ANDREI G. LAPENIS
ASSOCIATE PROFESSOR
DEPARTMENT OF GEOGRAPHY AND PLANNING
UNIVERSITY AT ALBANY
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6/04/2015

EDUCATION

- Ph.D. State Hydrological Institute, Department of Climate Change (St Petersburg, Russia), 1986
  Specialties: Climatology, Oceanography, Hydrochemistry
  Thesis: "Carbon Dioxide Variations in the Atmosphere - Ocean - Biota System on Various Time Scales" Advisors: Professor Mikhail I. Budyko and Professor Eleanor K. Buytner
- MS in Geography. State Leningrad University, Department of Geography (St Petersburg, Russia), 1980
  Specialty: Oceanography. Thesis: "Distribution of Anthropogenic Carbon Dioxide between the Atmosphere and the World Ocean" Advisor: Professor Eleanor K. Buytner

EDUCATIONAL EMPLOYMENT

- Associate Professor, Director of Graduate Program in Geography, Department of Geography and Planning, University at Albany, State University of New York — *2003 - Present*
- Assistant Professor, Department of Geography and Planning, State University of New York — *1996 - 2003*
- Research Scientist, Earth Systems Group, Department of Applied Sciences, New York University. — *1992 - 1996*
- Adjunct Professor, Department of Geography and Geology, Hunter College, City University of New York. — *1995*
- State Hydrological Institute (SHI), Department of Climate Change, St. Petersburg, Russia. — *1980 - 1992*
  Head, Paleoclimate Group, SHI. — *1990 - 1992*
  Senior Scientist, SHI. — *1988 - 1992*
  Visiting Scientist, Earth Systems Group, Department of Applied Sciences, New York University. — *1988 - 1989*
  Research Scientist, SHI. — *1986 - 1988*
  Ph.D. Student-Researcher, SHI. — *1981 - 1985*
  Engineer, SHI. — *1980 - 1981*

PUBLICATIONS IN PEER REVIEWED JOURNALS (1996-2014)

