Curriculum Vitae

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COMPETENCIES

For the last 20 years I have been working in assessment and prediction of regional and global changes in the environment through development and application of computer models of major environmental processes, model integration, and computer simulation. I have specific interests in research of climate change impact on forests and agriculture, land use change processes, mitigation and adaptation, and sustainability issues. I actively collaborate with colleagues from environmental and social sciences, and from different countries, e.g. Germany, Finland, Canada, Russia, and others. In the 2007 IPCC report on climate change, I served as a leading author in a chapter on food, fisheries, and forestry. This collaborative work was awarded the Nobel Peace Prize, shared between the IPCC and Al Gore. Other high-profile international projects that made an impact on national policies include “Nuclear Winter,” a study on global cooling following a nuclear conflict, and the study “Climate Change Impact on Food and Water Security in Russia.” My teaching interests match my research interests and include (1) earth systems science; (2) environmental modeling and GIS/spatial statistics; (3) elementary climate physics and global climate change; and (4) cross-disciplinary courses, integrated with introduction to GIS, computer modeling and scientific computing.

1. EDUCATIONAL BACKGROUND

Degrees

PhD, Computer Center of the USSR Academy of Science, Moscow, Russia (1986 – 1990).
Thesis: "Modeling water cycle and production process in forest ecosystems."

MS, Moscow State University, Faculty of Applied Mathematics and Cybernetics, Russia (1979 – 1984).
Thesis: "A numerical method of separation for linear systems."

Additional classes and seminars

2008-09. Issues in Higher Education Leadership Seminar. UND President’s program.
2004-present. ESRI ARC GIS (multiple online classes). ESRI.
2007. Bayesian Statistics Seminar. Purdue University.
2006. Microsoft Access Seminar. Purdue University.
2006. Macromedia Dreamweaver Seminar. Purdue University.
2000. Microsoft Certified Systems Engineer. Microsoft.
1997. FORTRAN 90 and Parallel Computing. EPA National Environmental Supercomputing Center.
1996. ERDAS IMAGINE. US EPA.

Computer skills

Programming: C/C++, Visual Basic, .NET, Fortran 77/90/95, Pascal, Prolog, PL/1, SQL, ESRI Mapobjects, Stella. Windows, UNIX.

GIS, Statistics, Data Processing: ESRI ArcGIS, ERDAS IMAGINE, SPSS, Mathematica, MS Access.

Internet and Multimedia: Macromedia Dreamweaver, Adobe Premiere, Adobe Photoshop, Camtasia.

2. PROFESSIONAL EXPERIENCE

Positions held

2006-present. Department of Earth Systems Science and Policy, University of North Dakota. Associate Professor.

2002-06. Department of Forestry and Natural Resources, Purdue University. Associate Researcher.

1998-02. Center for Ecology & Forest Productivity of Russian Academy of Science, Moscow, Russia. Senior Researcher.

2000-01. European Forest Institute, Joensuu, Finland. Visiting scientist.

1995-98. US EPA National Health and Environmental Effects Laboratory, Corvallis OR. Researcher, grantee of the US National Research Council.

1992-95. Center for Ecology & Forest Productivity of Russian Academy of Science, Moscow, Russia. Researcher.

1985-92. Computer Center of the USSR Academy of Science, Moscow, Russia. Researcher.

1984-85. Academy for National Economy of Council of Ministers of the USSR, Moscow, Russia. Software Engineer.

Current research

2008-09. Northern Great Plains Center for People and the Environment Phase II. NASA Applied Sciences Program Grant (#NNX08AO97G). Co-I or co-PI in the following sub-projects:

- Distributional Impacts of Climate Change on Agriculturally Important Pollinators of the Northern Great Plains;
- Historical and Future Land Use Dynamics in the Northern Great Plains;
- Adaptation Planning for Climate Change Impacts on the Northern Great Plains.

