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Curriculum Vitae

Peter Turchin

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Education:

1985	Ph.D.	Duke University	Zoology (minor: mathematics)
1980	B.A.	New York University	Biology (cum laude)
1975–7		Moscow State University	Biology

Professional Positions:

Department of Ecology and Evolutionary Biology, University of Connecticut

2002–	Professor
1997–02	Associate Professor
1994–97	Assistant Professor

Santa Fe Institute

2007–8	Visiting Professor
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Southern Forest Experiment Station, Forest Service Research

1990–94	Supervisory Ecologist
1988–90	Ecologist

Department of Zoology, University of Washington

1988	Lecturer
1985–88	Postdoctoral Research Associate

Department of Zoology, Duke University

1983–85	Teaching Assistant
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Professional Activities:

Symposia, workshops, and working groups organized (last ten years)

2006	Measuring and modeling cycles of state formation, decline and upward sweeps since the bronze age. San Diego (<i>with C. Chase-Dunn</i>).
2004	Analyzing Complex Macrosystems as Dynamic Networks. A workshop at the Santa Fe Institute (<i>with D. White and C. Chase-Dunn</i>).
2004	Studying Political Centralization Cycles as a Dynamic Process. Organized an invited panel at the Third International Conference on Hierarchy and Power in the History of Civilizations, Moscow, Russia.
1998	Nonlinear time-series analysis. Workshops at Leiden University, Netherlands; and University of Marseilles, France.
1997	Building empirically-based theory for spatial ecology: tales from the front lines. Invited Symposium at Ecological Society of America Annual Meeting, Albuquerque, NM.
1995–98	Working Group on Complex Population Dynamics (<i>with W. Murdoch</i>). NCEAS, Santa Barbara, CA.

Service

2004	Sino-US Collaboration Project <i>Ecological Complexity and Ecosystem Services</i>
2000	NSF Site Visit Team for the National Center for Ecological Analysis and Synthesis
1999–02	Editorial Board, <i>Researches in Population Ecology</i>
1998–00	Associate Editor, <i>Ecology Letters</i> .
1995–97	Scientific Advisory Board, National Center for Ecological Analysis and Synthesis; Santa Barbara, CA
1993–97	NSF Ecological Studies Panel
1992	NSF Special Projects Panel

Honors or distinctions

- 2004 *ISI Highly Cited* identified Turchin as one of top 250 cited authors in the field of Ecology/Environment
- 2003 UConn Alumni Association's Award: Faculty Excellence in Research
- 2000–01 Fulbright Scholarship
- 2000 Chancellor's Research Excellence Award (University of Connecticut)
- 1999 Invited Lecturer at Oikos Seminar on Costs and Gains of Recent Progress in Ecology
- 1997 Elected Chair of the Theoretical Ecology Section of the Ecological Society of America
- 1997 Invited Lecturer, Oikos Symposium; Røros, Norway
- 1995 Invited Guest Speaker at the Society of Population Ecology Meeting; Mie, Japan

Postdoctoral Associates:

- 2004–05 Juan Manuel Morales
- 2003–05 Mosheh Wolf
- 1999–03 Kim Cuddington (currently at Miami University of Ohio)
- 1995–98 Rich Wilkens (currently at Dowling College)
- 1993–95 Jim Cronin (currently at University of Louisiana)
- 1989–90 Andy Taylor (currently at University of Hawaii)

Ph.D. students graduated:

- Jay Bancroft (2000)
- Eric Schaubert (2000)
- Kristian Omland (2001)
- Juan Manuel Morales (2004)

Research grants

- 2005–08 NSF Global state formation: modeling the rise, fall and upward sweeps of large polities in world history and the global future (with C. Chase-Dunn and E. Anderson)
- 2005–07 NSF Supplement to the 2000–5 NSG-IRCEB grant
- 2000–05 NSF-IRCEB Building a mechanistic basis for landscape ecology of ungulate populations (with J. Fryxell, M. Turner, M. Boyce, and E. Merrill)
- 1997–99 NSF Dispersal as a mechanistic basis for landscape ecology: the role of scale and heterogeneity.
- 1997–2000 NSF Direct and indirect effects on community resilience in oak forests.
- 1996–98 NCEAS Working group on complex population dynamics.
- 1995–98 NSF Testing reaction-diffusion theory: spatial dynamics in a bark beetle–predator system.
- 1994–96 UConn RF Investigating small mammal cycles with empirically-based models.
- 1992–95 USDA Evaluation of the area-wide efficacy of direct control tactics for southern pine beetle.
- 1992–94 USDA-FS Effects of thinning on southern pine beetle risk to old-growth pine stands.
- 1991–92 USDA-FS Effects of mixed pine – hardwood management on pine mortality due to bark beetles: a landscape approach.
- 1989–91 USDA Empirical and quantitative analysis of intraforest dispersal in the southern pine beetle.
- 1986–88 NSF Influence of host patch size on herbivore population dynamics.

