LEONID BUNIMOVICH
CURRICULUM VITAE
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EDUCATION:

1967	Bachelor's degree	Moscow University
1969	Master's degree	Moscow University
1973	Ph.D. in "Probability Theory and Mathematical Statistics"	Moscow University
1986	Doctor of Sciences in "Theoretical and Mathematical Physics"	Institute for Theoretical Physics of the Academy of Sciences of UkSSR

POSITIONS HELD:

1972-1977	Junior Scientist	Institute of Psychiatry of the Academy of Medical Sciences of the USSR
1977-1978	Senior Scientist	Research Institute of Paper
1978-1986	Senior Scientist	Institute of Oceanology of the Russian Academy of Sciences
1984	Visiting Researcher	Mathematical Institute of Hungarian Academy of Sci., Budapest

1986	Visiting Researcher	Banach Mathematical Center, Warsaw, Poland
1986-1992	Leading Scientist	Institute of Oceanology of the Russian Academy of Sciences
5-8/88	Director of Researcher	Centre de Physique Theorique, Marseille, France
6/88	Visiting Researcher	Institut des Hautes Etudes Scientiefiques
6/88	Visiting Researcher	Universite de Paris VI
2/89	Visiting Researcher	Mathematical Institute, ETH, Zurich
6/89	Visiting Scholar	University of Bielefeld, Germany
11-12/89	Visiting Researcher	Courant Institute, New York University
1/90	Visiting Researcher	Mathematical Center, Rutgers University
6/90	Visiting Researcher	Institute for Scientific Interchanges, Turin, Italy
7/90	Visiting Scholar	Department of Mathematics, University of Rome 1
3-4/91	Visiting Researcher	Mathematical Center, Rutgers University
6/91	Visiting Researcher	Institute of the Statistical Mechanics of Turbulence, Marseille, France
7/91	Visiting Researcher	Institute for Scientific Interchanges, Turin, Italy
1990 – 1991	Professor	Department of Physics, University of Bielefeld, Germany
4-5/94	Visiting Professor	Weizmann Institute of Sciences
6/94	Visiting Professor	University of Modena, Italy
6-7/95	Visiting Professor	Universite de Paris VII

9/95	Visiting Professor	Newton's Institute, Cambridge
5/96	Visiting Researcher	Weizmann Institute of Sciences
6-7/96	Visiting Professor	Universite de Paris VII
6-7/97	Visiting Professor	Forschungsinstitut fuer Mathematik, ETH, Zuerich
6-7/98	Visiting Researcher	University of Rome, Italy
3/99	Visiting Researcher	Centro Int-le Ciencias, Cuernavaca, Mexico
7/99	Visiting Professor	University of Bologna
1997 – present	Adjunct Professor	School of Biology Georgia Institute of Technology
1991 - 1998	Professor	School of Mathematics Georgia Institute of Technology
1996 – 2003	Director	Southeast Applied Analysis Center
1998 - present	Regents' Professor	School of Mathematics Georgia Institute of Technology
2006 -present	Director	Applied & Biological Contemporary Mathematics Program

CURRENT FIELDS OF INTEREST:

Dynamical Systems, Ergodic Theory, Statistical Mechanics, Space-Time Chaos, Intermittency and Coherent Structures in Extended Systems, Geophysical Hydrodynamics, Mathematical Biology, Quantum Chaos, Waves in Nonhomogeneous Media, Lattice Gases, Cellular Automata, Percolation, Limit Theorems for Chaotic Dynamical Systems, Bioinformatics, Operations Research, Logistics, Neuroscience, Dynamical Networks

TEACHING EXPERIENCE:

Fall 2007	Math 6705	Modeling and Dynamics	12 students
Spring 2007	Math 3215	Intr. to Probability&Statistics	26 students
Fall 2006	Math 6705	Modeling and Dynamics	10 students
Fall 2006	Math	Ergodic Theory (reading course)	3 students
Spring 2006	Math 3215	Intr. to Probability&Statistics	33 students
Fall 2005	Math 6705	Modeling and Dynamics	12 students
Spring 2005	Math 3215	Intr. to Probability&Statistics	73 students
Fall 2004	Math 2401	Calculus III	119 students
Summer 2004	Math 8859	Intro. to Ergodic Theory (Reading Course)	1 student
Spring 2004	Math 3215	Intro. to Probability&Statistics	37 students
Fall 2003	Math 6705	Modeling and Dynamics	23 students
Spring 2003	Math 4280	Intro. to Information Theory	24 students
Fall 2002	Math 6705	Modeling and Dynamics	10 students
Spring 2002	Math 4280	Intro. to Information Theory	15 students
Fall 2001	Math 6705	Modeling and Dynamics	17 students
Fall 2001	Math 8500	Chaos and PDEs	01 student
Fall 2000	Math 6705	Modeling and Dynamics	07 students
Fall 2000	Math 8859	Dynamical Systems (Reading course)	03 students
Spring 2000	Math 8833	Entropy and Cellular Automata	05 students
Fall 1999	Math 8833A	Modeling and Dynamics	10 students
	Math 8900	Hyperbolic and Nonhyperbolic systems (Readers course)	02 students
Winter 1999	Math 8253	Dynamics and Stochastics	04 students
Fall 1998	Math 4216	Intro. to Statistics	29 students
Winter 1998	Math 4215	Intro. to Probability	36 students
Fall 1997	Math 4215	Intro. to Probability	35 students
	Math 8504	Hyperbolic Dynamics (Reading course)	04 students

PUBLICATIONS:

(a) Appeared:

"Relative Volume of KAM-tori and Uniform Distribution, Stickiness and Nonstickiness in Hamiltonian Systems", Nonlinearity 21 (2008) T13-17

"Deterministic Walks in Rigid Enviroments with Aging" (with A.Yurchenko), Discrete&Cont-s Dyn. Syst. 9 (2008) 37-46

"Peeping at Chaos; Nondestructive monitoring of chaotic systems" (with C.Dettmann), Europhys. Letters 80 (2007) 40001

"Dynamical Billiards", Scholarpedia (2007)

"Dynamical Networks: interplay of topology, interactions and local dynamics", Nonlinearity 20 (2007) 1761-71

"Deterministic Walks in Markov Environments" (with A. Yurchenko), Contemp-ry Math. 480 (2007) 57-72

"Semi-Focusing Billiards:Hyperbolicity" (with G.DelMagno), Comm. Math. Phys. 262 (2006) 17-32

"Long Range Action in Networks of Chaotic Elements" (with M.Blank), Nonlinearity 19 (2006) 329-344

"One-particle and few-particle billiards" (with S.Lansel, M.Porter), Chaos 013129 (2006)

"Deterministic Models of the Simplest Chemical Reactions" (with M.Demers), J. Stat-l Phys. 120 (2005) 239-252

"Chaos in Spatially Extended Systems via a Peak Crossing Bifurcation" (with A.Berger), Int. J. Bifurcations&Chaos 15 (2005) 3607-3622

"Coupled Map Lattices: at the age of maturity", Lect. Notes Phys. 671 (2005) 9-32

