

# CURRICULUM VITAE

Sergei A. Ivanov

(M.Sc. Leningrad State Univ.; Ph.D. Leningrad State Univ.)

## ♡♡ PERSONAL DETAILS ♡♡

### Address:

Pushkov institute of terrestrial magnetism, ionosphere and radio wave propagation of the Russian Academy of Sciences St.-Petersburg Branch.

Russia, S. Petersburg, 199034, Mendeleev line, 1.

Email: sergei.a.ivanov@mail.ru

**Date of Birth:** January 26, 1952

**Nationality:** Russian

**Place of Birth:** Leningrad, USSR

**Gender:** Male

**Marital Status:** Married

**Child:** none

## ♡♡ EDUCATION AND QUALIFICATIONS ♡♡

- **B.Sc: 1969-1974** Department of Mathematical Physics, Leningrad State University, Russia Major: Spectral Theory of Operators

- **M.Sc: 1974-1975** Department of Mathematical Physics, Leningrad State University, Russia

Master thesis: Regge problem and the model operator.

- **Ph.D: 1981-1983**

Faculty of Mathematics and Mechanics, Department of Mathematic and mechanics, Leningrad State University, Russia.

Ph.D Thesis: Completeness and Basis Property of Eigenfunction System of Ordinary non-Selfadjont Operator.

## ♡♡ WORKING EXPERIENCES AND EMPLOYMENTS ♡♡

- **Junior Scientific Researcher: March 1975 - Dec. 1983**

Faculty of Mathematics and Mechanics Institute of Mathematics and Mechanics, Leningrad State Univ. Russia

- ♣ Working fields: Finite element method, operator theory, nonharmonic Fourier series

- **Scientific Researcher: Dec. 1983 -1990**

Institute of Mathematics and and Mechanics, Leningrad State Univ. Russia

- ♣ Working fields: Finite element method, nonharmonic Fourier series, Distributed Parameter System Control
- **Senior Scientific Researcher: Dec. 1990 - 1998**  
Institute of Mathematics and and Mechanics, Leningrad State Univ. Russia
  - ♣ Working fields: nonharmonic Fourier series. Distributed Parameter System Control
- **Head of laboratory 1998 - 2004 ,**  
Russian Center of Laser Physics, St. Petersburg State Univ., Russia
  - ♣ Working fields: spectroscopy of atom ensemble decay, nonharmonic Fourier series, Distributed Parameter System Control
- **Senior scientific researcher 2004-2008 ,** Institute of laser technologies. St. Petersburg State Univ.
  - ♣ Working fields: spectroscopy of atom ensemble decay, nonharmonic Fourier series Distributed Parameter System Control
- **Senior scientific researcher 2008-2010 ,**  
Chemical Department, St. Petersburg State Univ.
  - ♣ Working fields: spectroscopy of atom ensemble decay, nonharmonic Fourier series, Distributed Parameter System Control
- **Associate Professor : 2010 - 2012**  
S. Petersburg State Marine Technical University
  - ♣ Working fields: nonharmonic Fourier series, Distributed Parameter System Control, inverse problems
  - ♣ Courses Taught: Mathematical analysis (high level two-year course), Control theory and inverse problems, History of mathematics.
- **Senior Scientific Researcher: 2012-2014**  
St. Petersburg Branch of Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, Russian Academy of Sciences.
  - ♣ Working fields: inverse problems in magnetometry, nonharmonic Fourier series, Distributed Parameter System Control
- **Leading Scientific Researcher: 2014-present**  
St. Petersburg Branch of Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, Russian Academy of Sciences.
  - ♣ Working fields: inverse problems in magnetometry, Distributed Parameter System Control.