2007-08. Northern Great Plains Center for People and the Environment. NASA Applied Sciences Program Grant (#NNX06AE16G). Co-I in the following sub-projects:

- Evaluation of Wetland Restoration: Insect and Floral Diversity in the Glacial Ridge National Wildlife Refuge;
- Distributional Impacts of Climate Change on Biodiversity of the Northern Great Plains;
- Predicting Invasive Species Patterns.

2007-09. Climate change and Transboundary Water Conflicts in Central Asia: Aral Sea case study (unsponsored; NSF grant proposal in preparation).

Previous research

2006. Purdue University. Modeling land use change in Illinois. Developing a model of the regional land use change using the remotely sensing data.

2002-06. ECASE. Integrated modeling of the effects of land-use change decisions on nonpoint source water pollution in the Upper Wabash river basin.

2002-06. IFAFS (Future Agriculture and Food Systems). Development of an Internet-based Forest Stand Software Support System. https://www.purdue.edu/apps/forestry/4stool/index.jsp

2000-04. Global environmental change and its threat to food and water security in Russia. A joint Russia-Germany project on establishing the links between future climate, agricultural production, and regional food shortages. The project was supported by a grant from Alexander von Humboldt foundation.

2000-01. Climate change impacts on the number and area of forest wildfiles on the territory of Russia. The project was supported by an individual research grant from the European Forest Institute (Joensuu, Finland).

1998-00. Using carbon from afforestation in CO_2 emission trading as a factor of sustainable use of forests (on example of Russia). Evaluations of the capacity of boreal forests of Russia as a carbon sink for meeting the goals of Kyoto Protocol. The project was supported by an individual research grant from the Open Society Foundation.

1995-98. Dynamic approach to modeling of vegetation shifts due to the global climate change. The project was supported by the US National research Counsel individual research scholarship.

1992-95. Application of bioclimatic indexes for estimation of time dependent shifts in vegetation patterns due to global climate changes. The project was supported by the Russian National Program "Global Change of Climate and Environment".

1993-95. Simulation of coupled terrestrial vegetation shifts and carbon changes. The project was supported by a Special Grant for young talented scientists from the Siberian branch of Russian Academy of science.

1992-95. The methodology of landscape approach to the modeling of natural systems: an object-oriented approach to computer simulation of forest landscape dynamics. Supported by the Russian-German joint project "Scientific Basis for Global Ecosystem Monitoring."

1985-92. Global Climate - Biosphere Modeling. Development of the spatially distributed model of global carbon cycle. The following projects were supported by the Russian National Program "Global Change of Climate and Environment":

- Development of the spatially distributed model of global carbon cycle for joint use with the Computer Center of Russian Academy of Science GCM. The model was used in "Nuclear Winter" computations.
- Development of a model of forest ecosystem with seasonal dynamics.
- Development of a model of hydrological cycle in a forest ecosystem.

Current and planned research grants

2009-11 (requested). Drought severity and climate change in Russia: from historical database to multi-model projection. CGP-RFBR Multidisciplinary Climate Change Competition (PI). $75,000.

2008-09 (requested) NASA. The feasibility of combining NASA satellite data, general circulation models, and hydrologic model to inform decision making for flood mitigation on the Devils Lake basin of North Dakota (Co-PI). $114,247.

2008-10 (requested). Communicating climate change. NASA Global Climate Change Education (GCCE) grant. (Co-PI). $149,000.

2008-09 Northern Great Plains Center for People and the Environment Phase II. NASA Applied Sciences Program Grant #NNX08AO97G. $2,576,054.

2007-08 Northern Great Plains Center for People and the Environment. NASA Applied Sciences Program Grant #NNX06AE16G (Co-I). $2,766,945.