- **Lapenis** A.G. , H.Henry, M. Vuille, J. Mower. 2014. Climatic Factors Controlling Plant Sensitivity to Warming. *Climatic Change*. ISSN: 0165-0009, DOI: 10.1007/s10584-013-1010-2.
- Lawrence, G.B., Fernandez, I.J., Richter, D.B., Ross, D.S., Hazlett, P.W., Bailey, S.W., Oiumet, R. Warby, A.F., Johnson, A.H., Lin, H., Kaste, J.M., **Lapenis**, A.G., Sullivan, T.J. 2013. Measuring environmental change in forest ecosystems by repeated soil sampling: a North American perspective. *Journal of Environmental Quality*. doi:10.2134/jeq2012.0378
- **Lapenis, A.G.,** G. B. Lawrence, A. Heim, Cnengyang Zheng, W. Shortle. 2013. Climate warming shifts carbon allocation from stemwood to roots in calcium-depleted spruce forests. *Global Biogeochem. Cycles*, doi: 10.1029/2011GB004268
- Lawrence, G.B., Shortle, W.C., David, M.B., Smith, K.T., Warby, R.A.F., **Lapenis, A.G**. 2012. Early indications of soil recovery from acidic deposition in U.S. red spruce forests. *Soil Science Society of America Journal*. doi: 10.2136/sssaj2011.0415Vol. 76 No. 4, p. 1407-1417
- **Lapenis, A.G.** 2010. Global Carbon Cycle. *Encyclopedia of Geography*. SAGE, DOI: 10.4135/9781412939591. **ISBN:** 9781412956970, p. 326-330
- Abakumov, E.V., Aparin, B.F, **Lapenis A. G**., Kosaki T. 2009. Investigation of organic matter changes in Typical Chernozem for 30 years period on the base of soil monoliths. *Proceedings of St. Petersburg University*. p 113-123
- Hammes, K. Torn, M.S. **Lapenis, A.G**., Schmidt M.W.I. 2008. Centennial black carbon turnover observed in a Russia steppe soil. *Biogeosciences*, 5 (doi:10.5194/bg-5-1339-2008), p 1339-1350
- **Lapenis, A.G,** GB Lawrence, SW Bailey, BF Aparin, AI Shiklomanov, NA Speranskaya, MS Torn, M Calef. 2008. Climatically driven loss of calcium in steppe soil as a sink for atmospheric carbon. *Global Biogeochemical Cycles*. DOI: 10.1029/2007GB003077.
- Shvidenko, A., Nelson, S., Shepaschenko, D, **Lapenis, A**. 2005. New estimates of live biomass and net primary productivity of Russian forest: A footprint of climate change? *Proceedings of 7th International Conference on CO_2*, 25-29 September 2005, Denver, Colorado, USA, 157-159
- **Lapenis, A.G.**, Shvidenko, A., Shepaschenko, D., Nilsson, S., Aiyyer, A. 2005. Acclimation of Russian forests to recent changes in climate. *Global Change Biology*, 11, DOI: 10.1111/j.1365-2486.2005.001069.x p 2090-2102
- Lawrence, G. B., **Lapenis, A.G**., Berggren, D., Aparin, B., Smith, K., Shortle, W.C., Balley, S. W., Varlyguin, D.L., Babikov, B. 2005. Climate Dependency of Tree Growth Suppressed by Acid Deposition Effect on Soils in Northwest Russia**.** *Environmental Science and Technology*, 39, 2004-2010.
- **Lapenis, A.G**. 2004. Biogeochemical Selection of Organisms. In "Scattered elements in boreal forests". Moscow, Nauka, pp 290-300 ISBN — 5-02-033044
- **Lapenis, A.G**., Lawrence, G.B., Andreev, A. A., Bobrov, A.A, Torn, M.S. W. Harden. 2004. Acidification of forest soil in Russia: From 1893 to Present. *Global Biogeochemical Cycles*. V 18. GB1037, doi:10.1029/2003GB002107
- **Lapenis, A.G.** 2002. "Directed Evolution of Biosphere: Biogeochemical Selection or Gaia?" *The Professional Geographer.* 54(3), pp 379-391

- Torn, M., **Lapenis, A.G.,** Harden, J., Timofeev, A., Babikov, B.V., Savitzkaya, S. 2002. "Soil carbon cycling in the Russian Steppe: Radiocarbon analysis of modern and historic Russian soils." *Global Change Biology.* 8, 941-953.
- Glavanakov, S., D. White, Caraco, T., **Lapenis, A.G**., G. Robinson, Szymanski, B., Maniatty, W.A. 2001. "Spatial-correlation structure of Lyme disease incidence" *American Journal of Tropical Medicine and Hygiene,* 65 (5)**,** pp. 538-545.
- **Lapenis, A.G.,** Torn, M.S., Harden, J.W., Holloker, K., Babikov, B., Timofeev, A.I., Hornberger, M.I., Nattis, R. 2000. "Scientists Unearth Truth about Soil Contamination" *EOS, Transactions, AGU* 81, 6, pp. 53, 59-60.
- **Lapenis, A.G**. 1998 "Arrhenius and Intergovernmental Panel of Climate Changes". *EOS, Transactions, AGU*, **79**, 22.
- **Lapenis, A.G.,** Klene, A. 1997, "Conveyor of Live Germs". *EOS, Transactions, AGU*, 78, 34.
- Kheshgi, H.S., Schlessinger, M., **Lapenis, A.G.** 1997. "Comparison of Paleotemperature Reconstructions as Evidence for the Paleoanalogue Hypothesis". *Climatic Change*, 35, pp. 123-131.
- Kheshgi, H. S. and **Lapenis, A.G.** 1996. "On the accuracy of the Russian paleoclimate reconstructions", *Palaeogeography, Palaeoclimatology, Palaeoecology* 121, pp. 221-237.