"Open Circular Billiards and Riemann Hypotheses" (with C.Dettmann), Phys. Rev. Lett. 94 (2005) 100201-100204

"Dynamical Systems and Benford's Law" (with A.Berger, T.Hill), AMS Transactions 357 (2005) 197-219

"Switched Flow Systems:Pseudo-Billiard Dynamics" (with M.Blank), Dynamical Systems:An Int-l J-l 14 (2004) 359-370

"Deterministic Walks in Random Environments", Physica D 187 (2004) 20-29

"'Method of Stabilization of a Target Regime in Manufacturing and Logistics", In:"Nonlinear Dynamics of Production Systems" (ed. by G.Radons, R.Neugebauer), Wiley, Weinheim (2004) 25-38

"Complexity of Dynamics as Variability of Predictability" (with R.Stoop, N.Stoop), J. Stat. Phys. 114 (2004) 1127-1137

"Walks in Rigid Environments; Symmetry and Dynamics", Asterisque 286 (2004) 231-248

"Lorentz Gas", In: "Encyclopedia of Nonlinear Science" (ed. by A.Scott), Taylor&Francis, London-NY (2004) 538-540

"Deterministic Walks in Random Environments" (2004), ibid. 198-200

"Billiards", (2004), ibid. 53-55

"Lorentz Gas Cellular Automata on Graphs" (with D.Kreslavsky), Theor-l Computer Sci. 306 (2003) 195-221

"Kinematics, Equilibrium and Shape in Hamiltonian Systems: The LAB Effect", "Chaos" 13 (2003) 903-912

"Sistemi Dinamici" (with V.Afraimovich, J.Hale), In: Encycl. dell Szienza, vol.IX, LaGrande Scienza, 2003, pp.841-850

"One-dimensional Lorentz Gas with Rotating Scatterers; Exact Solutions" (with M.Khlabystova), J.Stat.Phys. 112 (2003) 1207-1219

"Multicomponent Dynamical Systems: SRB Measures and Phase Transitions" (with M.Blank), "Nonlinearity" 16 (2003) 387-401

"Absolute Focusing and Ergodicity of Billiards" , Regular&Chaotic Dynamics 8 (2003) 15-28

“Walks in Rigid Environments:Continuous Limits” (with M.Khlabystova), J.Stat.Phys. **108** (2002), 905-925

“Lorentz Lattice Gases and Many-dimensional Turing Machines”(with M.Khlabystova) ,in :”Collision-based Computing” (ed.by A.Adamatzky), Springer, London, 2002, pp.443-467.

“Some estimates for 2-dimensional Infinite and Bounded Dilute Random Lorentz Gases” (with C.Boldrighini, A.Pellegrinotti), J.Stat.Phys. **109** (2002), 729-746.

"Mushrooms and Other Billiards with Divided Phase Space", Chaos **11** (2001), 1-7.

"Motion of Particles in Random Media and Many-dimensional Turing Machines", Multiple-Valued Logic **6** (2001), 463-482.

"Localization and Propagation in Random Lattices" (with M. Khlabystova), J. Stat. Phys. **104** (2001), 1155-1171.

"Lattice Dynamical Systems", In: "From Finite to Infinite Dimensional Dynamical Systems (ed. by J.C. Robinson, P.A. Glendinning), Kluwer, London, 2001, 59-83.

"Dynamical Systems and Operations Research: A Basic Model", Discr & Cont's Dynamical Systems **1** (2001), 209-218.

"Ising-Type and Other Transitions in One-Dimensional Coupled Map Lattices with Sign Symmetry" (with C. Boldrighini, G. Cosimi, S. Frigio, A. Pellegrinotti), J. Stat. Phys. **102** (2001), 1271-1284.

"Dispersing, Defocusing and Astigmatism", Math. Education **5** (2001), 106-124 (in Russian).

"Existence of Transport Coefficients", In: "Lorentz and Hard Spheres Gas", Springer-Verlag, Berlin, 2001, pp. 145-178.

"Generic Origins of Irregular Spiking in Neocortical Networks", (with R. Stoop, W.-H. Steeb), Biol. Cybern. **83** (2001), 481-489.

"Walks in Rigid Environments," Physica A, **279** (2000), 169-179.

"Noise-driven Neocortical Interactions: A Simple Generation Mechanism for Complex Neuron Spiking", (with R. Stoop, K. Schindler), Acta Biotheoretica **48** (2000), 149-171.

"Hypebolicity and Astigmatism", J. Stat. Phys. **101** (2000), 373-384.

"Neocortical Networks of Pyramidal Neurons," (with R. Stoop, K. Schindler), Nonlinearity **13** (2000), 1515-1529.

"Billiards and other Hyperbolic Systems", In: Dynamical Systems, Ergodic Theory and Applications", Springer, Ser. "Mathem, Physics", v. **1** (2000), 192-233.

"When Pyramidal Neurons Lock, When They Respond Chaotically and When They Like to Synchronize, (with R. Stoop, K. Schindler), Neuroscience Res. **36**, (2000), 81-91.

"Controlling Production Lines," In: "Handbook of Chaos Control" (ed. by H. Schuster) Wiley – VCH, (1999).

"Dynamics of Two and Three-Worker Production Lines" (with J. Bartholdi, D. Eisenstein), Operations Res., **47**, (1999).

"Inhibitory Connections Enhance Pattern Recurrence in Networks of Neocortical Pyramidal Cells" (with R. Stoop, K. Schindler), Phys., Lett. A, **258**, (1999).

"Space-time Chaos in Spatially Continuous Systems", Physica D **131**, (1999).

"Propagation and Self-organization in Lattice Random Media (with P. Grosfils, J.P. Boon, E.G.D. Cohen), J. Stat. Phys. **97** (1999), 575-608.

"How High-Dimensional Stadia Look Like" (with J. Rehacek), Commun. Math. Phys., **197** (1998).

"On the Ergodicity of High-dimensional Focusing Billiards" (with J. Rehacek) Ann. Inst. H. Poincare, **68** (1998).

"Localized Solutions in Lattice Systems and Bifurcations Caused by Spatial Interactions" (with D. Turaev), Nonlinearity **11** (1998).

"Nowhere Dispersing 3D Billiards with Nonvanishing Lyapunov Exponents" (with J. Rehacek), Commun. Math. Physics, vol. **189** (1997), 729-757.

On Localization of Vorticity in Lorentz Gases," J. Stat. Physics, vol. **87** (1997), 449-457.

"Non-equilibrium Statistical Mechanics and Ergodic Theory," In: "Nonlinear Dynamics, Chaotic and Complex Systems," (ed by E. Infeld et al.), Cambridge Univ. Press, (1997), 41-51.

"On Stability of Structures and Patterns in Extended Systems" (with V. Franceschini, C. Giberti, C. Vernia), Physica D **103** (1997), 412-418.

"Dynamics of Spatial Averages" (with M. Jiang), "Chaos," **7** (1997), 21-26.

"Coupled Map Lattices: Some Topological and Ergodic Properties", Physica D, vol. **103** (1997), 1-17.