3. INSTRUCTION

Lectures and laboratory studies

2009 Spring. ESSP 502, 502L, 502R Earth System Science and Policy: biogeochemistry.

2008 Fall. Guest lectures in ESSP 501 and ESSP 501L Earth System Science and Policy I.

2008 Summer. ESSP 520 Earth Systems Modeling.

2008 Spring. ESSP 502, 502L, 502R Earth System Science and Policy: biogeochemistry.

2008 Spring. Guest lectures in ESSP 502 and ESSP 502L Earth System Science and Policy II: hydrology.

2007 Fall. Guest lectures in ESSP 501 and ESSP 501L Earth System Science and Policy I.

2007 Spring. ESSP 599-01 Readings in Climate Change.

2007 Spring. Guest lectures in ESSP 502 Earth System Science and Policy II. Guest lecture in GEOL105.

2006 Fall. Guest lectures in ESSP 501 and ESSP 501L Earth System Science and Policy I.

2005 Fall. FNR 598M Ecological Modeling, Purdue University.

Curriculum development

2008. ESSP520 Earth Systems Modeling.

2008. ESSP502 Earth System Science and Policy II, Global Biogeochemical Cycles.

2007. ESSP599-01. Readings in Climate Change.

2005. FNR598M. Ecological Modeling with Visual Basic.

Academic advising

2008-09. Major Professor of two MS and one MEM students; thesis committee for two students.

2007-08. Major Professor of two MS and one MEM students; thesis committee for three students.

2006-07. Thesis committee for three MS and MEM students.

GRA supervision

2008 Fall. Three students (MS, MEM)

2008 Summer. Three students (MS, MEM)

2008 Spring. Three students (MS)

2007 Fall. Three students (MS)

2007 Spring. One student (MS)

2006 Fall. Two students (MS and MEM)

4. SERVICE

University service

2007-current. Student Evaluation Committee, ESSP UND.

2007-current. Chair, ESSP Brownbag Friday Discussion seminars, ESSP UND.

2007-current. UND Graduate Faculty, associate membership.

Service to profession

Reviewer

2008. IASTED International Conference on Environmental Modelling and Simulation EMS 2008; Carbon Balance and Management

2007. Carbon Balance and Management; IASTED International Conference on Environmental Modelling and Simulation EMS 2007.

2006. IPCC Climate Change 2007 WG2 Chapter 12 SOD; IPCC Climate Change 2007 WG3 SOD; Hare, W.L., Battaglini, A., Jaeger, C., Cramer, W. (eds.) Climate impact hotspots – Key vulnerable regions and climate change; IIASA Peccei and Mikhalevich Award.

2005. IPCC Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues related to Hydrofluorocarbons and Perfluorocarbons; IPCC Climate Change 2007 WG3 Chapter 9 ZOD; IPCC Climate Change 2007 WG2 Chapter 12 FOD; Mitigation and Adaptation Strategies for Global Change.

2002. Environmental Science and Policy.

1994, 1995. Fulbright Senior Scholars Program in Russian Federation.

Leading Author, Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC AR4).

Editorial board, Carbon Balance and Management.

Conference Organizer

2008. International Program Committee for the Fourth IASTED International Conference on Environmental Modelling and Simulation EMS 2008.

2007. International Program Committee for the Third IASTED International Conference on Environmental Modelling and Simulation EMS 2007, August 20 – 22, 2007, Honolulu HI, USA.

2005, 2006. Judge, Best Paper Awards, Forestry and Natural Resources Graduate Student Conference, Purdue University.

2004. Session chair, the Second IASTED International Conference on Environmental Modelling and Simulation EMS-2004, St. Thomas VI.

Authored Software

WORDER, software for analysis of digital textual data. http://kirilenko.org/worder

Species Fingerprint, software for ecological niche visualization. http://kirilenko.org/fingerprint

NeuroNiche, software for projecting ecological niche modifications with climate change using Artificial Neural Networks.

4Stool, An Internet-based decision support tool for non-industrial private forest landowners.

Service to public

Committees

2007-current. Green^3 Grand Forks Resource Committee (developing suggestions for the city of Grand Forks for tangible actions on a wide range of programs and policies involving the community at large, city government and community-wide entities.) Chairing the Land Use subcommittee.

