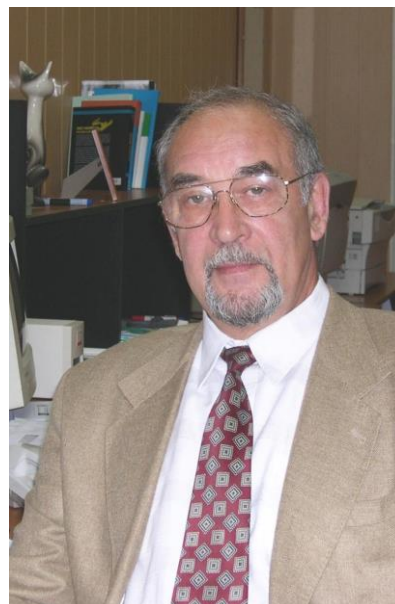


CURRICULUM VITAE

Professor Vadim S. Anishchenko



PERSONAL DATA

DATE OF BIRTH October 21, 1943
PLACE OF BIRTH Saratov, Russia
MARITAL STATUS Married, having 1 child (1974)
CITIZENSHIP Russia

PERMANENT ADDRESSES

Office:

Department of Physics,
Saratov National Research State University,
Astrakhanskaya 83,
Saratov, 410012, Russia
Tel/fax: +7-8452-210710
E-mail: wadim@info.sgu.ru

Home:

Michurina street, 169, apt. 14,
Saratov, 410031, Russia
Tel: +7-8452-234898 (home), +7-927-227-2474 (mobile).

FIELDS OF RESEARCH

Theory of nonlinear oscillations
Nonlinear dynamics and dynamical chaos
Statistical radiophysics
Applications of nonlinear dynamics methods in biology and medicine.

ACADEMIC DEGREES

- 01.06.1966 Master of Science, Saratov State University, Russia
- 01.10.1970 Ph.D., Saratov State University, Russia
- 01.04.1987 Doctor of Sciences, Supreme Attestation Commission
of the Russian Federation, Moscow, Russia

ACADEMIC AWARDS

- 01.06.1989 Professor of Physics, Supreme Attestation Commission
of the Russian Federation, Moscow, Russia
- 01.06.1994 Scientific Grant of the President of the Russian
Federation and the Russian Academy of Science,
Moscow, Russia
- 01.01.1995 Honored Man of Science of the Russian Federation,
State Commission at the President of Russian
Federation
- 1994 - 1999
1997 Soros Professor, International Science Foundation
Corresponding Member of the Russian Academy of
Natural Sciences
- 1999 Humboldt Research Award
- 2002 Academician of the Russian Academy of Natural
Sciences
- 2004 Medal of the Order of Merit for the Fatherland, II degree,
State Commission at the President of Russian
Federation
- 2005 Re-Invitation for Research Award Winners (the Humboldt
Foundation)
- 2006 Grant of the RF President for the Russian Leading
Scientific School on Radiophysics and Nonlinear
Dynamics
- 2011 Re-Invitation for Research Award Winners (the Humboldt
Foundation)
- 2013 Honored Professor of Saratov State University

PROFESSIONAL BACKGROUND

- 10.2013 - present Scientific Advisor of the Rector of Saratov National
Research State University
- 10.1988 - present Head of Radiophysics and Nonlinear Dynamics Chair,
Saratov State University, Russia
- 07.1987 - 10.1988 Professor of Physics, Saratov State University, Russia
- 01.1987 - 06.1987 Invited Professor, Humboldt University at Berlin
- 09.1970 - 01.1987 Assistant, Associate Professor, Saratov State University,

- 10.2013 - present Scientific Advisor of the Rector of Saratov National
Research State University
Saratov, Russia
- 01.1968 - 09.1970 Ph.D. student, State University, Saratov, Russia
- 08.1966 - 12.1967 Senior engineer, Scientific and Research Institute of
Mechanics and Physics, Saratov State University,
Saratov, Russia

PHD AND DOCTORS OF SCIENCES

Professor V.S. Anishchenko was a scientific supervisor of 22 PhD students and 6 Doctors of Sciences (habilitation) who successfully defended their dissertations.