SELECTED PUBLICATIONS IN PEER-REVIEWED JOURNALS (1981-1994)

- Kheshgi, H.S., Flannery, B.P., Hoffert, M.I., **Lapenis, A.G.** 1994. "The effectiveness of marine CO_2 disposal", *Energy* (Oxford University Press) **19**, 9, pp. 967-974.
- **Lapenis, A.G.,** Shabalova, M.V. 1994. "Global Climate Changes and Moisture Conditions in the Intracontinental Arid Zones", *Climatic Change* 30, pp. 1-15.
- **Lapenis, A.G.,** Rampino, M.R. 1993. "Predicting Earth's Life Span". *Nature,* 363, p. 218.
- Flanery, B., Kheshgi, H., Hoffert, M., **Lapenis, A.G.** 1993. "Assessing the Effectiveness of Marine CO_2 Disposal". *Energy Conversion and Management*. 34, pp. 983-989.
- **Lapenis, A.G.,** Shabalova, M.V. 1992. "Global Climate Changes and Intracontinental Arid Zones". *Meteorologiya i Gydrologiya* 8, pp. 18-24 (English translation in *Soviet Meteorology and Hydrology*).
- Borzenkova, I.I., Zubakov, V.A., **Lapenis, A.G.** 1992. "Global Climate Changes During the Warm Epochs of the Past". *Meteorologiya i Gydrologiya* 8, pp 32-40 (English translation in *Soviet Meteorology and Hydrology*).
- **Lapenis, A.G.,** Budyko, M.I. 1990. "Antropogennye izmeneniya klimata I productivnost morskoi bioty" (Anthropogenic climate changes and marine biota productivity). *Fishing and Oceanography*, 129, Leningrad, pp. 10-27 (*in Russian*).
- **Lapenis, A.G.,** Os'kina, N., Ivanova, E., Barash, M.S. 1990. "The Late Quaternary Changes in Ocean Productivity". *Okeanologia* 30, No 1, pp. 69-75 (English translation in *Oceanology*).
- **Lapenis, A.G**., Vasileva E.V.1989. "Zonal distribution of marine biota productivity in the World Ocean". *SHI Transactions*, V. 347, pp. 87-91.