Panel discussions and presentations, invited

2007. Panel discussion of the movie The Inconvenient Truth. Northland Community and Technical College, Thief River Falls, MN. April 19, 2007.

2007. Panel discussion of the movie The Inconvenient Truth. Department of Geology and Geological Engineering of the University of North Dakota and the Dakota Science Center of Grand Forks, Empire Arts Center, Grand Forks, ND. April 14, 2007.

2007. Kirilenko A. Climate Change Science: What We Know Now. University of North Dakota, Grand Forks, ND. March 6, 2007.

2004. Kirilenko A. Global Warming. Purdue University School of Agriculture. Presentation to high school students, participating at the Purdue Agriculture Exploration Summer Camp. July 13, 2004

Interviews, TV appearances, and newspaper publications about my work

2008. Interview, Grand Forks Herald, June.

2007. Interview, Grand Forks Herald, December.

2007. Interview, Grand Forks Cable TV Channel 3, cir. October 17.

2007. Nobel Peace Prize connects with UND climate scientist. UND University letter, October 17.

2007. Y. Lee. A piece of the prize. UND professor part of the panel that wins Nobel Prize. Grand Forks Herald, October 13, issue 106 (numerous reprints).

2007. UND climate change expert to comment on President Bush's global carbon emission reduction plan. UND News, June 1. http://www2.und.edu/our/news/story.php?id=2086.

2007. K. Johnson. Scientist hopes climate study "makes a difference." Grand Forks Herald, March 6,

issue 219 (numerous reprints in local newspapers).

2007. Officials say climate change will hurt Upper Midwest. Associated Press, April 8 (numerous reprints in local newspapers).

2007. Climate change would affect Midwest. Rapid City Journal, April 10.

2007. UND researcher plays role in report on climate change. Associated Press, February 3.

2007. A part of history. UND professor has hand in international report. Grand Forks Herald, February 3, issue 219.

2007. Interview, Grand Forks Cable TV Channel 3, April 10.

2004. Russian national daily newspaper Izvestia (News) published an article on my research in climate change impact on Russian agriculture in their Science section. Natalia Reznik, Global warming in Russia – frequent draughts and more potatoes. Izvestia, September 11, issue 168(26725).

1997. The New York Times (Science section) published my map on projected deforestation in Russia, related to climate change. Deborah Shapley. Deep in Siberia's forest, finding clues to the "Missing Sink". New York Times, November 28.

5. HONORS AND AWARDS

2008, University of North Dakota School of Airspace Recognition.

2007, Nobel Peace Prize (shared between Al Gore and the IPCC).

2007, University of North Dakota, President annual address to the University Council, Achievements Recognition.

2004, Purdue University, School of Agriculture Certificate of Appreciation.

6. PUBLICATIONS

Refereed journal articles

1. Bryant, J.P., Clausen, T.P., Landhäusser, S.M., Swihart, R.K., **Kirilenko**, A.P., Carrière, S., Stevens, M.T., Cleland, D.T., Jakubas, W.J., Williams, J.H., Veitch, A.M., Popko, R.A., Hawkins, C.D.B., Carlson, M.R., Weber, R.J., Packee, E.C., Malone, T.T., Lehmkhul, K.L., Cebrian, M., Paragi, T.F., Niemi, F.M., Picone, P.M., Brown, S.C., Moore, J.E., Glowacky, E., Kangas, A. Fire molds a mosaic of selection for chemical defense of juvenile paper birch by snowshoe hare browsing in winter. American Naturalist (in review).
2. Stepchenkova, S., Tang, L., Jang, S.C., **Kirilenko**, A., Morrison, A. Benchmarking CVB website performance: spatial and structural patterns. Tourism Management (in review).
3. Stepchenkova, S., **Kirilenko**, A., Morrison, A. Facilitating statistical analysis of digital textual data: a two-step approach. Quantity and Quality (in press).
4. 2008. Dronin, N., **Kirilenko**, A. Climate change and food stress in Russia: what if the market transforms as it did during the past century? Climatic Change, 86(1-2): 123-150.
5. 2007. **Kirilenko**, A., Sedjo, R. Climate Change Impacts on Forestry. PNAS, 104: 19697-19702.
6. 2007. Alcamo, J., Dronin, N., Endejan, M., Golubev, G., **Kirilenko**, A. A New Assessment of Climate Change Impacts on Food Production Shortfalls and Water Availability in Russia. Global Environmental Change, 17(3): 429-444.
7. 2007. **Kirilenko**, A, Chivoiu, B., Crick, J., Ross-Davis, A., Schaaf, K., Shao, G., Swihart, R., Singhania, V. An Internet-based decision support tool for non-industrial private forest landowners. Environmental Modelling and Software, 22, 1498-1508.
8. 2004. **Kirilenko**, A.P., Alcamo, J., Golubev, G.N., Dronin, N.M., and Endejan, M. Modeling the Impact of Climate Changes on Agriculture in Russia. Doklady Academii Nauk Geografia (Reports of