## ♡♡ RESEARCH GRANTS ♡♡

- Control and inverse problems for partial differential equations. 1995-1996. Supported by the Commission of the European Communities in the frames of EC-Russia Collaboration (contract ESPRIT P 9282 ACTCS) — investigator.
- Multidimensional inverse problems of mathematical physics: theory and numerical experiment 1998-1999. Supported by the Russian Foundation for Basic Research, No. 198-01-00314a— investigator.
- Exponential Riesz bases in Sobolev spaces 1999-2000. Supported by the Russian Foundation for Basic Research, No. 199-01-00744a — main investigator.
- Exponential families in vector Sobolev spaces and solution estimates to delayed equations 2002-2004. Supported by the Russian Foundation for Basic Research, No. 02-01-00554a— main investigator.
- Multivelocety inverse problem and determination of residual stress 2002 - 2005. Supported by The Education Ministry of Russia, No. E02-1.0-172— main investigator.
- Fast algorithms for hp-discretization of three dimensional linear and non linear elliptic equations 2005 - 2007. Supported by the Russian Foundation for Basic Research, No. 05-01-00779-a— investigator.
- Spectral analysis of operators in Hilbert spaces and its applications 2005 - 2007. Supported by the Russian Foundation for Basic Research, No. 05-01-00989-a— investigator.
- Methods of spectral analysis for differential, difference and other types of operators and its applications 2008 - 2010. Supported by the Russian Foundation for Basic Research, No. 08-01-00595a— investigator.
- Fast parallel adaptive solves of decomposition method for hp-discretization of boundary problems and error estimates 2008-2010. Supported by the Russian Foundation for Basic Research, No. 08-01-00595a— investigator.
- High-speed performance, robustness, parallelization of computations and control errors in the finite element analysis 2011 - 2013. Supported by the Russian Foundation for Basic Research, No. 11-01-00667-a— investigator.
- Spectral problems of differential and difference operators and its applications 2011 - 2013. Supported by the Russian Foundation for Basic Research, No. 11-01-00790-a— investigator.
- Operator spectral theory and its applications in in fluid mechanics and the boundary control problem 2011 - 2012. Supported by the Russian Foundation for Basic Research, No. 11-01-12115-ofi-m-2011— investigator.

- Spectral analysis of differential and difference operators and applications 2014 - 2016, Supported by the Russian Foundation for Basic Research, No. 14-01-00349— investigator.
- The study of the fine structure of marine linear magnetic anomalies of the oceans and geohistorical and paleomagnetic analysis 2015-2017. Supported by the Russian Foundation for Basic Research, No. 15-05-00292a— investigator.

♡♡ **SHORT AND LONG-TERM VISITING POSITIONS** ♡♡

- **Visiting Professor: March 1994-April 1994**  
Ecole superior de Cachan, France,  
♣ Working fields: Inverse problems.  
Reference: Prof. C. Bardos.
- **Visiting Professor: December 1996 - December 1996**  
Tokio Science University, Japan,  
♣ Working fields: Inverse problems.  
Reference: Prof. G.Nakamura.
- **Visiting Professor: March 1997**  
Virginia TeX, USA.  
♣ Working fields: Controllability problems.  
Reference: Prof. D.L.Russell
- **Visiting Professor: April 1997**  
Maryland University, USA.  
♣ Working fields: Controllability problems.  
Reference: Prof. T. Seidman.
- **Visiting Professor: March 2004-April 2004**  
Gunma University, Japan.  
♣ Working fields: Inverse problems.  
Reference: Prof. G.Nakamura.
- **Visiting Professor: July 2004**  
Academy of Mathematics and System Sciences, Academia Sinica, Beijing 100080.  
♣ Working fields: Control problems for hybrid systems.  
Reference: Prof. B.G. Guo.

- **Visiting Professor: March 2005**

Geophysical Institute, University of Alaska Fairbanks (UAF), USA.

♣ Working fields: Controllability and identification problems.

Reference: Prof. S. A. Avdonin.

- **Visiting Professor: Nov. 2007**

University of the Witwatersrand, Johannesburg, South Africa.

♣ Working fields: Control problems.

Reference: Prof. B.G. Guo.

- **Visiting Professor: Sept. 2016 - Dec 2016**

School of Mathematics and Statistics, Beijing Institute of Technology.

♣ Working fields: Control problems.

Reference: Prof. J.M. Wang.