RESEARCHES ABROAD

- 11-12.2015 Research visit to Technical University (Prof. E. Schoell)
- 10-11.2014 Research visit to Technical University (Prof. E. Schoell)
- 10-11.2013 Research visit in Humboldt University at Berlin (Prof. L.
Schimansky-Geier, Prof. I. Sokolov) and Technical
University of Berlin (Prof. E. Schoell)
- 02-05.2011 Research visit in the framework of the Re-invitation
Programme for Research Award Winners in Humboldt
University at Berlin (Prof. J. Kurths)
- 01-02.2010 Research visit in Humboldt University at Berlin (Prof. L.
Schimansky-Geier, Prof. J. Kurths)
- 10-11.2008 Research visit in Humboldt University at Berlin (Prof. L.
Schimansky-Geier, Prof. I. Sokolov)
- 09-10.2005 Research visit in the framework of the Re-invitation
Programme for Research Award Winners in Humboldt
University at Berlin (Prof. L. Schimansky-Geier)
- 10-11.2003 NATO Science Fellowship, Institute of Physical Chemistry,
National Center for Scientific Research «Demokritos»,
Athens, Greece (Dr. A. Provata)
- 2000 - 2002 Research visits in the framework of the Humboldt Research
Award, Humboldt University at Berlin (Prof. W. Ebeling,
Prof. L. Schimansky-Geier) and Potsdam University (Prof.
J. Kurths)
- 07.1998 Invited research visit in School of Physics and Chemistry,
Lancaster University, UK (Prof. P.V.E. McClintock)
- 11.1997 -12.1997 Invited research visit in Swiss Federal Institute of
Technology, Lausanne, Switzerland (Prof. M. Hasler)
- 06.1997 - 07.1997 Research visit in University of Missouri at St.Louis, USA
(Prof. F. Moss)
- 08.1995 - 09.1995, Invited research visits in the University of Potsdam,

- 11.1992 -12.1992 Department of Physics (Prof. J. Kurths)
- 10.1994 - 11.1994, 02.1987 - 07.1987 Invited research visits in Humboldt University at Berlin, Institute of Physics (Prof. W. Ebeling)
- 10.1993 - 12.1993, 04.1992 - 06.1992 Invited research visits in University of California at Berkeley, Department of Electrical Engineering and Computer Sciences (Prof. L.O. Chua)

SELECTED MONOGRAPHS AND TEXTBOOKS

1. Anishchenko V.S. Dynamical Chaos - Basic Concepts. B-14, Teubner-Texte zur Physik, Leipzig, 1987, 172 p.
2. Anishchenko V.S. Dynamical Chaos in Physical Systems: Experimental Investigation of Self-Oscillating Circuits. B-22, Teubner-Texte zur Physik, Leipzig, 1989, 212 p.
3. V.S. Anishchenko, Complex Oscillations in Simple Systems. "Nauka" Publishing House, Moscow, 1990, 312 p. (in Russian).
4. V.S. Anishchenko. Dynamical Chaos – Models and Experiments. Appearance Routes and Structure of Chaos in Simple Dynamical Systems. World Scientific Series on Nonlinear Science. Series A. Vol.8, 1995, 384 p. Series Editor: Leon O. Chua.
5. V.S. Anishchenko, V.V. Astakhov, A.B. Neiman, T.E. Vadivasova, and L. Schimansky-Geier, Nonlinear Dynamics of Chaotic and Stochastic Systems. Tutorial and Modern Development Springer, Berlin, Heidelberg, 2002, 374 p.
6. V.S. Anishchenko, V.V. Astakhov, A.B. Neiman, T.E. Vadivasova, and L. Schimansky-Geier, Nonlinear Dynamics of Chaotic and Stochastic Systems. Tutorial and Modern Development. 2nd Edition. Springer, Berlin, Heidelberg, 2007, 450c.
7. V.S. Anishchenko, V.V. Astakhov, T.E. Vadivasova, and G.I. Strelkova, Synchronization of Regular, Chaotic and Stochastic Oscillations (textbook). Institute of Computer Research Publishing House, Moscow-Izhevsk, 2008, 144 p. (in Russian).
8. V.S. Anishchenko, V.V. Astakhov, T.E. Vadivasova, Regular and Chaotic Self-Sustained Oscillations (monograph-textbook). "Intellect" Publishing House, Moscow, 2009, 312 p. (in Russian).
9. V.S. Anishchenko, T.E. Vadivasova, Lectures on Nonlinear Dynamics (textbook). "Regular and Chaotic Dynamics" Publishing House, Moscow-Izhevsk, 2011, 500 p. (in Russian).
10. V.S. Anishchenko, T.E. Vadivasova, and G.I. Strelkova, Deterministic Nonlinear Systems. A Short Course. Springer Series in Synergetics. Springer, Berlin, 2014, 294 p.