"On New Mechanism of Transition to Chaos in Lattice Dynamical Systems" (with S. Venkatagiri), Physics Reports, vol. **290** (1997), 81-100.

"Stable Chaotic Waves Generated by Hyperbolic PDEs" (with A. Babin), Nonlinearity, vol. **9** (1996), 853-875.

"Many-Dimensional Lorentz Cellular Automata and Turing Machines," Int. J. Bifurcation & Chaos, vol. **6** (1996), 1127-1135.

"Chaotic Focusing Billiards in Higher Dimensions" (with G. Casati, I. Guarneri), Phys. Rev. Let., vol. **77** (1996), 2941-2944.

"Onset of Chaos in Coupled Map Lattices via the peak-crossing Bifurcation" (with S. Venkatagiri), Nonlinearity, vol. **9** (1996), 1281-1298.

"Viscosity for a Periodic Two Disk Fluid: An Existence Proof" (with H. Spohn), Commun. Math. Physics, vol. **176** (1996)**,** 661-680.

"Continued Fractions and Geometrical Optics.," Advances in Math, AMS Publ., vol. **171** (1995), 45-55.

"Ising-type Transitions in Coupled Map Lattices" (with C. Boldrighini, G. Cosimi, S. Frigio, A. Pellegrinotti), J. Stat. Phys., **80** (1995), 1185-1205.

"Coupled Map Lattices: One Step Forward and Two Steps Back," Physica D, vol. **86** (1995), 248-255.

"On the Problem of Stability in Lattice Dynamical Systems" (with E. Carlen), J. Diff. Equations., vol. **22** (1995), 213-229.

"Density of Defects and Spatial Entropy in Extended Systems" (with V.S. Afraimovich), Physica D, vol. **8** (1995), 277-288.

"Variational Principle for Periodic Trajectories of Hyperbolic Billiards," Chaos, vol. **5** (1995), 349-359.

"Rotators, Periodicity and Absence of Diffusion in Cyclic Cellular Automata" (with S.T. Troubetzkoy), J. Statistical Physics, vol. **74** (1994), 1-10.

"Space-time Chaos, Coherent Structures and Patterns in Extended Systems" in "Chaotic Dynamics and Transport in Fluids and Plasma" (ed. by I. Prigogine), Amer. Inst. of Physics Publ., NY (1994), 3-14.

"Mechanisms that Produce non-Gaussian Behavior in Lattice Gas Cellular Automata"(with S.T. Troubetzkoy) in "Dynamics of Complex and Irregular Structures" (ed. by P. Blanchard), World Scientific, (1994), 86-92.

"The Simplest Structures in Coupled Map Lattices and their Stability" (with V.S. Afraimovich), Random and Computational Dynamics, vol. **1** (1993), 423-444.

"Statistical Mechanics of Coupled Map Lattices" (with Ya G. Sinai) in "Coupled Map Lattices" (ed. by K. Kaneko), Wiley, (1993), 167-187.

"Observations of the Fractal Properties of the Japan Sea Surface Temperature Patterns" (with A. Ostrovskii, S-I Umatani), International Journal of Remote Sensing, vol. **14** (1993), 2185-2201.

"Topological Properties of Flipping Lorentz Lattice Gases" (with S. Troubetzkoy), J. Statistical Physics, vol. **72** (1993), 297-307.

"Two Mechanisms of Chaos in Hamiltonian Systems and Space-Time Chaos" Proceedings of the X International Congress on Mathematical Physics, Springer (1992) 52-69.

"On Absolutely Focusing Mirrors" in "Ergodic Theory and Related Topics" (ed. by U. Krengel et al), Springer Lect. Notes Math., vol. **1514** (1992), 62-82.

"Ergodic Systems of N Balls in a Billiard Table" (with C. Liverani, A. Pellegrinotti, Yu, Suhov), Commun. in Math Physics, vol. **146** (1992), 357-396.

"Recurrence Properties of Lorentz Lattice Gas Cellular Automata" (with S. Troubetzkoy), Journal of Statistical Physics, vol. **67** (1992), 289-302.

"Phase Transitions in Lorentz Gases" in "From Phase Transitions to Chaos" (ed. by G. Györgyi et al), World Scientific (1992), 501-511.

"Coupled Trivial Maps"(with R. Livi, G. Martizez, S. Ruffo), Chaos V. vol.**2** (1992), 283-292.

"Simple and Complex Patterns in Coupled Map Lattices" in "Chaos, Order and Patterns" (ed. by G. Casati, P. Cvitanovic), London, Pitman, (1992), 229-236.

"Diffusive Energy Growth in Classical and Quantum Driven Oscillators" (with H.R. Jauslin, J.L. Lebowitz, A. Pellegrinotti, P. Nielaba), J. of Statistical Physics, vol. **62**, (1991), 793-817.

"On the Estimation of Parameters of Nonlinear Lattice Models" (with D. Yu. Gupalo, A. G. Ostrovsky, L.I. Piterbarg), Mathematical Modeling, vol. **3** (1991), 48-56.

"Coherent Structures and Nonlinear Dynamics" in "Coherent Structures in the Ocean" (ed. by G.I Barenblatt et al.), Moscow, Nauka, (1991), 62-75.

"Robust Quasihomogeneous Configurations in Coupled Map Lattices," Complex Systems, vol. **5**, (1991), 415-423.

"Conditions of Stochasticity of Two-Dimensional Billiards," Chaos, vol. **1**, (1991), 187-193.

"Decay of Correlations and the Central Limit Theorem for Two-Dimensional Billiards" (with Ya. G. Sinai, N.I. Chernov), Russian Mathem, Surveys, vol. **46** (1991), 47-106.

"A Theorem on Ergodicity of Two-Dimensional Hyperbolic Billiards," Commun. in Math. Phys., vol. **130**, (1990), 599-621.

"Space-Time Chaos and Coherent Structures in Coupled Map Lattices" in "New Trends in Nonlinear Dynamics and Pattern Forming Phenomena" (ed. P. Coullet, P. Huerre). Plenum, NY, (1990), 167-169.

"The Emergence of Coherent Structures in Coupled Map Lattices" (with A. Lambert, R. Lima), J. of Statistical Physics, vol. **61**, (1990), 253-262.

"Markov Partitions for Two-Dimensional Hyperbolic Billiards" (with Ya. G. Sinai, N.I. Chernov) Russian Mathem. Surveys, vol. **45**, (1990), 105-152.

"Space-Time Chaos and Arising of Coherent Structures in the Map Lattices" in "Dynamical Systems and Turbulence" (ed. by A. N. Sharkovsky), Kiev, published by the Mathematical Institute of the Academy of Sciences of the USSR, (1989), 33-43.

"Dynamical Systems of Hyperbolic Type with Singularities" in "Encyclopedia of Mathematical Sciences," vol. **2** (ed. by Ya. G. Sinai), Springer-Verlag, (1989), 151-178.

"Many-Dimensional Nowhere Dispersing Billiards with Chaotic Behavior," Physica D, vol. **33**, (1988), 58-64.