- **Visiting Professor: March 2018 - Mai 2018**

School of Mathematics and Statistics, Beijing Institute of Technology.

♣ Working fields: Control problems.

Reference: Prof. J.M. Wang.

### ♠♠♠ PUBLIC PEER COMMENTS ♠♠♠

- H.O.Fattorini in **"Zentralblatt"** comments the book [Avdonin, S.A. and Ivanov, S.A., Families of exponentials. The method of moments in controllability problems for distributed parameter systems., Cambridge: Cambridge Univ. Press. xv, 302 p., 1995], **"For many years, information on controllability via moment problems could only be found rummaging in original papers. Except for sporadic partial treatments, the first book fully devoted to the subject was the authors' monograph [Controllability of distributed parameter systems and families of exponentials (in Russian), UMK BO, Kiev]. Although written by two of the principal actors in the field, popularity of this work was limited chiefly because of the language barrier and unattractive typesetting. The present book is a much improved version of the earlier monograph (in fact, in many senses a totally new work) and it should be useful to most control scholars."**

- V. Komkov in **"Zentralblatt"** comments paper [Avdonin, S.A. and Ivanov, S.A., Controllability types of a circular membrane with rotationally symmetric data, Control Cybern., volume=28, number=3, pages 383-396,1999]

**It is a well written paper, offering a study of a relatively simple engineering system, but illustrating much of the recent (and not so simple) abstract analysis."**

♠♠♠ List of PUBLICATIONS ♠♠♠

Sergei A. Ivanov

**Monographs**

1. S. Avdonin and **S. Ivanov**, Controllability Theory for Distributed Parameter Systems and Families of Exponentials. Kiev, 1989. 248 p. (Russian).
2. **S. Ivanov**, S. Avdonin and S. Ivanov (1995). Families of Exponentials. The Method of Moments in Controllability Problems for Distributed Parameter Systems. Cambridge University Press, N Y, 302p.

**PUBLICATIONS in Refereed International Journals**

3. S. Avdonin, **S. Ivanov**, and I. Joo, On theorem N.K. Bari. *Studia Sci Math. Hung.* 1989, v.24, pp. 259-261.
4. S. Avdonin, **S. Ivanov**, and I. Joo, On Riesz bases from vector exponentials I. *Annales Univ. Sci. Budapest.* 1989, v.32, pp. 101-114.
5. S. Avdonin, **S. Ivanov**, and I. Joo, On Riesz bases from vector exponentials II. *Annales Univ. Sci. Budapest.* 1989, v.32, pp. 115-126.
6. S. Avdonin, **S. Ivanov**, and I. Joo, Families of exponentials and controllability of a rectangular membrane. *Studia Sci. Math. Hungarica*, 1990, v.25, pp. 291-306. (Russian).
7. S. Avdonin and **S. Ivanov** (1995). Boundary controllability problems for the wave equation in a parallelepiped. *Appl. Math. Lett.* V.8, no.2, pp.97-102
8. **S. Ivanov**, (1996) Nonharmonic Fourier series in the Sobolev spaces of positive fractional orders. *New Zealand Journal of Mathematics* v. 25, (1996), 36-46
9. Belishev M., A. Blagovestchenskii, and **S. A. Ivanov**, The Two-Velocity Dynamical System: Boundary Control of Waves and Inverse problems. *Wave Motion* 25 (1997) 83-107, Erratum (typeset error) 26 (1997).
10. M.I. Belishev, V.Yu. Gotlib and **S.A. Ivanov** The BC-method in multidimensional spectral inverse problem: theory and numerical illustrations, *ESAIM: COCV*, October 1997, Vol. 2, pp. 307-327
11. **S.A. Ivanov**, Control norms for large control times, *ESAIM: COCV*, July 1999, Vol. 4, p. 405-418
12. Avdonin, Sergei A.; **Ivanov, Sergei A.** Controllability types of a circular membrane with rotationally symmetric data. *Control and Cybernetics*, v.28 (1999), no.3, 384-396.
13. Sergei A. Avdonin, **Sergei A. Ivanov**, and David Russell. Exponential bases in Sobolev spaces in control and observation problems for the wave equation. *Proc. Royal Soc. Edinburgh*, 130A(5):947-970, 2000.