Publications

Books

- Turchin P, Nefedov SA. 2009. *Secular Cycles*. Princeton University Press, Princeton, NJ.
- Turchin P. 2005. *War and Peace and War: Life Cycles of Imperial Nations*. Pi Press. (A Serbian-language translation was published in November 2006). Published as a paperback under the title *War and Peace and War: The Rise and Fall of Empires* by Plume in February 2007.
- Turchin P. 2003. *Historical Dynamics: Why States Rise and Fall*. Princeton University Press, Princeton, NJ. (Russian translation published in 2007)
- Turchin P. 2003. *Complex Population Dynamics: a Theoretical/Empirical Synthesis*. Princeton University Press, Princeton, NJ.
- Turchin P. 1998. *Quantitative Analysis of Movement: Measuring and Modeling Population Redistribution in Animals and Plants*. Sinauer Associates, Sunderland, MA.

Articles in Nature, Science, or PNAS

- Turchin P, Scheidel W. 2009. Coin Hoards Speak of Population Declines in Ancient Rome. PNAS, in press.
- Turchin P. 2008. Arise 'cliodynamics'. Nature 454:34-35.
- Turchin, P. 2008. Building nations after conflict (a book review). Nature 453:986-987.
- Burtsev M, Turchin P. 2006. Evolution of cooperative strategies from first principles. Nature 440: 1041-4.
- Turchin P. 2003. Evolution in population dynamics. Nature 424: 257-258.
- Ellner SP, McCauley E, Kendall BE, Briggs CJ, Hosseini PR, Wood SN, Janssen A, Sabelis MW, Turchin P, Nisbet RM, Murdoch WW. 2001. Habitat structure and population persistence in an experimental community. Nature 412: 538-543.
- Turchin P, Oksanen L, Ekerholm P, Oksanen T, Henttonen H. 2000. Are lemmings prey or predators? Nature 405: 562-565.
- Turchin P, Taylor AD, Reeve JD. 1999. Dynamical role of predators in population cycles of a forest insect: an experimental test. Science 285: 1068-1071.
- Hanski I, Turchin P, Korpimäki E, Henttonen H. 1993. Population oscillations of boreal rodents: regulation by mustelid predators leads to chaos. Nature 364: 232-235.
- Turchin P. 1990. Rarity of density dependence or population regulation with lags? Nature 344: 660-663.

Articles in other peer-reviewed journals

- Turchin P, Gavrillets S. 2009. Evolution of Complex Hierarchical Societies. Social Evolution and History 8(2): in press.
- Turchin, P. 2009. A Theory for Formation of Large Empires. Journal of Global History 4:191-207.
- Wolf M, Frair J, Merrill E, Turchin P. 2009. The attraction of the known: the importance of spatial familiarity in habitat selection in wapiti *Cervus elaphus*. Ecography, in press.
- Turchin, P. 2009. Long-term population cycles in human societies. Pages 1-17 in R. S. Ostfeld and W. H. Schlesinger, editors. *The Year in Ecology and Conservation Biology, 2009*. Ann. N. Y. Acad. Sci. 1162.
- Turchin, P. 2008. Theories and models in empirical investigation of historical dynamics (in Russian). Istoriya i sovremennost 2008(2): 10-33.
- Turchin P, Adams JM, Hall TD. 2006. East-West Orientation of Historical Empires and Modern States. Journal of World-Systems Research 12:219-229.
- Turchin P, Korotayev A. 2006. Population Dynamics and Internal Warfare: a Reconsideration. Social Evolution and History 5(2): 121-158.
- Ellner SP, Turchin P. 2005. When can noise induce chaos and why does it matter: a critique. Oikos 111: 620-631.
- Turchin P. 2005. Dynamical Feedbacks between Population Growth and Sociopolitical Instability in Agrarian States. Structure and Dynamics 1(1): Article 3.
- Turchin P. 2005. A Primer on Statistical Analysis of Dynamical Systems in Historical Social Sciences (with a Particular Emphasis on Secular Cycles). Structure and Dynamics 1(1): Article 4.
- Turchin P. 2005. Response to Oscillations in Population Sizes – From Ecology to History. Structure and Dynamics 1(1): Article 11.

