

Svetlana Milutinović, PhD

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SUMMARY OF QUALIFICATIONS

- Eleven years of professional experience in science at prominent European and US academic institutions, demonstrating competence in research and analysis, proficiency in computing, fast learning of new concepts across disciplines, ability to work both independently and in teams, initiative in formulating and achieving goals, capability to manage project work and coordinate activities of multiple partners to ensure timely delivery of results (e.g., leading collaborative paper writing, coordinating report production, supervising students' activities).
- Strong written, verbal and visual communication skills coupled with mastery of English language, applied extensively in conveying science-based information to other scientists, students and general audience (e.g., Master's and PhD theses, scientific papers, research grant applications, reports, op-ed writing, online materials, lectures and presentations at conferences and other meetings).
- Excellent track record in fundraising: co-authored three project proposals to science funding agencies, with 100% success. Recipient of several foreign research fellowships.

DEGREES

PhD; Major field: Oceanography. Geophysical Institute, University of Bergen, Norway. June 2011.

MSc; Major field: Biology; Concentration: Ecology; Grade point average: 4.51/5.00. Faculty of Science and Mathematics, University of Zagreb, Croatia. May 1999.

OTHER RELEVANT EDUCATION

Postgraduate level courses in Biological Anthropology. Faculty of Science and Mathematics, University of Zagreb, Croatia. 2000 – 2002.

- Passed: Paleoanthropology (A), Field Work (A), Dermatoglyphs Analysis (A).
- Audited: Anthropology and Human Populations Biology, Population Genetics, Man – Cultural Determination, Data Analysis, Anthropological Models, Anthropological Biometry, Anthropological Linguistics, Ecological Methods in Environment Evaluation and Protection, Mutagens in Living and Working Environment, Biological Methods in Genetic Toxicology.

PROFESSIONAL EXPERIENCE

Postdoctoral researcher. Department of Earth and Environmental Science, University of Pennsylvania (Penn), Philadelphia, PA, USA. Jan. 2012 – present.

- Contributed to successful fundraising for a collaborative interdisciplinary study of the dynamics of ocean phytoplankton size composition, based on satellite observations and an ecological model.
- Managed a team of researchers in a part of the study and took the lead in writing a scientific paper that will soon be submitted for publication in a refereed journal.
- Communicated the results of this research at various scientific meetings.
- Coordinated writing of annual progress report for the funding institution.
- Provided recommendations for policy-makers.

- Helped establish collaboration with a European expert to design an innovative research project on incorporating the principles of biological evolution into predictive ocean ecology models.
- Played an important role in getting funding for preliminary work on this topic.
- Introduced concepts of satellite oceanography and algal ecology to a diverse audience of undergraduate students with no educational background in these fields.
- Supervised and trained four students in technical work that involves the handling and analysis of satellite data sets.
- Assisted in reviewing various project proposals in the field of oceanography for the leading US science funding agencies.
- Collaborated with Norwegian ocean scientists as a co-writer of a research paper focusing on the production and pathways of organic carbon in the Nordic Seas.

Postdoctoral research assistant. Nansen Environmental and Remote Sensing Center, Bergen, Norway. Jun. 2011 – Dec. 2011.

- Collaborated with a fellow scientist on an ecosystem model evaluation by using satellite data and field measurements.
- Conducted an extensive background review of science literature related to the potential for evolutionary adaptation of algae and other organisms to climate change.
- Connected to other scientists in Europe and the US to explore possibilities for research partnerships.
- Supported another researcher in improving the quality of her project proposals before their submission to funding bodies.

PhD candidate. Nansen Environmental and Remote Sensing Center, Bergen, Norway. (Affiliated with the Geophysical Institute and Bjerknes Centre for Climate Research, Bergen, Norway.) Jan. 2005 – Jun. 2011.

- Fully developed a plan for PhD research, with only a minimum input from supervisors.
- Mastered the required curriculum with highest marks, demonstrating strong ability to quickly absorb and apply new knowledge.
- Built competency in computational programming and in statistical techniques related to uncertainty analysis.
- Collected, handled and analyzed diverse data sets (satellite imagery, field observations and output of global and regional climate models).
- Wrote a successful project proposal that contributed funding for a part of the PhD research.
- Initiated collaboration with a leading US scientist and won a three-month fellowship for a scholarly visit to his research group at Oregon State University.
- Wrote progress reports for the funding agencies.
- First author of two peer-reviewed scientific papers, a PhD thesis and a technical report, presenting studies on uncertainties in remotely sensed values of algal productivity in the world ocean. Co-authored a report about oil spill response for the Council of Europe. Presented research results in posters, talks and media outreach to expert and non-expert audiences.

Scientific assistant. Nansen Environmental and Remote Sensing Center, Bergen, Norway. Jan. 2003 – Dec. 2004.

- Investigated capacities for environmental monitoring, forecasting and mitigation of natural and anthropogenic hazards (harmful algae blooms, oil spills) in the seas of Norway and other European countries.
- Became skillful in finding credible Internet and library sources of information relevant for the work.
- Co-authored three reports as deliverables for projects funded by the European Space Agency and Norway. Wrote a fellowship report for the Research Council of Norway.