Russian Academy of Sciences, Geography), 396(6), 819-822.

9. 2001. **Kirilenko**, A.P. On variability of predicted vegetation migration under changing climate. Doklady Akademii Nauk Rossii. (Reports of Russian Academy of Science), 376(1): 130 – 133.
10. 2000. **Kirilenko**, A.P., Belotelov, N.V., Bogatyrev, B.G. Global model of vegetation migration: incorporation of climatic variability. Ecological modelling. 132 (1-2): 125 - 134.
11. 1998. Lighthart, B., **Kirilenko**, A.P. Simulation of summer-time diurnal bacterial dynamics in the atmospheric surface layer. Atmospheric Environment, 32 (14/15): 2491 – 2496.
12. 1998. **Kirilenko**, A.P., Solomon, A.M. Modelling dynamic vegetation response to rapid climate change using bioclimatic classification. Climatic Change, 38(1): 15 – 49.
13. 1997. Solomon, A.M., **Kirilenko**, A.P. Climate change and terrestrial biomass: What if trees do not migrate? Global Ecology and Biogeography Letters, 6: 139 – 148.
14. 1997. Krankina, O.N., Dixon, R.K., **Kirilenko**, A.P., Kobak, K.I. Global climate change adaptation: examples from Russian boreal forests. Climatic change, 36: 197 – 215.
15. 1996. Belotelov, N.V., Bogatyrev, B.G., **Kirilenko**, A.P., Venevsky, S.V. Modelling of time-dependent biome shifts under global climate changes. Ecological Modelling, 87(3-4): 29 – 40.
16. 1996. Belotelov, N.V., Bogatyrev, B.G., **Kirilenko**, A.P. Dynamic bioclimatic approach to modeling vegetation shifts. Phystech Journal, 2(4): 47 – 58.
17. 1994. **Kirilenko**, A.P., Belotelov, N.V., Bogatyrev, B.G. Simulation of vegetation zones' shifts and climate variability. Doklady Akademii Nauk Rossii (Reports of Russian Academy of Science) 338(1): 116 – 118 (in Russian, English summary)
18. 1992. Tarko, A.M., Bogatyrev, B.G., **Kirilenko**, A.P. Proportion of countries and regions in the formation of global atmospheric carbon dioxide budget. Doklady Akademii Nauk SSSR (Reports of the USSR Academy of Science), 322(3): 610 – 613 (in Russian, English summary, with English translation following)
19. 1991. **Kirilenko**, A.P. Mathematical model of water cycle in forest ecosystems. Zhurnal Obschey Biologii (Journal of Biology), 52(6): 863 – 867. (in Russian, English summary)