"Two Mechanisms of Dynamical Chaos : Permanent Stochasticity and Intermittency" in "Nonlinear and Turbulent Processes in Physics" (ed. by V.G. Bar'yakhtar et al.), Kiev, Naukova Dumka, (1988), 190-193.

"Measure Theory and Ergodic Theory" (with A.M. Vershik), Suppl. to John von Neumann "Selected Papers on Functional Analysis," Moscow, Nauka (1988), 360-365.

"Space-Time Chaos in Coupled Map Lattices" (with Ya G. Sinai) Nonlinearity, vol. **1**, (1988), 491-516.

"On one exactly solvable model of intermittency of hydrophysical and hydrobiological fields" in "Biology of Black Sea"(ed. by M. E. Vinogradov), (1988), 61-69.

"Rigorous Results in Nonequilibrium Statistical Mechanics" in "Ergodic Theory and Related Topics" (ed. by H. Michel), Teubner-Texte zur Mathematik, Leipzig, vol. **94**, (1987), 41-52.

"Dispersion of Internal Waves in Horizontally Inhomogeneous Ocean" (with V.V. Zhmur), USSR Academy of Sciences, Doklady, vol. **286**, (1986), 197-200.

"On the Stochastic Dynamics of Rays in Resonators," Radiofizika, vol. **28**, (1985), 1601-1602.

"Dispersion of Internal Waves on the Ensemble of Spots of the Mixed Fluid" (with V.V. Zhmur), Academy of Sciences of the USSR Izvestija, ser. "Physics of the Ocean and Atmosphere", vol. **24**, (1985), 311-318.

"Dispersion of Internal Waves on Layers of Mixed Fluid in Two-Layer Ocean with the Shift of Velocity" (with V.V. Zhmur), Academy of Sciences of the USSR Izvestija, ser. "Physics of the Ocean and Atmosphere," vol. **24**, (1985), 1086-1094.

"Statistical Properties of the Lorenz Model," Radiofizika, vol. **28**, (1985), 1472-1473.

"On the Rate of Decay of Correlations in Dynamical Systems with Chaotic Behavior," Soviet J. of Theor. and Exper. Physics, vol. **89**, (1985), 842-852.

"On the Diffusion in Dynamical Systems" in "Statistical Physics and Dynamical Systems (Rigorous Results)" (ed. by A. Jaffe et al.), Birkhauser (1985), 46-56.

"On the Kinetic Description of Spatially Nonuniform Wave Fields" in "Nonlinear and Turbulent Processes in Physics" (ed. by R.Z. Sagdeev), vol. **1**, Harwood Ac. Publ. (1984), 873-877.

"Dynamical Systems with Elastic Reflections," Russian Mathem. Surveys, vol. **39**, (1984), 184-185.

"On Decay of Correlations in Dynamical Systems," ibid. vol. **2**, (1984), 1241-1245.

"On the Relation of the Spatial Intermittency of the Oceanic Internal Waves Field and its Relaxation Times" (with V.I. Shrira), Soviet Academy of Sciences, Doklady, vol. **276**, (1984), 1460-1464.

"On Boltzmann Equation for the Lorentz Gas," with C. Boldroghini, Ya. G. Sinai, J. of Statistical Physics, vol. **32,** (1983), 477-501.

"Method for the Classification of Records of Fluctuations of Hydrophysical Fields" (with V.S. Belyaev), Oceanology, vol. **17**, (1983), 882-886.

"Statistical Properties of Lorenz Attractors" in "Nonlinear Dynamics and Turbulence" (ed. by G.I. Barenblatt et al.), London, Pitman, (1983), 71-92.

"Reflection of Internal Waves from the Moving Jump of Velocity" (with V.V. Zhmur), Izvestija of the USSR Academy of Sciences, ser. "Physics of the Ocean and Atmosphere" vol. **25**, (1983), 1062-1067.

"The Rate of Correlations Decay in One-Dimensional Ecological Models" (with Ya.G.Sinai), in "Thermodynamics and Kinetics of Biological Processes" (ed. J. Lamprecht, A.I. Zotin), de Gruyter & Co. Berlin-NY, (1982), 297-307.

"Some New Advancements in the Physical Applications of Ergodic Theory" in "Ergodic Theory and Related Topics" (ed. by H. Michel), Berlin, Akad. Verlag (1982), 27-33.

"Confidence Intervals for the Vertical Gradients of the Velocity of the Flow and for Richardson Number," Oceanology, vol. **21**, (1982), 131-136.

"On the Estimation of the Concentration of the Mariner Sediments," Oceanology, vol. **21**, (1982), 671-674.

"Clinical and Statistical Laws of the Dynamics of Schizophrenia" (with Yu. I. Liberman, N.A. Shmaonova), Journal of Neurology and Psychiatry, vol. **48**, (1981), 34-42.

"Some Rigorous Results of Nonequilibrium Statistical Physics," Russian Mathem. Surveys, vol. **36**, (1981), 752-753.

"Statistical Properties of the Lorentz Gas with Periodic Configuration of Scatterers," Commun. in Math. Phys., vol. **78**, (1981), 479-497

"On the Polyloci Models of Heredity" in "Mathematical Models in Ecology and Genetics" (ed. by Yu. M. Svirezhev), Moscow, Nauka (1981), 114-120.

"Markov Partitions for Dispersed Billiards," with Ya. G. Sinai, Commun. in Math. Phys., vol. **78**, (1980), 247-280.

"Stochasticity of the Attractor in Lorenz Model" in "Nonlinear Waves"(ed. by A. V. Gaponov-Grekhov, M.I Rabinovich), Moscow, Nauka, (1980), 212-226.

"On the Properties of Internal Waves in Horizontally Varying Vaisala-Brendt Frequency Field in the Ocean," Izvestija of the Academy of Sciences of the USSR, ser. "Physics of the Ocean and Atmosphere," vol. **16**, (1980), 517-525.

"Ergodic Properties of the Billiards Systems," Russian Mathem. Surveys, vol. **35**, (1980), 253-254.

"On Some Asymptotic Properties of Polyloci Systems," General Biology Reports (1979), 126-128.

"On Recalculation of Norms of Parameters of the Quality for the New Test," Reliability and Control of the Quality, vol. **8**, (1979), 216-224.

"On the Ergodic Properties of Nowhere Dispersing Billiards," Commun. in Math. Phys., vol. **65**, (1979), 295-312.

"On the Problem of Recalculation of Parameters of the Quality in Application to the Standardization" (with S.M. Smolensky), Trans-s of the 22nd. Conference of the Europe Society for the Control of Quality, GDR (1978), 463-478.

"On Classification of Diseases with Attacks," General Biology Reports (1978), 106-108.

"The Estimation of the Number of Antitymozitic Antibodies for Schizophrenia" (with S.G. Kushner, T.P. Maznina), Journal of Neurology and Psychiatry, vol. **43**, (1978), 697-700.

"On the Structure of Migrations of Populations of Economically Developed Countries" in "Applications of Multivariate Statistical Analysis in Economics" (ed. by S. A. Aivasian et al), Tartu Nauka (1977), 83-87.