- **Lapenis, A.G.** 1989. "Biodynamic mechanism of changes in atmospheric CO_2 concentrations". *Izvestia Academii Nauk SSSR*, Geochimia, **6**, pp.794-799 (English translation in *Geochemica International*).
- **Lapenis, A.G.,** Saikin I.A. 1989. "The model of oxygen regime of bottom sediments in shallow basin". *SHI Transactions*, V.346, pp. 25-34.
- **Lapenis, A.G.** 1988. "Influence of marine biota productivity on CCD level in the ocean and CO_2 concentration in the atmosphere". In: *Hydrology*, (Ed, by I.V. Popov), Leningrad, Gidrometeoizdat, pp. 15-27.
- Verbitski, M.Ya., **Lapenis, A.G**. 1987. "Ice ages, carbon dioxide and calcium balance in the ocean". *Izvestia Academii Nauk SSSR, Seria Geographicheskaya*, pp. 16-24 (English translation in *Izvestia of Russian Academy of Sciences, Geography*).
- **Lapenis, A.G.** "Antarctic surges and atmospheric CO_2 concentration". In: *Actual Questions in Oceanography*. Leningrad, Gydrometeoizdat, 1987, pp. 180-183.
- **Lapenis, A.G.,** Kolomeitsev, A.I. 1987. "Effects of ocean circulation on marine biota productivity". *Meteorologiya i Gydrologiya* **1**, pp. 77-83 (English translation in *Soviet Meteorology and Hydrology*).
- Buytner, E.K., Zaharova, O.K., **Lapenis, A.G.** 1986. "On the estimation of atmospheric carbon dioxide concentration in the preindustrial epoch". *Izv. Acad. Nauk of the USSR*, **30**, 1986. (English translation in *Izvestia of Russian Academy of Sciences, Atmospheric and Oceanic Physics*).
- **Lapenis, A.G**. 1986. "Marine biota productivity, ocean circulation and atmospheric CO_2 concentration". In: *Geochemistry of Carbon.* Moscow, Nauka, pp. 23-27.
- **Lapenis, A.G.** 1984. "Relationship of the partial pressure of carbon dioxide in the atmosphere with the level of critical depth of carbonate accumulation in the ocean". *Meteorologiya i Gydrologiya* (English translation in *Soviet Meteorology and Hydrology*) 9, pp. 66-72.
- **Lapenis, A.G.** 1984. "On the chemical balance of natural waters with bottom deposits". *Meteorologiya i Gydrologiya* (English translation in *Soviet Meteorology and Hydrology*), 2, pp.46-53.
- **Lapenis A.G.** 1984. On the impact of environmental conditions on chemical equilibrium between carbonate deposits and sea water. *Proceedings of Yung Scientists Conference*. Leningrad, Hydrometeoizdat, p 14-23
- **Lapenis A.G.1984.** Relationship between the depth of critical carbonate accumulation in the World Ocean and atmospheric concentration of carbon dioxide. In *Marine Geology. Proceedings of 6th Congress of marine geologists*. V1, p 34-39
- Buytner, E.K. and **Lapenis,** A.G. 1983. On the impact of oil slicks on sea surface temperature and on components of sea surface energy balance. *SHI Transactions,* V280 p. 22-29
- Buytner **E.**K., Zaharova O.K., Turchinovich I.E., **Lapenis A.G**. 1981 Anthropogenic changes of atmospheric carbon dioxide during next five decades. Meteorologia I Gidrologia 3, p.18-31 (English translation in Soviet Meteorology and Hydrology)

- **Lapenis, A.G.** 1981. Temperature control of anthropogenic carbon dioxide absorption by the World Ocean. *Proceedings of Leningrad University*. Geology and Geography. *7, p 7-18*

BOOK CHAPTERS

- **Lapenis, A.G** (contributor). 1990. "World Ocean and Coastal Zones". *The IPCC Impact Assessment* (Edited by W.J. Mc G. Tegart, G.W. Sheldon and D.C. Griffiths), Melbourne, Australia, Imprimature Press pp.6-11 and 6-28.
- Rampino, M.R., Etkins R., Hoffert, M.I., **Lapenis, A.G.,** Rosanov, E.V.,Volk, T. 1989. "Feedback between the Greenhouse Effect, Stratospheric Ozone and Marine Productivity". Third International Conference on Analysis and Evaluation of Atmospheric CO_2 Data Present and Past. (Hinterzarten, 16-20 October 1989). *Report No. 59 World Meteorological Organization*. (WMO TD No. 340)
- Buytner E.K., **Lapenis, A.G.** 1985. "Influence of surface sea layer pollution on heat and mass exchange between the ocean and the atmosphere". In "*Problems of Chemical Pollution of the World Ocean*" (Ed: E.K. Buytner and R.S. Bortkovki). Leningrad, Gidrometeoizdat, pp. 128-149
- **Lapenis, A.G.** 1984. "Influence of temperature and pressure on chemical equilibrium of natural waters with bottom sediments". In: *Hydrology*, (Ed., by I.V. Popov), Leningrad, Gidrometeoizdat, pp. 25-36.

RECENT REPORTS

- Lapenis, A.G. 2014. "Snow Manipulation Studies at Huyck Preserve". Report to Scientific Advisory Committee of Edmund Huyck Preserve and Biologic Station. Reprint, 30 p.