- Kendall BE, Ellner SP, McCauley E, Wood SN, Briggs CJ, Murdoch WW, Turchin P. 2005. Population cycles in pine looper moth (*Bupalus piniarius*): dynamical tests of mechanistic hypotheses. *Ecological Monographs* 75: 259-276.
- Nazaretyan AP, Borodkin, LI, Malkov, SYu, Chernavskiy DS, Turchin PV, Lyuri DI, Armand, AD, Krichevets AN, Ionov IN, Kazankov AA, Borinsaya SA, Litvinenko VA, Karavayev VA. 2004. Vozmozhny li matematicheskie modeli v istorii? (Are mathematical models in history possible?) *Obschestvennye nauki i sovremennost'* 2004(3): 111-122.
- Turchin P, Wood SN, Ellner SP, Kendall BE, Murdoch WW, Fischlin A, Casas J, McCauley E, Briggs CJ. 2003. Dynamical effects of plant quality and parasitism on population cycles of larch budmoth. *Ecology* 84: 1207-1214.
- Boyce MS, Mao JS, Merrill EH, Fortin D, Turner MG, Fryxell J, Turchin P. 2003. Scale and heterogeneity in habitat selection by elk in Yellowstone National Park. *Ecoscience* 10:321-332.
- Bancroft JS, Turchin P. 2003. An experimental test of fragmentation and loss of habitat with *Oryzaephilus surinamensis*. *Ecology* 84: 1756-1767.
- Turchin, P. 2003. Secular waves in historical demography (in Russian). *Priroda* 6: 3-12.
- Turchin P, Hall TD. 2003. Spatial synchrony among and within world-systems: insights from theoretical ecology. *Journal of World Systems Research* 9: 37-64.
- Turchin P. 2002. Are there general laws in population ecology? (In Russian) *Zhurnal Obshchey Biologii* 63: 3-14. (This is a reworked Russian translation of the *Oikos* 94:17 article.)
- Schauber EM, Kelly D, Turchin P, Simon C, Lee WG, Allen RB, Payton IJ, Wilson PR, Cowan PE, Brockie RE. 2002. Synchronous and asynchronous masting by 18 New Zealand plant species: the role of temperature cues and implications for climate change. *Ecology* 83: 1214-1225.
- Turchin P, Batzli GO. 2001. Availability of food and the population dynamics of arvicoline rodents. *Ecology* 82: 1521-1534.
- Hanski I, Henttonen H, Korpimäki E, Oksanen L, Turchin P. 2001. Small rodent dynamics and predation. *Ecology* 82: 1505-1520.
- Turchin P. 2001. Does population ecology have general laws? *Oikos* 94: 17-26.
- Turchin P, Hanski I. 2001. Contrasting alternative hypotheses about rodent cycles by translating them into parameterized models. *Ecology Letters* 4: 267-276.
- Berryman AA, Turchin P. 2001. Identifying the density-dependent structure underlying ecological time series. *Oikos* 92: 265-270.
- McCauley E, Kendall BE, Janssen A, Wood S, Murdoch WW, Hosseini P, Briggs C, Ellner SE, Nisbet RN, Sabelis MW, Turchin P. 2000. Inferring colonization processes from population dynamics in spatially structured predator-prey systems. *Ecology* 81: 3350-3361 .
- Turchin P, Ellner SP. 2000. Living on the edge of chaos: population dynamics of Fennoscandian voles. *Ecology* 81: 3099-3116.
- Grover JP, McKee D, Young S, Godfray HCJ, Turchin P. 2000. Periodic dynamics in *Daphnia* populations: biological interactions and external forcing. *Ecology* 81: 2781-2798.
- Cronin JT, Reeve JD, Wilkens R, Turchin P. 2000. The pattern and range of dispersal of a checkered-beetle predator relative to its bark-beetle prey. *Oikos* 90: 127-138.
- Turchin P, Davidson J, Hayes JL. 1999. Effects of thinning on development of southern pine beetle infestations in old-growth stands. *Southern Journal of Applied Forestry* 23: 193-196.
- Kendall BE, Briggs CJ, Murdoch WW, Turchin P, Ellner SP, McCauley E, Nisbet RM, Wood SN. 1999. Why do populations cycle? A synthesis of statistical and mechanistic modeling approaches. *Ecology* 80: 1789-1805.
- Turchin P, Berryman AA. 1999. Detecting cycles and delayed density dependence: a comment on Hunter and Price (1998). *Ecological Entomology* 25: 1-3.
- Cronin JT, Turchin P, Hayes JL, Steiner CA. 1999. Area-wide efficacy of a localized forest pest management practice. *Environmental Entomology* 28: 496-504.
- Turchin P. 1999. Population regulation: a synthetic view. *Oikos* 84: 153-159.
- Reeve JD, Rhodes DJ, Turchin P. 1998. Scramble competition in southern pine beetle, *Dendroctonus frontalis*. *Ecological Entomology* 23: 433-443.
- Turchin P, Hanski I. 1997. An empirically-based model for the latitudinal gradient in vole population dynamics. *American Naturalist* 149: 842-874.