"Hierarchial Structure of Human Populations," General Biology Reports (1977), 190-193.

"On the Valuability of Clinical and Pharmacokinetic Parameters for the Forecasting of the Efficiency of Prophylactics of Affective Psychoses" (with E.I. Minsker et al.), Journal of Neurology and Psychiatry, vol. **42**, (1977), 671-678.

"On the Model of Hierarchical Structure of the Human Populations," Genetika, vol. **11**, (1975), 134-143.

"On the Genetical Heterogeneity of Human Hereditary Diseases," Genetika, vol. **11**, (1975), 125-133.

"On Ergodic Properties of Some Billiards," Functional Analysis and its Applications, vol. **8**, (1974), 254-255.

"The Central Limit Theorem for One Class of Billiards," Probability Theory and Applications, vol. **29**, (1974), 63-83.

"On Billiards Close to Dispersing Ones," Mathematical Sbornik, vol. **94**, (1974), 45-67.

"On One Class of Special Flows," Izvestija Academy of Sciences of the USSR, ser. Mathematics, vol. **37**, (1974), 213-227.

"On the Ergodic Properties of Billiards Close to Dispersing Ones," Doklady of the Academy of Sciences of the

USSR, vol. **211**, (1973), 1024-1027.

"Inclusion of Bernoulli Shifts into Some Special Flows," Russian Mathem. Surveys, vol. **28**, (1973), 171-172.

"On the Main Theorem of the Theory of Dispersing Billiards," with Ya.G. Sinai, Mathematical Sbornik, vol. **93**, (1973), 415-431.

"The Central Limit Theorem for Dispersing Billiards," Doklady of the Academy of Sciences of the USSR, vol. **204**, (1972), 778-781.

"On One Transformation of the Circle," Mathem. Zametky, vol. **5**,(1970), 205-216.

(c) Unpublished Material:

"Dynamical Systems with Chaotic Behavior," Dissertation for the Degree of Doctor of Science in Mathematical Physics, Institute of Theoretical Physics of Ac. of Sci. USSR, 1986, 336 p.

"Hydrodynamical Instabilities," Institute of Oceanology of Ac. Sci. USSR, 1980, 78 p.

"Statistical Properties of Some Flows of Symbolic Dynamics and of Billiards Close to Dispersing Ones," Candidate Dissertation (Ph.D.), Moscow University, Dept. of Mathematics, 1972, 130 p.

(d) A Few Selected Conference Papers

"Illumination Problem and Absolutely Focusing Mirrors", Proc. International Symposium of Photo-Optical Engineering Society, (2001), v4446, pp. 185-192.

"Control of Oscillations and Chaos in Canonical Neocortical Microcircuits", (with R. Stoop, A. Kern), Proc. IEEE Conference on Control of Oscillations and Chaos, (2000) pp. 439-444.

"Towards Close-to-Nature Neural Networks" (with R. Stoop), Nonlinear Dynamics of Electronic Systems (NDES 99), 1999.

"On Local and Global Synchronization in Networks of Neocortical Pyranoidal Cells" (with R. Stoop), Proc. ICECS, pp. 29-32, 1999.

"On a Network of Rat Cortical Neurons Transmitting Periodic Messages" (with R. Stoop), Nonlinear Theory and Applications (ed. By T. Saito), World Scientific, (1997), 169-172.

“Space-Time Chaos in Networks of Chaotic Elements and Spatial Intermittency,” ibid., 261-263.

Books:

High-Frequency Internal Gravity Waves. Internal Waves Album (with T. Paka, V. Shrira, V. Vasilenko), IOAS Publ. 1989, 318 p. (in Russian)

Sinai’s Moscow Seminar on Dynamical Systems (edited with B.M. Gurevich, Ya. B. Pesin), Advances in Math. Sci., Ser. 2,v. 171, AMS Publ., 1996, 247p.

RESEARCH GRANTS AND CONTRACTS
Funded:

"UBM: Quantitative Systems Biology" (with M.Borodovsky, J.Choi), NSF, 2005-2008, $300,000.

"Novel Approaches to Plankton Seasonal Succession" (with C.Klausmeier, E.Litchman),
NSF Ecological Biology, 2005-2008, $349.995

"Chaos and Disorder in Mathematics and Physics" (with D.Dolgopyat), Conference, 2005, $15,000

“Dynamics and Kinetics”, NSF, 2002-2007, $375, 000.

“Mechanisms of Chaos”, Max Kade Foundation, 2001-2002, $48,800.

“Dynamics and Kinetics”, NSF, 1999-2002, $102,437.

"Southeast Applied Analysis Center," NSF, 1996-2001, $500,000.
(Co-PIs: T. Hill, J. Hale)

"Dynamics and Kinetics of Spatially Extended Systems,” NSF, 1996-1999, $123,000.

"Qualitative Properties in Dynamics and Mathematical Physics," French-USA Cooperation, NSF, 1993-1996, $17,000. (Co-PIs: J. Hale, J. Geronimo, E. Harrell, and K. Mischaikow)

"Billiards in Classical and Quantum Physics," USA-Israel Binational Science Foundation, 1993-1996, (Co-PI: U. Smilansky) $61,500.

"Space-Time and Transport Phenomena in Extended Systems," NSF, 1993-1996,
$110,700.

"Lorentz Lattice Gas Cellular Automata," NATO, Collaborative research USA-Germany, 1993, (Co-PI: S. Troubetzkoy) $12,000.

RECENT INVITED TALKS:

2008 "Dynamics Days USA", plenary

"Nonl. Dyn.&stat. Mech. of Complex Syst.", workshop, keynote, Lavin, Switzerland

"Complex Networks", workshop, keynote ETH, Zurich

2007 "Dynamics of Extended Systems", Int-l workshop, MSRI

"Statistical Machanics", Int-l conf., Rutgers

"Chaotic Dynamics of Smooth Systems", Int-l Conf., Lisbon

"Microscopic Origin of Instability and Noise", Int-l Conf., Leipzig

Bernstein Center for Neuroscience, Coll-m, Goettingen

CalTech, Colloquium

Univ. of Maryland, Coll-m

Univ. of Maryland, seminar "Dyn. Systems"

Univ. of Keele, UK, Coll-m

Center for Systems Biology, GaTech

2006 "European Dynamics Days", Plenary, Crete

"Dynamical Systems and Statistical Mechanics", Plenary, Durham, UK

"Dynamical Chaos:From Rigorous Results to Nanotechnology",
Plenary, Singapore

"Nonlinear Dynamics in Finite Lattices", Plenary, Dresden, Germany

"Courant Dynamics Days", Courant Inst., NY

"Dynamical Systems", Intl. conf., Univ. of Maryland

Int-l Moslim University, Colloquium, Kuala Lumpur, Malaysia

MIMOS, Colloquium, Kuala Lumpur

"Dynamical Systems and Nonequilibrium Statistical Mechanics",
two months program, Plenary lecture, Univ. of Singapore