14. T.I. Seidman, S.A. Avdonin, and **S.A. Ivanov**, ‘Window’ problem for complex exponentials, *J. Fourier Analysis Appl.*, 6 (2000), no. 3, 233–254.
15. S.A. Avdonin and **S.A. Ivanov**, Exponential Riesz bases of subspaces and divided differences, *St Petersburg Mathematical Journal*, 13 (2001), no. 3, 339–351.
16. **Ivanov, S.** and Kalton, N., Interpolation of subspaces and applications to exponential bases. *St. Petersburg Math. J.* 13 (2002), no. 2, 221–239
17. Vlasov, V. V.; **Ivanov, S. A.**, Estimates for solutions of equations with aftereffect in the scale of Sobolev spaces, and a basis of divided differences. *St. Petersburg Math. J.* 15 (2004), no. 4, 545–561
18. **Sergei A. Ivanov**, Chi-Sing Man, and Gen Nakamura Recovery of residual stress in a vertically heterogeneous elastic medium *IMA Journal of Applied Mathematics* 02/2005.
19. B. Z. Guo and **Sergei A Ivanov**, On boundary controllability and observability of a one-dimensional non-uniform SCOLE system, *Journal of Optimization Theory and Applications*, 127(1)(2005), 89-108.
20. **Ivanov** and Vlasov, Sharp estimates for solutions of systems with aftereffect *St Petersburg Mathematical Journal* 01/2008; 20(2):193-211.
21. S.A. Avdonin and **S.A. Ivanov**, Sampling and Interpolation Problems for Vector Valued Signals in the Paley-Wiener Spaces *IEEE Transactions on Signal Processing* 12/2008;
22. S.A. Avdonin and **S.A. Ivanov**, Sampling problem for non-separated sets and divided differences *Sampling Theory in Signal and Image Processing* 01/2009; 8(2).
23. **S. Ivanov** and L. Pandolfi, Heat equation with memory: Lack of controllability to rest *Journal of Mathematical Analysis and Applications* 07/2009; 355(1):1-11.
24. Sergei A. Avdonin, Boris P. Belinskiy, **Sergei A. Ivanov**, On Controllability of an Elastic Ring *Applied Mathematics and Optimization* 08/2009; 60(1):71-103.
25. Alexandre Eremenko and **Sergei A. Ivanov**, Spectra of the Gurtin-Pipkin Type Equations *SIAM journal on mathematical analysis* 43(5):2296-2306, January 2011
26. **Sergei Ivanov** and Jun min Wang, Controllability of a Multichannel System *Journal of Differential Equations*, November 2017 264(4):2538-2552
27. Sergei Avdonin, **Sergei Ivanov**, and Jun min Wang, Inverse Problems for the Heat Equation with Memory. *Inverse problems and Imaging* 13-1 February 2019.

#### **PUBLICATIONS in Refereed International Conference Proceedings**

28. S.Avdonin, S. Belishev and **S. Ivanov**, Control and inverse problem for multi-channel hyperbolic systems. Proc. of *SIAM Conference on Control Sept. 17-19, 1992, Minneapolis.*

29. S.A. Avdonin and **S. A. Ivanov**, Controllability of networks of elastically connected strings, *Proceedings of the 31th IEEE Conference on Decision and Control, December 16–18, 1992, Tuscon, Arizona*, pp. 3009-3011.
30. **S. A. Ivanov** and S. A. Merkuriev. Some remarks on resolving and interpretation of the short marine magnetic anomalies. *Proceeding of International Conference "Problem of Geocosmos"*, October 3-7, 2016, St. Petersburg, Russia. VVM Publishing, 2016, pp. 37-44.
31. **S. A. Ivanov** and S. A. Merkuriev, Preliminary Results of the Geohistorical and Paleomagnetic Analysis of Marine Magnetic Anomalies in the Northwestern Indian Ocean. *Recent Advances in Rock Magnetism, Environmental Magnetism and Paleomagnetism. International Conference on Geomagnetism, Paleomagnetism and Rock Magnetism (Kazan, Russia) Springer International Publishing, Proceedings of the 12th International School and Conference "Conference on Paleomagnetism and Rock Magnetism"*. Springer International Publishing, 2019, pp.479-490