IN PREPARATION

- **Lapenis, A.G.,** Robinson, G., Lawrence, G.B. 2015. Response of Carbon Allocation in Spruce to Changes in Snow Cover Period. *Ecological Applications.*
- **Lapenis, A.G.,** Buyantuev, A., Varlygin D. 2015. Decline of Spruce Sensitivity to Warming with Latitude. *Global Change Biology.*

PUBLICATIONS IN POPULAR SCIENTIFIC LITERATURE

- **Lapenis A.G.** 2011. Global Person: Climatologist Mikhail Budyko. *Globalistic and Globalization Studies*. Volgograd, "Teacher" Publishing House, N7, p 182-189
- **Lapenis, A.G.** 2007. The Wind of Petersburg's Energetics. *Russian Expert Review*, N4-5 (22), p. 65-67
- **Lapenis, A.G.** 2000 "Old and New Soil Samples Used to Study Soil Contamination", *Earth in Space* (For Teachers and Students of Science), Vol.12, No 6, pp. 4-7.

FUNDING

EXTERNAL

- "TESSA: Thermopile-based Enzymatic Sugar Sensor Array" *2015 - 2016*
  (**PI**), National Science Foundation, Innovative Corps Program.
  Duration: July 2015-January 2016.
  Amount: $50,000.
- "Collaborative Research: IDBR: TYPE A: The NANAPHID: A novel aphid-like *2015 - 2017*
  nanosensor network for real-time measurements of carbohydrates in live plant tissue" (**PI**), National Science Foundation, Instrument Development for Biological Research. Duration: January 2015-February 2017.
  Amount: $837,000.
- "Development of "Aphid-like" Biosensors for Measuring *2013 - 2015*
  Concentrations of Saccharides in Sap Flow in Conifer Stem Phloem" (**PI**).
  Sponsor: SUNY 4E Network. Amount: $135,000.
- "Acquisition of Two Channel Dendrometers for Study of Spruce Response *2012 - 1014*
  to Early Snow Melt"(**PI**). Sponsor: USGS. Duration: December 2012-December 2013. Amount: $25,000
- " Snow Manipulations and Dendroclimatological Studies at the Huyck *2012 - 2013*
  Preserve" (**PI**). Sponsor: Huyck Preserve Foundation. Duration:
  April 2012- April 2013. Amount: $3,000
- "Appalachian Trail MEGA-Transect Atmospheric Deposition Effects Study " *2009 - 2013*
  (**Co-PI** with Greg Lawrence (PI, USGS) and others). Sponsor: National Park Service. Duration: 2009–2013. Amount: $298,382.
- "Deriving Biogeochemical Fingerprints of Acidic Deposits on Forest Soil and *2003 - 2004*
  Forest Health in the United States and Russia: Regional Approach to Global Problem" (**PI**). Sponsor: US Forest Service. Duration: August 1, 2003 – August 1, 2004. Amount of award: $31,000
- "Patroon Creek Watershed Monitoring, Management and Restoration Program *2001 - 2003*
  (**Co-PI** with Arnason (PI, DAES), Robinson (DB) and others). Sponsor: Environmental Protection Agency (Grant Number: R828578),
  Amount of award: $643,614
- "A Comparative Study of Acidic Deposition and Natural Processes on Forest *2001 - 2003*
  Soil Development in the United States and Russia Over the Past Century" (**PI**),
  Sponsor: National Science Foundation, Division of Environmental Biology, Cluster for Ecological Studies, Ecosystem Studies Program. Duration: April 2001-April 2003.
  Amount of award: $227,635.
- "Deriving Biogeochemical Fingerprints of Acidic Deposits on Forest Soil and *2000 - 2002*
  Forest Health in the United States and Russia: Regional Approach to Global Problem" (**PI**). Sponsor: US Forest Service. Duration: August 1, 2000 – August 1, 2002. Amount of award: $20,000.