Institute of Mathematical Sciences, Colloquium, Singapore

Bioinformatics workshop, Clarksville, North GA College

Univ. of Connecticut, Colloquium

2005 "Time at Work", Int-l Workshop, In-i H. Poincare, Paris

"Facing Chaos Through Nonlinear Dynamics",
Int-l School/Workshop, lectures, Maribor, Slovenia

""Ergodic Theory& Prob-ty Theory", Int-l Workshop,
UNC, Chapel Hill

"Dyn-l Systems&Appl-s", Int-l Workshop,
Penn State Univ

Univ. of Chicago, Applied Math. & PDE, seminar

Univ. of Alabama at Birmingham, Coll-m

MPI for Nonlinear Dynamics & Seflorganization,
Goettingen, Germany, Col-m

Center for Neurodynamics, Goettingen, seminar

Univ. of Potsdam, Stat. Phys.& Nonlinear Dyn-cs
Center, Germany, col-m

Delavare Valley College, PA

Bioinformatics &Comp-l Biology, seminar,
SOB &Bioeng-g, GaTech

2004 "Pacific Dynamics Days", Plenary, Singapore

"Coupled Map Lattices", Plenary Lectures, In-t H.Poincare, Paris

"Dynamical Systems", Int-l Conf., Jerusalem

"Courant Dynamics Days", Int-l Conf., Courant Inst.

ETH-Univ. of Zurich Physics Colloquium, Zurich

Univ. of Bristol, UK, Colloquium

Asia-Pacific Logistics Institute, Colloquium, Singapore

Univ. of Indiana, Math Colloquium

DARPA Workshop "Evolution of Uncertainties", Plenary, Hartford

Bioinformatics Retreat School, Lecture, Clarksville, GA

2003 "Dynamics Days", Plenary, Palma de Mallorca, Spain

"Kolmogorov's Legacy in Physics", Plenary, ICTP, trieste, Italy

"Nonlinear Dynamics of Production Systems", Keynote speaker, Chemnitz, Germany

Burrett Lectures, Invited lecturer, Univ. of Tennesse, Knoxville

Int-l conf. on Classical&Quantum Chaos, Keynote speaker, Cuernavaca, Mexico

"Statistical Physics", Int-l conf., plenary, Rutgers Univ.

"Dynamical Systems", Int-l workshop, plenary, IPAM, UCLA

Univ. of Potsdam, Physics Coll-m, Germany

Max Planc Inst-te for Stroemungforschung, Goettingen, Colloquium

Univ. of Darmstadt, MathPhys Colloquium, darmstadt, Germany

Univ. of CA Irvine, Math Colloquium

2002 “Complex Adaptive Systems”, Plenary, Int-l Conf., IAS, Bremen

“Evolution of Innovations”, Int-l Conf.,Czech Ac. Sci., Prague

"Microscopic Chaos and Transport in Many-Particle Systems", Plenary, Dresden

"Synchronization in Multicomponent Systems", Int-l Conf., Plenary, Mellas, Ukraine

"Dif-l Eq-ns & Math. Physics", Int-l Conf., Birmingham

"Mathematics of Biological Computations", Int-l Workshop, Lavin, Switzerland

Institut of Neuroinformatics, Zurich, Colloquium

Dynamical Systems Seminar, ETH, Zurich

Institute for Stochastics, Goettingen Univ., Colloquium

MPI fuer Stromungforschung, Colloquium, Goettingen

Univ. of Potsdam, Statistical Physics and Complex Systems

Humboldt Univ., Berlin, Statistical Physics Seminar

Univ. of Texas, Austin, Colloquium, Institute of Nonlinear Science

2001 "Dynamical Systems", Plenary Speaker, International Conference, Trieste, Italy

International Symposium of Photo-Optical Engineering Society, San Diego

"Nonlinear Science", International Conference, Cocoyoc, Mexico

"Latin American School in Physics", Principal Lecturer (5 lectures), Mexico City

"French Summer School in Geometry", Principal Lecturer (5 lectures), Montpellier

"Mathematical Approaches to Biological Computations", Workshop, (2 lectures), Lavin, Switzerland

"Nonlinear Dynamics", Workshop, University of California, San Diego, LaJolla

AMS Meeting, Irvine

Centre de Physique Theorique, University of Luminy, Marseille, Colloquium

University of Chicago, Seminar on Applied Math & PDE's

Rockefeller University, New York, Seminar of the Center for Biology & Physics

University of Santiago, Chile

Georgia State University, Colloquium

United Technologies RC, Division of Control and Dynamical Systems

Morris Brown College, Math Colloquium

2000 "Nonlinear Dynamics of Production Systems," Plenary, Internl Symposium, Cottbus, Germany

"Dynamical Systems", Plenary, International Conference, University of Maryland

"Quantum Chaos and Comples Systems", Plenary, International Conference, University of Washington, Seattle

"Dynamical Systems", International Conference, Rio de Janeiro

"Nonlinearity", Workshop, London

"New Frontiers in Dynamical Systems", International Conference, Edinburgh

"Differential Equations and Dynamical Systems", International Conference, Kennesaw, USA

"Statistical Physics", Conference, Rutgers University

"Dynamical Systems", Workshop, Los Angeles

"Dynamical Systems and Stat. Mech.", Conference, New Brunswick

"Southeast Probability Days", Atlanta

AMS Meeting, Toronto

AMS Meeting, Birmingham

University of Santiago, Chile, Applied Math Colloquium

Arizona State University, Colloquium

Arizona State University, Interdisciplinary Seminar

University of Toronto, Colloquium

University of Southern California, Colloquium

University of Southern California, Dynamics Seminar

United Technologies RC, UTRC Colloquium

United Technologies RC, Dynamics and Control Seminar

Emory University, Analysis Seminar

School of Biology, Georgia Tech., Colloquium

1999 "Dynamics and Stochasticity," Brussels, Plenary Speaker, Internal Conference

"Nonlinear Dynamics and Kinetic Theory," Vienna, Plenary Speaker, International Conference

"Dynamics Days," Como, Italy, Plenary Speaker

"Symmetry in Nature," International Workshop, Centro Internationale Ciencias Mexico
"Spatio-temporal Dynamical Systems," International Workshop, Plenary Speaker, Cuernavaca, Mexico

"Dynamical Systems and Statistical Physics", International Workshop, Schroedinger Inst., Austria

AMS-SMM Meeting, Denton, Texas

Southeast Probability Days, Atlanta

SIAM Conf. on Industrial Math., Raleigh, N.C.

Auburn Univ., Colloquium

Mathematics Inst., SUNY at Stony Brook

Rutgers University, Math. Physics Seminar

Los Alamos National Lab, Center for Nonlinear Studies

Morris Brown College of Atlanta

Oak Ridge National Lab

Univ. of Rome I, Italy

Univ. of Bologna, Italy

Univ. of Modena, Italy

CIC, Cuernavaca, Mexico

UNAM, Cuernavaca, Mexico

Technical Univ., Mexico City, Colloquium

SIAM Conference on Dynamical Systems and Applics., Session "Lattice Systems," Snowbird

SIAM Conference on Dynamical Systems and Applics., Session "Operations Research," Snowbird

1998 International Conference "Classical and Quantum Chaos," Plenary Talk, Toulouse, France

International Conference "Probabilistic and Thermodynamic Aspects of Nonlinear Dynamics," Plenary Talk, Brussels

International Conference "Disordered Dynamical Systems," Plenary Talk, Dresden, Germany

Congress on Statistical Physics, Paris, France

Southeast Geometry Conference, Athens, Georgia

AMS-SIAM Workshop, Courant Institute, NYU, N.Y.