#### PUBLICATIONS in Refereed Russian Journals

32. **S. Ivanov**, Calculations of eigenvalues of the biharmonic operator. *Izv. Akad. Nauk SSSR Ser. Mekh.* 2 (1977), 187.
33. **S. Ivanov**, B.Pavlov, Carleson series of resonances in the Regge problem. *Izv. Akad. Nauk SSSR Ser. Mat.* 42 (1978), 26-55; English transl. in *Math. USSR Izv.* 12 (1978).
34. **S. Ivanov**, V.Korneev, On a five-point approximation scheme for the biharmonic operator. *"Metody Vycislenii" (Numerical Methods)*, 11, (1978) (Russian)
35. **S. Ivanov**, Completeness of resonance state system of matrix polar operator. *Vestnik Leningrad. Univ.* 1978, no. 19, (Ser. Mat. Mekh. Astr. vyp. 4), 43-48; English transl. in *Vestnik Leningrad Univ. Math.* 11 (1983).
36. **S. Ivanov**, B.Pavlov, Vector valued exponential systems and zeros of entire matrix-functions. *Vestnik Leningrad. Univ.* 1980, no. 1, (Ser. Mat. Mekh. Astr. vyp. 1, 25-31 (Russian).
37. **S. Ivanov**, V.Korneev, Fast discrete Fourier transform for differential equations of fourth order. *Vestnik Leningrad. Univ.* 1980, no. 13, (Ser. Mat. Mekh. Astr.), 25-31 (Russian).
38. **S. Ivanov**, Completeness and basis property of resonance state system of operator. *Vestnik Leningrad. Univ.* 1983, no. 13, (Ser. Mat. Mekh. Astr.), 89-90. (Russian).
39. S.Avdonin and **S. Ivanov**, Exponential serial bases and the problem of the complete damping of systems of strings *Dokl. Akad. Nauk SSSR* 275 (1984), 355-358; English transl. in *Soviet Phys. Dokl.* 29 (1984). (Russian).