Refereed monographs and book chapters

20. 2008. **Kirilenko**, A.P., Dronin, N.M., Ashakeeva, G. Projecting food and water security in the Aral Sea Basin Countries: climate change, irrigation, and policy. //In: White, J.R., and Robinson, W.H., Natural Resources: Economics, Management and Policy. Nova Science Publishers, 51-87.
21. 2007. Easterling, W., Aggarwal, P., Batima, P., Brander, K., Erda, L., Howden, M., **Kirilenko**, A., Morton, J., Soussana, J.-F., Schmidhuber, J., Tubiello, F.N. Food, fibre and forest products. //In: M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden, C.E. Hanson (eds.) Climate Change 2007: Impacts, Adaptation and Vulnerability. IPCC, Cambridge University Press, Cambridge, UK, 273-313.
22. 2005. Alcamo J., Endejan, M., **Kirilenko**, A.P., Golubev, G.N., Dronin N.M. Climate Change and its Impact on Agricultural Production in Russia // In: eds. E. Milanova, Y. Himiyama, I. Bicik. Understanding Land-Use and Land-Cover Change in Global and Regional Context. Science Publishers, 35-46.
23. 2005. **Kirilenko**, A.P., Dronin, N.M. Climatic and political factors in the agricultural performance of Russia // In: eds. E. Milanova, Y. Himiyama, I. Bicik. Understanding Land-Use and Land-Cover Change in Global and Regional Context. Science Publishers, 305-314.
24. 2004. Golubev, G.N., Dronin, N.M., **Kirilenko**, A.P. Climate change and sustainable development of agriculture in Russia. In: Laverov N.P. (Ed.) Sustainable development: resources of Russia. Ministry of Education and Science RF, Russian University of Chemistry and Technology, Moscow, 156-199. (Published in Russian.)
25. 2001. **Kirilenko** A.P. Climate change effect on the reforestation potential of Russia. In: Brunet India,

M. and Lopez Bonillo, D. (eds.), Detecting and Modelling Regional Climate Change, Springer-Verlag, Berlin – Heidelberg – Paris - New York, 672 pp.

26. 1996. Belotelov, N.V., Bogatyrev, B.G., **Kirilenko**, A.P. A medium-scale model of forest dynamics: principles of development and structure. In: Gravenhors, G., Vygodskaya, N., Oltchev, A. (eds.), Scientific Basis for Global Ecosystem Monitoring, Including the Monitoring in Biosphere Reservations and other Protected Territories. Bonn - Gottingen - Moscow, 1996, 85 - 92 (in Russian and in German).
27. 1995. Belotelov N.V., Bogatyrev B.G., **Kirilenko** A.P. Modeling dynamics of vegetation shifts under time-dependent scenarios of global climate change. In: Isaev, A.S. (ed.) Problems of Monitoring and Modeling Dynamics of Forest Ecosystems. Moscow, Nauka press, 252 – 277. (in Russian, English resume)
28. 1995. Belotelov, N.V., Bogatyrev, B.G., **Kirilenko**, A.P. Principles of landscape approach to modeling of forest vegetation dynamics. In: Isaev, A.S. (ed.) Problems of Monitoring and Modeling Dynamics of Forest Ecosystems. Moscow, Nauka press, 220 – 227. (in Russian, English resume)
29. 1990. **Kirilenko**, A.P. Modeling water cycle and production process in forest ecosystems. Ph.D. Thesis. Moscow, Computer Center of the USSR Academy of Sciences, 152 pg. (in Russian)
30. 1989. Bogatyrev, B.G., **Kirilenko**, A.P. Structural and functional analysis of carbon dynamics in the biosphere. In: Mathematical Methods and Problems in Engineering, vol. 1. Moscow, USSR Ministry of Defense, 39 – 44. (in Russian)
31. 1988. Udalkina, M.V., Bazilevich, N.I., Bogatyrev, B.G., **Kirilenko**, A.P., and Tarko, A.M. Study of production process in forest ecosystem for temperate zone of Northern Hemisphere using database. In: Problems of Ecological Monitoring and Ecosystem Modeling, vol. XI. Leningrad, Gidrometeoizdat press, 150 – 159. (in Russian, English resume)