- "Integrated Undergraduate Physical Geography Laboratory." (**PI**). Sponsor: National Science Foundation, Education and Human Resources Directorate, Division of Undergraduate Education. Duration: 1998-2000. Amount of Award: $45,224 (matching University at Albany funds: $150,000). *1998 - 2000*
- "Salinization of Russian Steppe", REU (Research Experience for Undergraduates) supplement to NSF grant that follows. Source of support: Arctic Science, Engineering, and Education Program (**PI**). Duration: 1998. Amount of Award: $5,000. *1998 - 1999*
- "Atmospheric Contamination of Russian Soils (1896-Present)." (**PI** *with Co-Pis: Margaret Torn, Jennifer Harden, Susan Trumbore and Eric Sundquist*). Source of Support: National Science Foundation, Geography and Regional Science Program together with Human Dimensions of Global Change. Duration: 1996-1998. Amount of Award: $160,000. *1996 - 1998*

EXTERNAL PENDING:

- Acquisition of a small Unmanned Aircraft System (UAS) for natural and urban ecosystem studies and risk disaster management. (**Co-PI**, with A. Buyantuev, (PI), Shiguo Jiang, Liming Zhou, J. Mower), NSF, MRI, Requested amount: $147,983 *2015-2017* *2015-2017*

Internal Support (University at Albany):

- "Remote Sensing of Starch in Spruce Canopy: Preliminary Dataset" (**PI**). Sponsor: University at Albany (FRAP B). Duration: May 2011 –May 2014. Amount of award: $3,690 *2011 - 2014*
- "Land-use History and Carbon Dynamic in the Soils of East European Plain during the Last 100 Years." (**PI**). Sponsor: University at Albany (FRAP A). Duration: 15 April 1998 -14 April 1999. Amount of Award: $10,000. *1998 - 1999*

TRAVEL GRANTS BY UNIVERSITY AT ALBANY:

2006, 2001.

NSF PROPOSALS NOT FUNDED (SINCE 2003)

- Development of "aphid-like" biosensors for measuring concentrations of saccharides in sap flow in conifer stem phloem. (PI), $1,076,587.00, NSF, MRI. 08/06/2013
- Snowpack Duration and Carbon Allocation in Spruce (Picea) (PI), $249,589.00 NSF, Geography. 09/13/2012
- Does Shifting Carbon Allometry in Spruce (Picea) Explain Slower Radial Growth in a Warmer Climate (PI) $184,723.00 NSF, Geography . 08/12/2011

- Circumboreal studies of Phenotypic Plasticity in Spruce (Picea) in Response to Climate Change, Nutrient Availability, and Pollution. (PI) $552,765.00 NSF, BIO, ES, 12/22/2010
- Response of Pedogenic Carbonates to Recent changes in Steppe Climate. (PI), $384,189.00 NSF, BIO, ES. 01/09/2008
- Response of Pedogenic Carbonates to Recent changes in Steppe Climate. (PI) , $404,277.00 NSF, BIO, ES. 12/03/2007
- Humates in Sustainable Agriculture: The Role of Organic Matter Origin. (PI), $75,740.00 NSF. 05/30/2007
- Watershed Sciences as a Core of Environmental Science/Study Curricula. (PI), $78,032.00, NSF, Geography, 05/13/2003

SELECTED INVITED TALKS AND CONFERENCE PRESENTATIONS

- Lapenis "Relationships between NDVI and soil properties in the Adirondacks", *Ninth Annual Workshop of the Northeastern Soil Monitoring Cooperative,* USGS New York Water Science Center, Troy, NY March 26, 2015 2015

  Lapenis "Snow Manipulation Studies at Huyck Preserve". *Eugene Odum Symposium*, Huck Preserve Biologic Station, Renselalerville, NY , July 2014
- Lapenis "Archive studies as instrument of soil science", Canadian Association of Soil Science, *Annual Meeting*, Quebec, Canada, June 6th 2012
- Lapenis "Potential shift of carbon allocation in boreal forests in response to climate warming". Department of Geography, Peking University, Beijing, China 14 November *2010*
- Lapenis "Role of boreal forests in carbon sink", Beijing Forum, Beijing, China, 7 November *2010*
- Lapenis "Role of soils in directed evolution of biosphere", *Eurasian Soil Science Conference*, St. Petersburg University, St. Petersburg, Russia, 20 March *2009*
- Lapenis "Historic Russian Soil Collection" *International Conference on Archived Studies in Soil Science*, The University of Edinburgh, Edinburgh, Great Britain, 7 October 2007
- Lapenis "Acclimation of Spruce Species to Warming and Shift in Carbon Allocation Away from Stem Wood", Department of Geography, McGill University, Canada, March 2007
- Lapenis "Acclimation of Russian forest to warming", NESPI Conference, Vienna, Austria. 17 April *2006*
- Lapenis ""Time Machine" of Soil Archives", Founding NESPI Conference, Suzdal, Russia, April 2003
- Lapenis "What We Can Learn From Radiocarbon in Russian Steppe Soil", Lawrence Livermore National Laboratory, October 2001