SELECTED HIGH-CITED PUBLICATIONS

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| 1. V.S. Anishchenko, A.B. Neiman, F. Moss, L. Schimansky-Geier, Stochastic resonance: noise-enhanced order. Physics-Uspekhi 42 (1), 7-36 (1999). | 411 |
| 2. A. Neiman, A. Silchenko, V. Anishchenko, L. Schimansky-Geier, Stochastic resonance: Noise-enhanced phase coherence. Physical Review E 58 (6), 7118 (1998). | 167 |
| 3. V.S. Anishchenko, T.E. Vadivasova, D.E. Postnov, M.A. Safonova, Synchronization of chaos. International Journal of Bifurcation and Chaos 2 (03), 633-644 (1992). | 166 |

4. B. Shulgin, A. Neiman, V. Anishchenko, 148
Mean switching frequency locking in stochastic bistable systems driven by a periodic force.
Physical Review Letters **75**(23), 4157 (1995).
5. V.S. Anishchenko, A.B. Neiman, M.A. Safonova, 141
Stochastic resonance in chaotic systems.
Journal of Statistical Physics **70** (1-2), 183-196 (1993).
6. A. Neiman, B. Shulgin, V. Anishchenko, W. Ebeling, L. Schimansky-Geier, 104
Dynamical entropies applied to stochastic resonance.
Physical Review Letters **76**(23), 4299 (1996).
7. V. Astakhov, A. Shabunin, T. Kapitaniak, V. Anishchenko, 84
Loss of chaos synchronization through the sequence of bifurcations of saddle periodic orbits.
Physical Review Letters **79**(6), 1014 (1997).
8. V.S. Anishchenko, M.A. Safonova, L.O. Chua, 79
Stochastic resonance in Chua's circuit driven by amplitude or frequency modulated signals.
International Journal of Bifurcation and Chaos **4**(02), 441-446 (1994).
9. A. Zakharova, T. Vadivasova, V. Anishchenko, A. Koseska, J. Kurths, 74
Stochastic bifurcations and coherence-like resonance in a self-sustained bistable noisy oscillator.
Physical Review E **81**(1), 011106 (2010).
10. V.S. Anishchenko, A.G. Balanov, N.B. Janson, N.B. Igosheva, G.V. Bordyugov, 72
Entrainment between heart rate and weak noninvasive forcing.
International Journal of Bifurcation and Chaos **10**(10), 2339-2348 (2000).
11. V. Astakhov, M. Hasler, T. Kapitaniak, A. Shabunin, V. Anishchenko, 67
Effect of parameter mismatch on the mechanism of chaos synchronization loss in coupled systems. Physical Review E **58**(5), 5620 (1998).
12. U. Erdmann, W. Ebeling, V.S. Anishchenko, 63
Excitation of rotational modes in two-dimensional systems of driven Brownian particles, Physical Review E **65**(6), 061106 (2002).
13. V. Anishchenko, S. Astakhov, T. Vadivasova, 59
Phase dynamics of two coupled oscillators under external periodic force.
Europhysics Letters **86**(3), 30003 (2009).
14. V.S. Anishchenko, A.N. Silchenko, I.A. Khovanov, 57
Synchronization of switching processes in coupled Lorenz systems.
Physical Review E **57**(1), 316 (1998).
15. A.N. Pavlov, V.S. Anishchenko, 54
Multifractal analysis of complex signals.
Physics - Uspekhi **50**(8), 819 (2007).
16. V.S. Anishchenko, A.N. Pavlov, 52
Global reconstruction in application to multichannel communication.
Physical Review E **57**(2), 2455 (1998).
17. V.S. Anishchenko, T. Kapitaniak, M.A. Safonova, O.V. Sosnovzeva, 52
Birth of double-double scroll attractor in coupled Chua circuits.
Physics Letters A **192**(2-4), 207-214 (1994).
18. N.B. Janson, A.G. Balanov, V.S. Anishchenko, P.V.E. McClintock, 47
Phase synchronization between several interacting processes from invariant date.
Physical Review Letters **86** (9), 1749 (2001).

SELECTED PUBLICATIONS FOR THE LAST 5 YEARS (2011-2016)