Refereed conference proceedings

32. 2008. **Kirilenko** A., Dronin, N. Climate Change and Water Resource in North Caucasus and South Urals. In: Lagutov, V. (ed.) Rescue of Sturgeon Species in the Ural River Basin. Proceedings of the NATO Advanced Research Workshop on Rescue of Sturgeon Species by means of Transboundary Integrated Water Management of the Ural River Basin. Orenburg, Russia, 13-16 June, 2007.
33. 2008. **Kirilenko** A., Hanley, R. Reducing Uncertainty in Ecological Niche Models with ANN Ensembles. In: Sànchez-Marrè, M., Béjar, J., Comas, J., Rizzoli, A.E., Guariso, G. Proceedings of the iEMSs Fourth Biennial Meeting, Universitat Politècnica de Catalunya, Barcelona, Catalonia, pg. 1047-1054.
34. 2007. **Kirilenko** A., Hanley, R. Predicting climate change impact on insect biodiversity: comparison of scenarios. Proceeding of the 32nd International Symposium on Remote Sensing of Environment. San Jose, Costa Rica, June 25-29, 2007, 453-457.
35. 2007. **Kirilenko**, A.P., Hanley, R.S. Using multiple methods to predict climate change impacts on bumblebees in North America. The Third IASTED International Conference on Environmental Modelling and Simulation EMS 2007, August 20 – 22, 2007, Honolulu HI, USA, 42-47.
36. 2007. Laguette, S., Hanley, R.S., **Kirilenko**, A.P. Predictive distributional modeling of three cattails species across North America Great Plains. The Third IASTED International Conference on Environmental Modelling and Simulation EMS 2007, August 20 – 22, 2007, Honolulu HI, USA, 37-41.
37. 2007. Hanley, R.S., **Kirilenko**, A.P., Chatzimanolis, S. Ecological fingerprinting as data visualization: phyloclimatic patterns within a group of South American beetles. The Third IASTED International Conference on Environmental Modelling and Simulation EMS 2007, August 20 – 22, 2007, Honolulu HI, USA, 20-24.
38. 2006. Zhang, X., **Kirilenko**, A., Estimate of chlorophyll concentration from ocean color: Uncertainty associated with unknown backscattering, Pan Ocean Remote Sensing Conference, 2006, 92-96.

39. 2004. **Kirilenko** A. Spatially distributed integrated modeling of land use change impact on hydrology. In: L. Ubertini (ed.) Proceedings of the IASTED International Conference on Environmental Modelling and Simulation, Nov. 22-24, 2004, St. Thomas, US VI, ACTA Press, 75-79.

40. 2003. Shao, G., **Kirilenko**, A., and Martin, B. Enhancing precision in assessing forest acreage changes with remotely sensed data. Proceedings of the Second International Precision Forestry Symposium, Seattle, Washington, June 15-17, 2003, 67-74.

41. 2003. **Kirilenko**, A., Alcamo, J., Dronin, N., Endejan, M., Golubev, G. Assessment of Climate Change Impact on Agriculture. Proceeding of the 30th International Symposium on Remote Sensing of Environment. Honolulu, November 10-14, 2003.

42. 2003. **Kirilenko** A., Dronin N. Climatic and political factors in agricultural performance of Russia. Proceedings of the Workshop in Global and Regional Land Use/Cover Changes. International Geographic Union. Moscow, July 17-20, 2003.

43. 2003. **Kirilenko** A., Alcamo, J., Golubev, G., Endejan, M., Dronin N. Climate change and its impact on agricultural production in regions of Russia. . Proceedings of the Workshop in Global and Regional Land Use/Cover Changes. International Geographic Union. Moscow, July 17-20, 2003.

44. 2001. **Kirilenko** A., Alcamo, J., Golubev, G., Endejan, M., Dronin N. Climate change and its impact on agricultural production in regions of Russia. . Proceedings of the Workshop in Global and Regional Land Use/Cover Changes. International Geographic Union. Moscow, July 17-20, 2003.