- Turchin P, Ostfeld RS. 1997. Effects of density and season on the population rate of change in the meadow vole. *Oikos* 78: 355-361.
- Berryman A, Turchin P. 1997. Detection of delayed density dependence: comment. *Ecology* 78: 318-320.
- Turchin P. 1996. Nonlinear time-series modeling of vole population fluctuations. *Researches in Population Ecology* 38: 121-132.
- Turchin P. 1996. Fractal analyses of animal movement: a critique. *Ecology* 77: 2086-2090.
- Turchin P, Odendaal FJ. 1996. Measuring the effective sampling area of a pheromone trap for monitoring population density of southern pine beetle (Coleoptera: Scolytidae). *Environmental Entomology* 25: 582-588.
- Turchin P. 1995. Chaos in microtine populations. *Proceedings of the Royal Society of London B* 262: 357-361.
- Ellner S, Turchin P. 1995. Chaos in a noisy world: new methods and evidence from time series analysis. *American Naturalist* 145: 343-375.
- Turchin P. 1993. Chaos and stability in rodent population dynamics: evidence from nonlinear time-series analysis. *Oikos* 68: 167-171.
- Hastings A, Hom CL, Ellner S, Turchin P, Godfray HCJ. 1993. Chaos in ecology: is mother nature a strange attractor? *Annual Review of Ecology and Systematics* 24: 1-33.
- Turchin P. 1993. The logistic equation revisited. *TREE* 8: 68.
- Turchin P, Thoeny W. 1993. Quantifying dispersal of southern pine beetles with mark-recapture experiments and a diffusion model. *Ecological Applications* 3: 187-198.
- Schowalter TD, Turchin P. 1993. Southern pine beetle infestation development: interaction between pine and hardwood basal areas. *Forest Science* 39: 201-210.
- Turchin P, Taylor AD. 1992. Complex dynamics in ecological time-series. *Ecology* 73: 289-305.
- Odendaal FJ, Turchin P, Hoy G, Wickens P, Wells J, Schroeder G. 1992. *Bullia digitalis* (Gastropoda) actively pursues moving prey by swash-riding. *Journal of Zoology London* 228: 103-113.
- Turchin P. 1991. Translating foraging movements in heterogeneous environments into the spatial distribution of foragers. *Ecology* 72: 1253-1266.
- Turchin P. 1991. Reconstructing endogenous dynamics of a laboratory *Drosophila* population. *Journal of Animal Ecology* 60: 1091-1098.
- Turchin P, Odendaal FJ, Rausher MD. 1991. Quantifying insect movement in the field. *Environ Entomol* 20: 955-963.
- Turchin P, Lorio PL, Taylor AD, Billings RF. 1991. Why do populations of southern pine beetles (Coleoptera: Scolytidae) fluctuate? *Environmental Entomology* 20: 401-409.
- Turchin P. 1989. Population consequences of aggregative movement. *Journal of Animal Ecology* 58: 75-100.
- Turchin P. 1989. Beyond simple diffusion: models of not-so-simple movement in animals and cells. *Comments on Theoretical Biology* 1: 65-83.
- Odendaal FJ, Turchin P, Stermitz FR. 1989. Resource distribution, harassment by males and spatial patterns of female *Euphydryas anicia* (Nymphalidae). *Oecologia* 78:283-288.
- Turchin P, Kareiva P. 1989. Aggregation in *Aphis varians*: an effective strategy for reducing predation risk. *Ecology* 70: 1008-1016.
- Odendaal FJ, Turchin P, Stermitz PR. 1988. An incidental-effect hypothesis explaining aggregation of males in a population of *Euphydryas anicia*. *American Naturalist* 132: 735-749.
- Turchin P. 1988. The effect of host-plant density on the numbers of Mexican bean beetles, *Epilachna varivestis*. *American Midland Naturalist* 119: 15-20.
- Turchin P. 1987. The role of aggregation in the response of Mexican bean beetles to host-plant density. *Oecologia* 71: 577-582.
- Turchin P. 1986. Modelling the effect of host patch size on Mexican bean beetle emigration. *Ecology* 67: 124-132.