40. **S. Ivanov**, V.Korneev, Estimates of Gauss quadratures on a space of piecewise polynomial function. *Vestnik Leningrad. Univ.* 1985, no 13, 29-35. (Russian).
41. **S. Ivanov**, Bases of rational vector-valued functions and Carleson sets, *Akad. Nauk Armyan. SSR Dokl.*, v. 80 (1985), 20-25,(Russian).
42. **S. Ivanov**,The best rational approximations by vector-valued functions in the Hardy spaces. *Matemat. sbornik* 1987, 133 (175), vyp. 1 (5), 134-142. (Russian); English transl. in *Math. USSR Sbornik* v.61 (1988), N.1, 137-145.
43. **S. Ivanov**, V.Korneev, Condition number of FEM matrix for the Neumann problem with fixed values in a node. *Vestnik Leningrad. Univ.* 1988, no. 1, (Ser. Mat. Mekh. Astr.), 97-98 (Russian).
44. **S. Ivanov**, V.Korneev and J. Lang, Estimates of constants in inequalities for bases elements. "Zhurn. vychisl. mat. i mat. phys." 28,1988, no 9, pp.1425 -1431. (Russian).
45. S.Avdonin and **S. Ivanov**, Generating matrix-valued function in problems of controlling the vibrations of connected strings. *Dokl. Akad. Nauk SSSR*, 307, 1989, 1033-1037. English transl. in *Soviet Math. Dokl.*, 1990, v.40, no. 1, 179-183.
46. **S. Ivanov**, Smooth diagonalization of Hermitian matrix-functions. "Ukrain Math. Journal", (1989), v.41, no. 11, p. 1569-1572.
47. S.Avdonin, **S. Ivanov**, and I. Joo, Initial and pointwise control of rectangular membrane vibrations. *Avtomatika*, 1990, no. 6, pp. 68-71. (Russian).
48. S.Avdonin, M.Belishev, and **S. Ivanov**, Boundary control and matrix inverse problem for the equation  $u_{tt} - u_{xx} + Q(x)u = 0$ , *Math. USSR Sbornik*, v. 182 (1991), no.3, pp. 307-331. (Russian); English transl. in *Math. USSR Sbornik*, v.72 (1992), 287-310.
49. **S. Ivanov** and V.Korneev, The problem of heat radiation of shell taking account of internal reflection. "Zhurn. vychisl. mat. i mat. phys." 30, 1991, no. 1, pp. 132-143. (Russian).
50. S.Avdonin, A.Ishmukhamedov, and **S. Ivanov**, A quadratic problem of optimal control of the vibrations of string. *Dokl. Akad. Nauk SSSR* 317, 1991, no. 1, pp. 22-26. (Russian); English transl. in *Soviet Math. Dokl.* v.43 (1991), no. 1.
51. S.Avdonin, M.Belishev, and **S. Ivanov**, Dirichlet boundary control in captured domain for multidimensional wave equation. *Avtomatika*, 1991, no. 2, pp. 86-90 (Russian ); English transl.in *Soviet Automatic Automat. Inform. Sci.* 24 (1991), no. 2, pp. 76-80.
52. **S. Ivanov**, V.N. Ivanova, Smirnov V.B. and Taibin B.Z., Z-transform and Pade approximation and determination of parameters of exponentially damped signals, *Optika i Spektroskopiya*, v.73 (1992), N. 2, 262-268 (Russian).

53. **S. Ivanov** and Smirnov V.B., Cramer-Rao bound in the problem of estimation of exponentially damped processes, *Optika i Spektroskopiya*, v.73 (1992), N.6, 1194-1199 (Russian). English translation in *Opt. Spectroscop.* v.73 (1992), N.6, pp. 711-713.
54. **S. Ivanov** and Smirnov V.B.(1994) On parameter detecting of exponentially damped signals, *Optika i Spektroskopiya*, 77(2): 264-267(in Russian). English translation in *Opt. Spectroscop.*
55. Avdonin S.A., Belishev M.I., and **Ivanov S.A.** (1993) Controllability in filled domain for the multidimensional wave equation with singular boundary control. *Zapiski Nauchn. Seminarov POMI*, v.210, 7-21
56. **S. Ivanov** and Korneev V.G. Choice of coordinate functions of high order and preconditioner for the domain decomposition method. *Izvestiya VUZov, Math.* 1995 No.4 (395) 1-20.
57. Belishev M. and **Ivanov S.** Boundary control and canonical realization of two-velocity dynamical system. *Zap. Nauchn. Semin. POMI*, v.222 (1995) , pp. 18-44.
58. **Ivanov.S.A.** and Korneev V.G.Preconditioning in the domain decomposition methods for the p-version with the hierarchical bases. Proceedings of the conference on the optimization of the finite element approximation (OFFA-95), St-Petersburg, 25-29 June 1995. *Matematicheskoe modelirovanie*, v.8, No 9, 1996, 63-73.
59. Belishev M.I., and **Ivanov S.A.** (1999) Characterization of data in dynamical inverse problem for two-velocity system. *Zapiski Nauchn. Seminarov POMI*, v.259, 19-46.
60. S.A. Avdonin and **S.A. Ivanov**, Levin-Golovin theorem for the Sobolev spaces, *Math. Notes*, 68 (2000), no. 1-2, 145-153.
61. Vlasov, V. V.; **Ivanov, S. A.** The basis property and estimates for solutions of equations with aftereffect in a scale of Sobolev spaces. (Russian) *Uspekhi Mat. Nauk* 56 (2001), no. 3(339), 151-152; translation in Russian *Math. Surveys* 56 (2001), no. 3, 595-596
62. Vlasov, V. V.; **Ivanov, S. A.** Estimates for solutions of equations with aftereffect in Sobolev spaces and a basis of divided differences. (Russian) *Mat. Zametki* 72 (2002), no. 2, 303-306; translation in *Math. Notes* 72 (2002), no. 1-2, 271-274.
63. Belishev, M. I.; **Ivanov, S. A.** Characterization of data in the dynamic inverse problem for a two-velocity system. (Russian) *Zap. Nauchn. Sem. S.-Peterburg. Otdel. Mat. Inst. Steklov. (POMI)* 259 (1999), Kraev. Zadachi Mat. Fiz. i Smezh. Vopr. Teor. Funkts. 30, 19-45, 296; translation in *J. Math. Sci.* (New York) 109 (2002), no. 5, 1814-1834