University of Rome I, Math. Phys. Seminar

University of Rome III, Colloquium

University of Camenino, Italy, Colloquium

University of Sussex, Brighton, England, Analysis Seminar

University of Colorado, Boulder, Colloquium

Division of Applied Mathematics, University of Colorado, Seminar

1997 SIAM International Conference on Dynamical Systems and their Applications, Snowbird, Utah, Plenary Lecture

International Conference “Transport Theory and Statistical Mechanics,” Oberwolfach, Germany

International Conference “Nonlinear Theory & Applications,” Honolulu

AMS Meeting, Atlanta, Georgia

Southeast Applied Probability Days

City of Zurich Joint Probability Seminar, ETH, Zurich

Seminar, Mathematics Department, University of Geneve

Colloquium, University of Lausanne

Colloquium, University of Bern

Colloquium, University of Edinburgh

Seminar, Math. Physics, Univ. of Texas at Austin

Colloquium, Los Alamos National Lab, CNLS

1996 International Conference "Statistical Mechanics as the Branch of Probability Theory," Vienna, Plenary Talk
Conference "Multifractals and Dynamical Systems," Courant Institute

Conference "Nonuniform Hyperbolicity and Statistical Mechanics," Rutgers University

AMS Meeting, Chattanooga, TE

AMS Meeting, Columbia, MO

Queen Mary College, London, Colloquium

Weizmann Institute of Sciences, Colloquium

Hebrew University, Jerusalem, Israel

Tel-Aviv University, Israel

Universite de Paris VII, 4 Lectures

Universite Libre de Bruxelles, Colloquium

Universite di Bologna, Colloquium

Emory University, Physics Colloquium

University of Birmingham, Colloquium

1995 Euroconference on Dynamical Systems, Plenary Lecture, Cambridge University, UK

International Conference "Nonlinear Dynamics, Chaotic and Complex Systems", Zakopane, Poland, Plenary Lecture

“Dynamics Days,” Lyon, France, Plenary Lecture

ASI NATO ”From Finite to Infinite Dynamical Systems,” Newton's Institute, Cambridge, UK, Plenary Lecturer (3 lectures)

“Lattice Dynamical Systems,” Paris, Plenary Talk

Workshop on Thermodynamic Formalism, Lavin, Switzerland

Southeast Topological Conference, University of Delaware

Conference on Dynamical Systems, Maryland

Conference on Statistical Physics, Rutgers University

SIAM Conf. on Dynamical Systems, 2 talks

Southeast Probability Days

University of Alabama at Birmingham, Colloquium

1994 Symposium on Classical and Quantum Billiards, Plenary Lecture and Invited Talk, Ascona, Switzerland

AMS Meeting, Manhattan, KS

Conference on Statistical Physics, Rutgers University

Conference on Nonlinear Dynamics in Science and Engineering, Atlanta

Université Paris VII

Weizmann Institute of Sciences, Colloquium and Seminar

Hebrew University, Jerusalem

Tel Aviv University, Israel

Centre de Physique Theorique, Marseille, 2 seminars

Duke University, Colloquium

Ohio State, Colloquium and Seminar

Univ. of Illinois at UC, Physics Colloquium

Univ. Of Illinois at UC Center for Complex Systems, Colloquium

1993 International Conference on Chaos, Order and Patterns, Como, Italy

Summer School on Mathematical Physics for Young Scientists, Ravello, Italy

International Conference on Chaos, Woods Hole

Annual Meeting of American Mathematical Society, San Antonio

Institute for Nonlinear Studies, Univ. of San Diego, 2 seminars

Univ. of Virginia, Charlottesville

Institute for Physical Science and Technology, Univ. of Maryland

International Workshop on Space-Time Dynamics, Univ. of Montreal, Canada (3 lectures)

Institute of Physics, Univ. of Muenchen, Germany

Institute for Nonlinear Dynamics, Univ. of Frankfurt am Mein, Germany

Univ. of Bielefeld, Germany

Univ. of Heidelberg, Germany

Univ. of Bologna, Italy

Univ. of Modena, Italy

1992 "Dynamics Days," Austin

Southeast Conference on Dynamical Systems, Raleigh

International Conference on Differential Equations and Mathematical Physics, Atlanta, GA, (contributing talk)

Northwestern University, Seminar on Dynamical Systems

University of North Carolina, Chapel Hill, 2 seminars

Dixieland Analysis Seminar, Emory University

Weizmann Institute of Sciences, Israel

Hebrew University, Jerusalem, Israel

Tel-Aviv University, Israel

Technion, Haifa, Israel

1991 Plenary Lecture at International Congress on Mathematical Physics, Leipzig

Plenary Lecture at "Dynamics Days," Berlin

Invited Lecture, Conference "Geometry and Physics," ZIF, Bielefeld

Colloquium, University of Houston, Center for Nonlinear Studies

Seminar on Analysis, Emory University

Colloquium, Institute for Scientific Interchanges, Turin

Colloquium, Erlangen University, Germany

Mathematical Physics Seminar, Rutgers University

Colloquium, Georgia Institute of Technology, School of Mathematics

Colloquium, Wissenschaftskolleg zu Berlin

Colloquium, Institute of Statistical Mechanics of Turbulence, Marseille

1990 Invited Lecture at the NATO Summer School "Chaos, Order and Patterns," Como USSR-USA Conference on Chaos, Tarussa

Colloquium, Weizmann Institute of Science, Mathematical Department

Invited Lecture on the Conference "Ergodic Theory and Related Topics," Guestrow, Germany

Chaos Seminar, Space Research Inst-te Ac. of Sci. USSR, Moscow

Colloquium, Institute for Scientific Interchanges, Turin

Mathematical Physics Seminar, University of Rome 1

Mathematical Department Seminar, University of Modena, Italy

Mathematical Physics Seminar, Rutgers University

Invited Speaker, “Dynamics Days,” Austin

Colloquium, University of Arizona, Department of Mathematics

1989 Plenary Lecture, “Dynamics Days,” Dusseldorf, Germany

Invited Speaker - Conference on Statistical Physics, Rutgers University

Colloquium, Mathematical Institute of ETH, Zurich

Mathematical Physics Seminar, Courant Institute

Mathematical Physics Seminar, Rutgers University Dynamical Systems Seminar, University of Maryland

Sinergetics Seminar, Moscow University

Moscow Seminar on Geophysical Hydrodynamics

Chaos Seminar, Space Research Institute of Ac. Sci. USSR, Moscow

1988 Invited Lecture at the Winter School “Probabilistic Methods in Physics,” Karpacz, Poland

Invited Speaker, NATO Summer School “New Trends in Nonlinear Dynamics and Pattern Forming Phenomena,” Cargese, France