Book Chapters

- Turchin P. Toward Cliodynamics – an Analytical, Predictive Science of History. In Krakauer D (ed). *History, Big History, and Metahistory*. Book in progress.

- Turchin P. 2008. Modeling periodic waves of integration in the Afro-Eurasian world-system. Pp. 163-191 in George Modelski, Tessaleno Devezas, William R. Thompson (eds). *Globalization as Evolutionary Process: Modeling Global Change*. Routledge, NY.
- Turchin PV. 2007. General empirical patterns in dynamics, cliodynamics, and demographic-structural theory. Pp. 248-251 in Turchin PV, Grinin LE, Malkov SYu, Korotayev AV (editors). 2007. *History and Mathematics: Conceptual Landscape and Research Directions* (in Russian). URSS, Moscow
- Turchin PV. 2007. Perspective of mathematical history. Pp. 8-18 in Turchin PV, Grinin LE, Malkov SYu, Korotayev AV (editors). 2007. *History and Mathematics: Conceptual Landscape and Research Directions* (in Russian). URSS, Moscow
- Redman CL, Crumley CL, Hassan FA, Hole F, Morais J, Riedel F, Scarborough VL, Tainter JA, Turchin P, Yasuda Y. 2007. Group report: Millennial perspectives on the dynamic interactions of climate, people, and resources. Pp 115-150 in Costanza R, Graumlich LJ, Steffen W (eds). *Sustainability or Collapse? An Integrated History and Future of People on Earth*. MIT Press, Cambridge.
- Hall TD, Turchin P. 2007. Lessons from population ecology for world-systems analyses of long-distance synchrony. Pp. 74-90 in Hornborg A. Crumley C (eds). *The World System and the Earth System: Global socioenvironmental change and sustainability since the Neolithic*. Left Coast Press, Walnut Creek, CA.
- Chase-Dunn C, Hall TD, Turchin P. 2007. World-systems in the biogeosphere: urbanization, state formation and climate change since the Iron Age Pp. 132-148 in Hornborg A. Crumley C (eds). *The World System and the Earth System: Global socioenvironmental change and sustainability since the Neolithic*. Left Coast Press, Walnut Creek, CA.
- Turchin P, Korotayev A, Grinin L. 2006. Why do we need models of historical dynamics. Pp. 4-8 in: Turchin P, Grinin, L, Korotayev, A, de Munck VC (editors) *History and Mathematics: Historical Dynamics and Development of Complex Societies*. URSS, Moscow.
- Turchin P. 2006. Scientific prediction in historical sociology: Ibn Khaldun meets Al Saud. Pp. 9-38 in: Turchin P, Grinin, L, Korotayev, A, de Munck VC (editors) *History and Mathematics: Historical Dynamics and Development of Complex Societies*. URSS, Moscow.
- Turchin P, Briggs CJ, Ellner SP, Fischlin A, Kendall BE, McCauley E, Murdoch WW, Wood SN. 2002. Population Cycles of the Larch Budmoth in Switzerland. Pages 130-141 in: Berryman A (ed). *Population Cycles: the case for Trophic Interactions*. Oxford University Press, New York.
- Reeve, JD, Turchin P. 2002. Evidence for predator-prey cycles in a bark beetle. Pages 92-108 in: Berryman A (ed). *Population Cycles: the case for Trophic Interactions*. Oxford University Press, New York.
- Tanhuanpää M, Ruohamäki, K, Turchin P, Ayres MP, Bylund H, Kaitaniemi P, Tammaru T, Haukioja E. 2002. Population cycles of the autumnal moth in Fennoscandia. Pages 130-141 in: Berryman A (ed). *Population Cycles: the case for Trophic Interactions*. Oxford University Press, New York.
- Turchin P, Ellner S. 2000. Modeling time-series data. Pp 33-48 in Perry JN, Smith RH, Woivod IP, Morse D (eds). *Chaos in Real Data*. Kluwer Academic Publishers.
- Huffaker C, Berryman A, Turchin P. 1999. Dynamics and regulation of insect populations. Pp 269-312 in Huffaker CB, Gutierrez AP (eds). *Ecological Entomology*. 2nd edition. Wiley and Sons, New York.
- Turchin P, Omland KS. 1999. Quantitative analysis of insect movement. Pp 463-502 in Huffaker CB, Gutierrez AP (eds). *Ecological Entomology*. 2nd edition. Wiley and Sons, New York.
- Turchin P, Simmons G. 1997. Movements of animals in congregations: an Eulerian analysis of bark beetle swarming. Pp 113-125 in: Parrish JK, Hamner WM, eds. *Animal Groups in Three Dimensions*. Cambridge University Press.
- Parrish JK, Turchin P. 1997. Individual decisions, traffic rules, and emergent pattern: a Lagrangian analysis. Pp 126-142 in: Parrish JK, Hamner WM, eds. *Animal Groups in Three Dimensions*. Cambridge University Press.
- Turchin P. 1997. Quantitative analysis of animal movements in congregations. Pp 107-112 in: Parrish JK, Hamner WM, eds. *Animal Groups in Three Dimensions*. Cambridge University Press.
- Turchin P, Reeve JD, Cronin JT, Wilkens RT. 1997. Spatial pattern formation in ecological systems: bridging theoretical and empirical approaches. Pp 195-210 in: Bascompte J, Solé RV (eds). *Modelling Spatiotemporal Dynamics in Ecology*. Landes Bioscience, Austin, TX.