45. 2000. **Kirilenko**, A.P. A probabilistic model of vegetation migration. The All-Russia scientific school “mathematical methods in ecology”. Petrozavodsk, June 10-16, 2001, 27-29. (in Russian)

46. 1995. **Kirilenko**, A.P, Bogatyrev, B.G., Belotelov, N.V. Dynamic Modelling of Carbon Cycle and Global Vegetation. Proceedings of the European simulation multiconference, Prague, Czech republic, June 5-7, 1995.

47. 1995. **Kirilenko**, A.P., Belotelov, N.V., Bogatyrev, B.G. Modeling dynamic vegetation shifts due to global climate change, including the consequences of growing climate instability. Proceedings of the Western Conf. of the Society of Computer Simulation. Las Vegas NV, Jan. 10 – 14, 1995.

48. 1994. **Kirilenko**, A.P, Bogatyrev, B.G., Belotelov, N.V. Hierarchical model of forest landscape dynamics. Proceedings of the 7th European Multiconference of the Society of Computer Simulation. Barcelona, Spain, June 1-3, 1994, 1077 – 1081.

49. 1993. **Kirilenko**, A.P. Model of production process in forest ecosystem: integration in landscape dynamics. Proceedings of the 6th European Multiconference of the Society of Computer Simulation. Lyon, France, June 7-9, 1993, 539 - 543.

50. 1989. Tarko, A.M., Bogatyrev, B.G., **Kirilenko**, A. P., Udalkina, M.V., Konovalova, E.I., Gajdukov O. Yu., Drozdov, A.L., Pisarenko, N.F., Tatarinov, F.A. Modeling of spatially distributed processes in the biosphere. In: Morphology and genetics of the processes of growth and development. Proceedings of Moscow Society of Naturalists, Moscow, 78 – 81. (in Russian)

Non-refereed papers

51. 2003. Alcamo, J., Dronin, N., Endejan, M., Golubev, G., **Kirilenko**, A. Will Climate Change Affect Food and Water Security in Russia? Summary Report of the International Project on Global Environmental Change and its Threat to Food and Water Security in Russia. Center for Environmental Systems Research, University of Kassel, Germany. Report No. A0302.

52. 2002. **Kirilenko**, A.P. Simulation of long-term dynamics of wildfires in Russia with Marcovian model. Internal Report No. 10. European Forest Institute, Joensuu, Finland.

53. 1990. Parkhomenko, V.P., Tarko, A.M., Bogatyrev, B.G., **Kirilenko**, A.P. Modeling of global and regional climatic and biosphere processes. Reports on Applied Mathematics, Computer Center of the USSR Acad. Sci., Moscow, 34 p.

54. 1989. Tarko, A.M., Bogatyrev, B.G., **Kirilenko**, A.P., Udalkina, M.V. Simulation of global and regional changes of carbon cycle in the biosphere. Reports on Applied Mathematics, Computer Center of the USSR Acad. of Sci., Moscow, 39 p. (in Russian)

55. 1988. Tarko, A.M., Bogatyrev, B.G., **Kirilenko**, A.P., Konovalova, E.I., Pisarenko, N.F., Udalkina, M.V. Simulation of global carbon dioxide cycle. Reports on Applied Mathematics, Computer Center of the USSR Acad. of Sci., Moscow, 42 p. (in Russian)

56. 1988. Bogatyrev, B.G., **Kirilenko**, A.P., Tarko, A.M. Spatially distributed models of the biosphere. Reports on Applied Mathematics, Computer Center of the USSR Acad. of Sci., Moscow, 23 p. (in Russian)

57. 1988. Bogatyrev, B.G., **Kirilenko**, A.P., Tarko, A.M. Mathematical models of dynamic processes in terrestrial ecosystems. Reports on Applied Mathematics, Computer Center USSR Acad. of Sci., Moscow, 26 p. (in Russian)

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8. PROFESSIONAL SOCIETIES

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