- Lapenis "Carbon Fractions in Archived and Modern Soil", Woods Hole Oceanographic Institution (Joint Seminar with USGS Woods Hole Science Center), Woods Hole, MA, September 2000

TEACHING:

Conventional courses:

- "Introduction to Physical Geography"(GOG 100N). *1996 - 2006*
- "Introduction to Climatology" (Climate and People) (GOG/GEO 304). *1996 - 2014*

Development of new courses:

- "Energy, Environment and Climate" (GOG504/PLN538). This graduate-level course takes an integrative look at scientific and social aspects of global warming. It was first offered in 2011 and, than, again in spring 2014. It was offered for graduate students in both: Geography and Planning programs. The main agenda of this class is better understanding of the science of climate change. At the same time, significant attention is paid to questions of policy and economics related to climate change issue. *2011*

- " Global Warming: Understanding the forecast"(GOG530). This is a computer-based class for graduate students interested in the science behind forecasts of global warming. The only prerequisite for this class is *Climatology* 304. This course enables students to evaluate the likelihood and potential severity of anthropogenic climate change in the coming centuries. An overview of the physics of the greenhouse effect including comparisons with Venus and Mars; overview of the carbon cycle in its role as a global thermostat; predictions and reliability of climate model forecasts of the greenhouse world; an examination of the records of recent and past climates. In this class students learn the mechanics of how climate models work and the sources of uncertainty in climate forecasting. They discuss records of recent and past climates, including records of abrupt climate change in recent climate of the past.

- "Environmental Analysis" (GOG/GEO/ENV 201). This course was developed with help from the NSF grant "Integrated Undergraduate Physical Geography Laboratory", and has been offered every year starting 1999. Student population did grow from 15 in 1999 to more than 100 students in 2008. At this time this is required course for the Environmental Science Major and an elective for Geography and Globalization majors. Because this is general education course, class population consists of not only geographers and environmental science majors but students in the Urban Studies major and some other popular undergraduate majors. *1998*

SUPERVISION (LAST 5 YEARS) OF POSTDOCTORAL FELLOWS, PHD, AND MASTER'S THESES

Postdoctoral fellows: 2009 - 2011,- Dr. Olga Yakimenko (Assistant Professor, Department of Geography, Moscow State University), 2012,- Dr. Chengyang Zheng (Assistant Professor, Department of Geography, Peking University).

Total Number of Postdoctoral Scholars Sponsored: 2.

Thesis advisor and postgraduate scholar sponsors over the last five years:

The Department of Geography and Planning does not have a Ph.D. Program. I do, however, participate in Ph.D. committees at other departments such as Department of Biological Sciences and Department of Atmospheric and Environmental Sciences.

2 Ph.D. Thesis: Elizabeth Coffey (Biology); Pablo Paiewonsky (Atmospheric Sciences),

5 MA/MS Thesis: M. Antidormi L. Compitello (NYSERDA), A. Ratigliano (U.S.G.S.), K. Dunne (DEC NYS), R. Wyisek (NJ High Sc).

More than 120 MA students who graduated through non-thesis track at the Department of Geography and Planning.