- Turchin P. 1995. Population regulation: old arguments and a new synthesis. Pp 19-40 in: Cappuccino N, Price PW (eds). *Population Dynamics: New Approaches and Synthesis*. Academic Press, New York.
- Turchin P, Millstein JA. 1993. EcoDyn/RSM: Response Surface Modeling of Nonlinear Ecological Dynamics. I. Theoretical Background. Applied Biomathematics, Setauket, NY.
- Reeve JD, Turchin P. 1993. A mechanistic approach to understanding and predicting southern pine beetle dynamics. In: Liebhold AM (ed). *Proceedings – spatial analysis and forest pest management*. USDA-Forest Service Gen Tech Report.
- Turchin P. 1991. Nonlinear modeling of time-series data: limit cycles and chaos in forest insects, voles, and epidemics. Pp 39-62 in Logan JA, Hain F(eds). *Chaos and Insect Ecology*. Virginia Exp Station Information Series 91-3. Blacksburg, VA.
- Turchin P. 1988. Models for aggregating populations. Pp 101-127 in Hallam TG, Gross LJ, Levin SA, eds. *Mathematical Ecology*. World Scientific, Singapore.

Edited Books

- Turchin PV, Grinin LE, Malkov Syu, Korotayev AV (editors). 2007. History and Mathematics: Conceptual Landscape and Research Directions (in Russian). URSS, Moscow
- Turchin P, Grinin, L, Korotayev, A, de Munck VC (editors). 2006. History and Mathematics: Historical Dynamics and Development of Complex Societies. URSS, Moscow.

Papers presented at meetings (last ten years)