1. Semenova N., Zakharova A., Anishchenko V., Schöll E. Coherence-resonance chimeras in a network of excitable elements // *Phys. Rev. Lett.* — 2016. — V. 117. — P. 014102.
2. Bogomolov S.A., Strelkova G.I., Schöll E., Anishchenko V.S. Amplitude and phase chimeras in an ensemble of chaotic oscillators // *Technical Physics Letters.* — 2016. — V. 42, No. 7. — P. 765–768.
3. Semenov V.V., Neiman A.B., Vadivasova T.E., Anishchenko V.S. Noise-induced transitions in a double-well oscillator with nonlinear dissipation // *Phys. Rev. E.* — 2016. — V. 93. — P. 052210.
4. Vadivasova T.E., Strelkova G.I., Bogomolov S.A., Anishchenko V.S. Correlation analysis of the coherence-incoherence transition in a ring of nonlocally coupled logistic maps // *Chaos.* — 2016. — V. 26. — P. 093108.
5. Semenova N.I., Anishchenko V.S. Fibonacci stairs and the Afraimovich-Pesin dimension for a stroboscopic section of a nonautonomous van der Pol oscillator // *Chaos.* — 2015. — V. 25. — P. 073111 (7 pages). doi:10.1063/1.4926453
6. N. Semenova, A. Zakharova, E. Scholl and V. Anishchenko. Does hyperbolicity impede emergence of chimera states in networks of nonlocally coupled chaotic oscillators? // *Europhysics Letters*, 112 (2015) 40002
7. Anishchenko V.S., Boev Ya.I., Semenova N.I., Strelkova G.I. Local and global approaches to the problem of Poincaré recurrences. Applications in nonlinear dynamics // *Physics Reports.* — 2015, Vol. 587, pp 1-39.
8. Boev Ya.I., Vadivasova T.E., Anishchenko V.S. Poincare Recurrence Statistic as an Indicator of Chaos Synchronization // *Chaos.* - 2014. - V. 24. - P. 023110.
9. Vadim S. Anishchenko, Yaroslav I. Boev. Diagnostics of stochastic resonance using Poincare recurrence time distribution // *Commun. Nonlinear Sci. Numer. Simulat (CNSNS).* - 2013. - V. 18, I. 4. - P. 953-958.
10. S.V. Astakhov and V.S. Anishchenko. Afraimovich–Pesin dimension for Poincaré recurrences in one- and two-dimensional deterministic and noisy chaotic maps // *Physics Letters A.* 2012.- Volume 376, Issues 47–48. pp. 3620–3624.
11. V. Anishchenko, M. Khairulin, G. Strelkova, J. Kurths. Statistical characteristics of the Poincare return times for an one-dimensional nonhyperbolic map. *Eur. Phys. J. B* **82**, 219-225 (2011).
12. S. Astakhov, A. Feoktistov, V.S. Anishchenko, and J. Kurths. Synchronization of multi-frequency noise-induced oscillations. *Chaos* **21**, 047513 (2011).

The complete list of publications (1967-2016) includes 410 scientific papers and 23 monographs and textbooks (the list of publications is available at <http://chaos.sgu.ru>).

PLENARY AND INVITED TALKS AT INTERNATIONAL SCIENTIFIC CONFERENCES (2011-2016)

1. “Role of Hyperbolicity in Chimera State Formation”. Plenary talk at the International Workshop on Spatio-Temporal Structures in Ensembles of Interacting Oscillators (Chimera States – 2016), September 14-16, 2016, Saratov.
2. “Coherence-incoherence transition in an ensemble of coupled maps” (invited talk). III Int. Conf.

«Dynamics, Bifurcations and Chaos», 18-22 July, 2016, Lobachevsky State University, Nizhny Novgorod.

3. “Amplitude and Phase Chimera States in a Ring of Nonlocally Coupled Chaotic Systems” (plenary talk). Dynamics Days 2016, Corfu, Greece, June 6-10, 2016.

4. “Chimera state realization in chaotic systems. The role of hyperbolicity” (plenary talk). II Int. Conf. «Dynamics, Bifurcations and Chaos», 20-24 July, 2015, Lobachevsky State University, Nizhny Novgorod.

5. “Poincare recurrences in systems with positive and zero topological entropy” (plenary talk). Int. Conference “Nonlinear Dynamics of Deterministic and Stochastic Systems: Unraveling Complexity”, Saratov, Russia, May 19-23, 2014.

6. “Poincare recurrences in the stroboscopic section of a nonautonomous van der Pol oscillator”. Int. Symposium “Topical problems of Nonlinear Wave Physics”, NWP-1. N.Novgorod, July 17-23, 2014.

7. “Local and Global Approaches to the Theory of Poincare Recurrences. Applications in Nonlinear Dynamics” (invited talk). The 22nd Int. Conf. “Nonlinear Dynamics of Electronic Systems”, Albena, Bulgaria, July 4-6, 2014.

8. “Poincare recurrences in a nonautonomous oscillator” (invited talk). Int. Conference-School “Saratov Fall Meeting - SFM'14”, September 23-26, 2014.

9. “Poincare Recurrences in an Ergodic Nonautonomous systems” (plenary talk). International Conference-School «Hamiltonian Dynamics, Nonautonomous Systems and Patterns in PDE's» dedicated to 70th birthday of L.M. Lerman and 70th birthday of A.D. Morozov , Nizhny Novgorod, December 10-15, 2014.

10. “Poincaré recurrences and their applications in nonlinear dynamics” (plenary talk). Int. Conference dedicate to L.P. Shilnikov. Nizhny Novgorod, July 1-5, 2013.

11. “Statistical properties of Poincare recurrences and their applications” (plenary talk). Int. Conference-School “Saratov Fall Meeting – SFM'12”. September 25-28, 2012.

12. “Poincare Recurrences” (plenary talk). The 15th Harzseminar «Strukturbiologie in Chemie und Biophysik» (Goslar-Hahnenklee, Germany, February 20-22, 2011).

During the period from 1981 to the present time about 50 plenary and invited talks were presented.