Invited Speaker - International Conference “Nonlinear and Turbulent Processes in Physics,” Kiev

Colloquium, Institut des Hautes Etudes Scientifiques

Colloquium, University of Paris VI

Colloquium, University d'Orsay

Seminar, Institute of Statistical Mechanics of Turbulence, Marseille, France

3 Lectures in Centre de Physique Theorique, Marseille, France

COMMITTEES - GEORGIA TECH:

2007-	Shared Postdocs Committee, Int-ve Biol-l Systems Inst., Chair
2006 -	Seminar on Mathematical Biology&Ecology, Organizer
2005	Postdocs Search Committee
2005-2007	Salary & Awards Committee
2004- 2006	Junior P&T Committee
2002	GaTech Faculty Research Awards Committee
2002-	PhD in Bioinformatics Search Committee
2002-	PhD in Bioinformatics Coordinating Committee
2002-	Center of Bioinformatics&Comp-l Biology, Exec. Committee
2002- 2003	Faculty Advisory Committee, Chair
2002 - 2004	Hiring Committee
2001 - 2003	Undergraduate Committee
2001 - 2003	Salary & Awards Committee
2001 -	Dean's Bioinformatics Advisory Committee
2001 - 2002	GRA Scholar in Bioinformatics Search Committee
2000-	Center of Nonlinear Sci-s Executive Comm.
2000 -	College of Sciences Steering Committee
2000 - 2002	Chair Prof. Search Committee in ISyE
1998 - 2000	Senior Promotion and Tenure Committee
1998 – 2000	Post-tenure Review Committee
1997	Chair Evaluation Committee
1996 - 1998	CDSNS Advisory Board, Chairman

1996 Senior Tenure and Promotion Committee, Chairman

1995 - 1996 Colloquium Chairman for CDSNS

1994 - 1996 Graduate Committee

1993 - 1995 Senior Tenure and Promotion Committee

1992 - 1995 Organizer and Co-Chair of Interdisciplinary Seminar, "Nonlinear Dynamics in Science and Technology"

1992 - 1993 Colloquium Chairman, Center for Dynamical Systems and Nonlinear Studies

Numerous Ph.D. Committees at the Schools of Mathematics, Physics, Biology, Industrial & Systems Engineering, Mechanical Engineering, Aerospace Engineering, Electrical Engineering

Numerous Sub-committees for SPTC and JPTC.

PROFESSIONAL AFFILIATIONS:

- American Mathematical Society
- International Association of Mathematical Physics
- Society of Industrial and Applied Mathematics
- Moscow Mathematical Society

SERVICE TO THE MATHEMATICAL COMMUNITY:

2008 Int. Conf. on Dynamical Networks, Austria, Scient-c Comm.

2007-2008 Int. Workshop on Nonlin. Dyn.&Statmech. of Complex Syst.", Switzerland, Scient-c Comm.

2006- 2007 "Intl. Conf. "Applied Mathematics and Computing", Plovdiv, Bulgaria, Scientific Comm.

2005-2006 "Dynamical Chaos: From Rigorous Results to Applications in Nanosystems", Semester (Int-l conf., School, workshop), Inst. of Math-s, Nat-l U. of Singapore, Org. & Scientific Comm.

2005 -2006 Int. Workshop "Dyn- Syst-s & Appl-s", Univ. of Maryland, Org-g Comm

2004- 2005 Int-l Conf. "Chaos and Disorder in Math-cs and Physics', Bressanone, Italy, Organizing Comm.

2004-2005 Int-l Conf. "Dinamics, Bifurcations and Chaos", Nizhny Novgorod, Russia, Scientific Comm.

2003-2004 Int-l Workshop on Coupled Map Lattices, In-t H.Poincare, Paris, Scientific Comm.

2000 International Conference on Dynamical Systems, Edinburgh, Advisory Committe

1999 Southeast Workshop on Industrial Math., Steering Committee

1999 Dynamics Days 99, Atlanta, Organizing Committee

1999 SIAM Conference on Dynamical Systems, Mini-symposium Organizer

1997 Advisory Committee, International Conference "Gene discovery in Silico," Georgia Tech, Atlanta

1995 Program Committee, Conference on Extended Systems, Paris

1995 Organizer, Mini-symposium, SIAM Conference on Nonlinear Dynamics

Scientific Referee: Comm. Math. Phys., Ergodic Theory & Dyn. System, Integers, Phys. Rev. Lett., Operations Research, Phys.Lett., Europhys. Lett., J. Mathem. Phys., Probability Theory and Related Fields, Russian Math. Surveys, Theor. Mathem. Phys., Function Analysis, J. Statistical Physics, J. Differential Equations, J. Math. Anal. Applications, Nonlinearity, Annals of Physics, Phys. Rev. NSF: Mathematics and Physics, DOE, Canadian Science Foundation, Swiss Science Foundation, NATO, European Science Foundation

CONSULTING:

1999 Bios Group

2001 United Technologies

EDITORIAL BOARDS:

1997 - Editorial Board of "SIAM J. of Applied Mathematics"

1995- Editorial Board of "Nonlinearity"

2004- Editorial Board of "Chaos"

2003-	Editorial Board of the series "Frontiers in Mathematics", Birkhauser
2003-	Editorial Board of "Int-l J. of Pure &Applied Mathematics"
2006 -	Editorial Board of Open Mathematics Journal
2002 -	Editorial Board of "Electronic J. of Physical&Math-l Sciences"
1999 – 2006	Editorial Board of "Discrete and Continuous Dynamical Systems"
1995 – 2004	Advisory Board of "Chaos"
1995	Editor, Advances of Soviet Mathematics, AMS publ.
1994 – 1997	Editor-in-Chief of the Journal, "Random and Computational Dynamics"
1992 – 1997	Editorial Board of the "Journal of Statistical Physics"
1989 – 1994	Editorial Board of the Series "Advances in Mathematics for Applied Sciences"
1989 – 1994	Editorial Board of the "Ergodic Theory and Dynamical Systems"

HONORS, AWARDS:

1998	Regents' Professor
1998	Exemplary Senior Faculty Award, Georgia Tech
1999	Fellow, Institute of Physics, UK
1999	Chartered Physicist, United Kingdom
2000	Outstanding Faculty Research Author Award, Georgia Tech
2002	Humboldt Prize
2004	Fellow, Institute of Physics

GRADUATE STUDENTS:

D.Kreslavsky, PhD, 2003
M.Khlabystova, PhD, 2003
G.Del Magno, PhD, 2002
E. Shchekinova, M.S., 1999
J. Rehacek, Ph.D., 1996
S. Venkatagiri, Ph.D., 1996

N. Gupalo (Moscow Phys. – Tech. In-te), M.S., 1990
N. Baturin (Moscow Phys-Tech. In-te), M.S., 1990

CURRENT GRADUATE STUDENTS:

A. Grigo
B. Webb
A. Yurchenko

POST-DOCTORAL ASSOCIATES

M. Jiang, 1994-96
A. Berger, 2001-02
M.Porter, 2002-2005
M.Demers, 2003-2006