- 2008 The New Gilded Age: A Demographic-Structural Analysis of American History, 1780-2000. Santa Fe Institute.
Dynamical Links between Population Growth and Sociopolitical Instability. Honolulu, HI.
Dynamical Feedbacks between Population Growth and Sociopolitical Instability. AAAS-SWARM, Albuquerque, NM.
- 2007 The Rise and Fall of Empires: Why do large territorial states tend to arise on steppe frontiers? Binghamton University, NY
Ecological influences on imperial expansion. American Political Science Association. Chicago, IL.
Collapse: a state-centered perspective. The Collapse Symposium, Wageningen University, Netherlands.
Empirical testing of theories in cliodynamics: the use of proxies. Conference “History and Mathematics”, Moscow
Ecology and Empire. Workshop on Socionatural History, Sudak, Ukraine
Analysis of dynamical systems in time and space. The Networks Workshop, Lyon, France
- 2006 Secular Cycles and World-System Pulsations in Pre-Industrial Eurasia. ECCS-2006, Oxford, UK
Testing Dynamic Model with Time-Series Data. NSF Workshop on Modeling Social Dynamics, Washington, DC
Modeling Periodic Waves of Globalization in Pre-modern Eurasia. Globalization as Evolutionary Process: Modeling, Simulating, and Forecasting Global Change, IIASA, Vienna.
Modeling Upward Sweeps of Territorial Empires. International Studies Association workshop, San Diego.
Modeling social and economic processes causing growth and decline of economic inequality. Association for History and Computer, Moscow.
A Model for the Formation of “Mirror Empires” on the Steppe Frontier. Hierarchy and Power in the History of Civilizations, Moscow.
- 2005 Testing Theories in Historical Sociology by Contrasting Model Predictions with Data. Annual Meeting of the American Political Science Association, Washington, DC.
96th Dahlem Workshop on Integrated History and Future of People on Earth (IHOPE). Berlin, Germany.
- 2004 Theoretical/Empirical Analyses of Historical Dynamics. Annual Meeting of the American Political Science Association, Chicago, USA.
Secular Cycles in Historical Demography. Joint Sino-USA Symposium on: Ecological Complexity and Ecosystem Services. Beijing, China

- Studying Political Centralization Cycles as a Dynamical Process. Third International Conference "Hierarchy and Power in the History of Civilizations", Moscow, Russia
- 2003 Analyzing Synchrony and Phase Shifts in Socio-Economic Oscillations. Social Science History Association, Baltimore.
Lessons from population ecology for world-systems analyses of long-distance synchrony. Conference of World System History and Global Environmental Change. Lund, Sweden
- 2003 Nonlinear dynamics in a noisy world, or why deterministic skeletons should be relegated to the closet. Ecological Society of America, Savannah, GA.
- 2001 Applying General Population Theory to Cervid Dynamics. Invited talk at the International Theriological Congress, Sun City, South Africa.
- 2000 Empirically Based Theory for Ungulate Conservation. Invited talk at the Ecological Society Meeting. Snowbird, UT.
- 2000 Developing a Mechanistic Basis for the Landscape Ecology of Ungulate Populations. Invited talk at the American Society of Mammalogists meeting. Durham, NH
- 1999 What mechanisms drive population oscillations of Larch Budmoth in Swiss Alps: plant quality or parasitism? Invited talk at the Ecological Society of America meeting, Spokane, WA.
- 1999 Dispersal as a mechanistic basis for landscape ecology: the role of scale and heterogeneity. Invited talk at the International Association of Landscape Ecology meeting, Snowmass, CO.
- 1999 General approaches to modeling movement. Guest lecture at the meeting of the Training and Research Management Group "Survival and evolution of species in fragmented landscapes". Cordoba, Spain
- 1998 Combining time-series analyses and field experiments to solve the puzzle of population cycles. Invited talks at the International Congress of Ecology, Florence, Italy; and at the Conference on Mathematical Ecology, Paris, France.
- 1997 Reaction-diffusion dynamics in a host tree-bark beetle- Clerid predator system. Invited Symposium at the Ecological Society Meeting, Albuquerque, NM.

Invited seminars (last ten years)

- 2007 Santa Fe Institute
- 2006 Columbia University
University of Washington
- 2005 Imperial College (UK)
Cambridge University (UK)
Moscow Institute of Physics and Technology
- 2004 Santa Fe Institute
University of California at Irvine
- 2003 Santa Fe Institute
Stanford University
University of California at Riverside
- 2002 American Museum of Natural History
Institute of Genetics (Moscow)
University of Alberta
University of Guelph
Rutgers University
- 2001 University of Helsinki
Michigan State University
- 2000 Moscow University
Institute for Applied Mathematics (Moscow)
- 1999 Desert Institute (Israel)
University of Connecticut
Duke University
North Carolina State University
- 1998 University of Amsterdam (Netherlands)
University of Zürich (Switzerland)
University of Paris-Sud (France)

University of Tours (France)
Leiden University (Netherlands)
1997 SUNY Stony Brook