Sweden) (2000, 2001, 2005, 2009, 2022), Universidad de Cantabria (Santander, Spain) (2000), University of Aizu (Aizu, Japan) (1999), University of Utah (Salt Lake City, USA) (1998, 2002), Høgskolen i Narvik (Narvik, Norge) (1998, 2000), Laboratoire d'Analyse Numérique (Jacques-Louis Lions) - Université Pierre et Marie Curie (Paris, France) (1997, 2003, 2004, 2007, 2008, 2009, 2012), Collège de France (Paris, France) (1996), Courant Institute of Mathematical Sciences (New York, USA) (1995), University of Minnesota (Minneapolis, USA) (1990, 1995), Indiana University (Bloomington, USA) (1990), Novosibirsk State University (Novosibirsk, Russia) (1988, 1989, 1995), Moscow Scientific Centers, Institutes and Universities (Moscow, Russia) (1987 - present),

*Presentations at Petrovskii Conferences on **Differential Equations and Related Topics** (Joint Sessions of Petrovskii Seminar on Differential Equations and Mathematical Physics together with Moscow Mathematical Society),*

Moscow State University [1989 (XII), 1991 (XIV), 1993 (XV), 1994 (XVI), 1995 (XVII), 1996 (XVIII), 1998 (XIX), 2001 (XX), 2004 (XXI), 2007 (XXII), 2011 (XXIII),

2021 (XXIV)].

Address:

Office: Department of Differential Equations,
Faculty of Mechanics and Mathematics,
M.V.Lomonosov Moscow State University,
Moscow 119991 Russia.
Phone +7 (495) 939-1631
Telex 411483MGUSU
Fax +7 (495) 939-2090
Home: Petrovskogo St., 3 - 43, Moscow 115419, Russia.
Phone +7 (499) 613-4535
E-mail chechkin@mech.math.msu.su, chechkin@mail.ru,
Gregory.Chechkin@yandex.ru, gregory.chechkin@gmail.com

Languages:

Russian (native), English, French

English proficiency:

Proficient (Advanced English Courses, Indiana University, fall, 1990.)

Recommendations:

Professor **Willi Jäger**, IWR, University of Heidelberg.
Professor **Doina Ciorănescu**, Sorbonne Université - Campus Pierre et Marie Curie
(former Paris-VI).
Professor **Graeme Milton**, University of Utah.
Professor **Hans F. Weinberger**, University of Minnesota.