STUDENT-INSTRUCTOR-INITIATED MULTIDISCIPLINARY DEGREES:

1998-2006 - In collaboration with Michael Landin and Braddock Linsley (DAES) sponsored more than 30 student-initiated multidisciplinary degrees in Climatology and in Environmental Studies.

SERVICE

Department level:

- Director of Graduate Program in Geography. *2003 - Present*
- Service on several *ad hoc* committees for faculty search 2004, 2013, 2014, 2015
- Member of *ad hoc* committee to establish new MS Program in GIS *2012-2015*
- Represented Department at Graduate and Undergraduate Commencement Ceremonies *2003, 2004,2005, 2009, 2014, 2015*
- Procession of the NSF 50th Anniversary Celebration. 2000
- Represented Department of Geography and Planning at Transfer Advisement. *2000, 1998, 1997*

University level:

- Senator At Large, Senate, Committee on University Life. *2013 – Present*
- Member of small group dialogue sessions for the 2014 – 2015 "Dialogue in Action" (DIA) 2014-2105 organized by the Office of Diversity and Inclusion
- Co-Chair of President's Task Force on Sustainable Environment (Chair of Energy Committee). 2006-2011
- Member of the University Committee on "P.C. Lemon Ecology Award" *1997, 2001, 2013*
- Member of CAS Faculty Council (Academic Support Committee). *2001 - 1999*
- Member and an organizer of Faculty Initiative Committee to establish a new interdisciplinary BS degree in Environmental Sciences. *2006*
- Lecturer for OASIS Program at SUNY Albany " The Peoples of Russia and China: Facing the Dawn of a New Century", December 2002

- Participated in New York Public Interest Research Group activities (recruitment of undergraduate students). *1997, 1998*

National level:

- Member of the NSF Panel Geosciences 1 for the Graduate Research Fellowship *2011*
- Reviewer for the *Global Change Biology*, *Global Biogeochemical Cycles*, *EOS*, *Climate Change*. *2003-Present.*
- Reviewer for the National Science Foundation (Geography and Regional Science, Cluster for Ecological Studies). *2013, 2009, 2003*

International level:

- Member of the Northern Eurasia Earth Science Partnership Initiative (http://neespi.org/) *2003-Present.*

FIELD WORK AND EXPEDITIONS

- 2015 –installation of PhenoCam and new set of dendrometers at Huyck Preserve (http://phenocam.sr.unh.edu/webcam/sites/huyckpreserveny_IR/)
- 2012-2015 - Experimental study at Huyck Preserve (NY). Snow manipulations, monitoring of spruce growth (via digital dendrometers,), soil analysis.
- 2010- Dendroclimatological studies at Bayobab site, Inner Mongolia, China.
- 2002, 2003 -Soil sampling along climate-acidic depositions gradient in Central Russia (from St. Petersburg to Vologda, Yr'ev Polskoi, Velikie Luki). Recovery of soil monoliths from 4 locations: Lisino Corpus, Vologda, Velikie Luki and Yr'ev Polskoi.
- 2001- Soil sampling along climate-acidic depositions gradient in Central Russia (from St. Petersburg to Volkhov, Luga). Recovery of soil monoliths from 3 locations: Lisino Corpus, Volkhov and Luga.
- 1998- Soil sampling along climate-vegetation gradient in Central Russia (from St. Petersburg to Voronezh). Sampling of peat bog and lacustrine deposits for pollen and testate amoebae analysis (together with Russian colleagues) to uncover recent land-use history around sites of Historic Russian Soil Collection.
- 1997- Field sampling and reconnaissance to study long-term changes of soil chemistry in Moscow, Voronezh and Kazan' (Republic of Tatarstan) regions.
- 1995- Studies in archives (St. Petersburg Academy of Forestry and St. Petersburg University) and reconnaissance in St. Petersburg and Moscow regions to identify original sites from Historic Russian Soil Collection.

PROFESSIONAL AFFILIATIONS

- American Association of Geographers.
- American Geophysical Union.
- Ecological Society of America.
- European Geoscience Union