64. Belishev, M. I.; **Ivanov, S. A.** Uniqueness in the small in a dynamic inverse problem for a two-velocity system. (Russian) *Zap. Nauchn. Sem. S.-Peterburg. Otdel. Mat. Inst. Steklov. (POMI)* 275 (2001), Mat. Vopr. Teor. Rasprostr. Voln. 30, 41–54, 310–311; translation in *J. Math. Sci. (N. Y.)* 117 (2003), no. 2, 3910–3917
65. Vlasov, V. V.; **Ivanov, S. A.** On estimates for solutions of functional-differential equations of neutral type in Sobolev spaces. (Russian) *Dokl. Akad. Nauk* 396 (2004), no. 4, 443–445.
66. Belishev, M. I.; **Ivanov, S. A.** Reconstruction of the parameters of a system of connected beams from dynamic boundary measurements. (Russian) *Zap. Nauchn. Sem. S.-Peterburg. Otdel. Mat. Inst. Steklov. (POMI)* 324 (2005), Mat. Vopr. Teor. Rasprostr. Voln. 34, 20–42, 262.
67. V. V. Vlasov, **S. A. Ivanov** et al, Spectral properties of combined media. *Journal of Mathematical Sciences* 02/2010; 164(6):948-963.
68. **S. A. Ivanov** and S. A. Merkur'ev,, Resolvability of the interval between inversions using marine magnetic anomalies based on the Rao-Cramer inequality *Geomagnetism and Aeronomy* 11/2013; 53(6):785-793.
69. **S. A. Ivanov** and S. A. Merkur'ev, Interpretation of marine magnetic anomalies. Part I. A survey of existing methods and analysis of the analytic signal method *Geomagnetism and Aeronomy* 05/2014; 54(3):388-396.
70. **Sergei A. Ivanov** and S. A. Merkur'ev, Interpretation of marine magnetic anomalies. Part II. Analysis of the new method and algorithm based on the least squares method *Geomagnetism and Aeronomy* 07/2014; 54(4):530-536.

**PUBLICATIONS in Arxive of Cornel Univ. (<http://arxiv.org/>)**

71. **Sergei Ivanov**, Interpolation of subspaces and applications to exponential bases. *arXiv:math/9912187*
72. **S. Ivanov**, T. Sheronova, Spectrum of the heat equation with memory, *arXiv:0912.1818*
73. **S. A. Ivanov**, 'Wave type' spectrum of the Gurtin-Pipkin equation of the second order, *arXiv:1002.2831*
74. **Sergei A. Ivanov**, Regularity of the Gurtin-Pipkin equation, *arXiv:1205.0616*
75. **Sergei Ivanov**, Singularity Propagation for the Gurtin-Pipkin equation, *arXiv:1312.1580*
76. **S.A. Ivanov** and S.A. Merkuriev, Testing the Dynamic Time Warping algorithm in the Seafloor Spreading Rate Problem, [arxiv.org/ftp/arxiv/papers/1712/1712.03920.pdf](http://arxiv.org/ftp/arxiv/papers/1712/1712.03920.pdf)
77. **Sergey Ivanov, Irina Demina, Sergey Merkuruyev**, Subduction Zone Effect on the Structure of the Small-Scale Currents at Core-Mantle Boundary, *arXiv:1904.03676*