Substitute teacher in biology and natural science. *Voltino* primary school, Zagreb, Croatia. February 2001.

AWARDS

Project Funding

- Awarded 50,000.00 US\$ by the University Research Foundation at the University of Pennsylvania for the project “Ocean algae: evolution under future climate change” (in collaboration with Irina Marinov). Grant period: Sep. 2013 – Aug. 2014.
- Granted 658,228.00 US\$ by the National Aeronautics and Space Administration for the project “Seasonal, interannual and interdecadal variability in global phytoplankton community size structure derived from ocean color remote sensing and IPCC-class ecosystem models” (in team with Irina Marinov and Tihomir S. Kostadinov). Grant period: Feb. 2013 – Jan. 2016.
- Provided 663,000.00 Norwegian kroner by the Research Council of Norway in support of the project “Satellite-derived estimates of marine primary productivity in the North Atlantic” (under the guidance of PhD advisors Johnny A. Johannessen, Truls Johannessen, Christoph Heinze and Michael J. Behrenfeld). Grant period: Jan. 2007 – Dec. 2008.

Fellowships / Scholarships

- Project fellowship by the Meltzer Foundation (L. Meltzers Høyskolefond), Norway. Awarded for collaboration with the group of Michael J. Behrenfeld at Oregon State University, Corvallis, OR, USA. Jun. 2007 – Sep. 2007.
- Research fellowship by Nansen Environmental and Remote Sensing Center, Bergen, Norway. Granted for participation in environmental research funded by the European Space Agency. Jun. 2003 – Dec. 2004.
- Research fellowship by the Research Council of Norway. Given for contribution to research of Norwegian coastal environment. Jan. 2003 – May 2003.
- Research scholarship by the Austrian Ministry of Education, Science and Culture. Provided for conducting an ethnological study of TV advertisements at the Institute of Anthropology, University of Vienna, Austria. Nov. 2000 – Jan. 2001.

REFEREED PUBLICATIONS

- 2011:** Milutinović, S. and L. Bertino: Assessment and propagation of uncertainties in input terms through an ocean-color-based model of primary productivity, *Remote Sensing of Environment*, 115(8), 1906-1917, doi:10.1016/j.rse.2011.03.013.
- 2011:** Milutinović, S.: The Influence of Input Uncertainties on Remotely Sensed Estimates of Ocean Primary Productivity, PhD thesis, 161 pp, University of Bergen, Bergen, Norway (available at <http://hdl.handle.net/1956/4819>).
- 2009:** Milutinović, S., M. J. Behrenfeld, J. A. Johannessen, and T. Johannessen: Sensitivity of remote sensing–derived phytoplankton productivity to mixed layer depth: Lessons from the carbon-based productivity model, *Global Biogeochemical Cycles*, 23, GB4005, doi:10.1029/2008GB003431.

OTHER PUBLICATIONS

- 2014:** Milutinović, S.: Oceans of problems, oceans of opportunities. Congress Blog section of The Hill newspaper (available at <http://thehill.com/blogs/congress-blog/energy-environment/210255-oceans-of-problems-oceans-of-opportunities>).
- 2011:** Milutinović, S.: Uncertainty in a Model for Estimating Euphotic Depth from Satellite Observations of Chlorophyll. *NERSC Special Report, No. 88*, Nansen Environmental and Remote Sensing Center, Bergen, Norway.
- 2005:** Pettersson, L. H., S. Milutinović and A. G. Strøm-Erichsen: The Role of Local Authorities in Responding to Major Oil Spills. Technical report for the Committee on Sustainable

Development of the Chamber of Local Authorities under the Council of Europe, Strasbourg, France. *NERSC special report no. 77*, Nansen Environmental and Remote Sensing Center, Bergen, Norway.

- 2004:** Johannessen, J. A., L. H. Pettersson and S. Milutinović: Policy foundations review (C1). Report for the project “Real Time Ocean Services for Environment and Security” (GSE ROSES). *ESA ESRIN Contract no. 17066/03/I-IW*. Nansen Environmental and Remote Sensing Center, Bergen, Norway.
- 2004:** Johannessen, J. A., L. H. Pettersson and S. Milutinović: Method compendium (S2). Report for the project “Real Time Ocean Services for Environment and Security” (GSE ROSES). *ESA ESRIN Contract no. 17066/03/I-IW*. Nansen Environmental and Remote Sensing Center, Bergen, Norway.
- 2004:** Johannessen J. A., Pettersson L. H. and S. Milutinović: Science review (U3). Report for the project “Real Time Ocean Services for Environment and Security” (GSE ROSES). *ESA ESRIN Contract no. 17066/03/I-IW*. Nansen Environmental and Remote Sensing Center, Bergen, Norway.

PAPERS IN REVIEW OR PREPARATION

- Milutinović, S., T. S. Kostadinov, and I. Marinov: Carbon biomass of ocean phytoplankton size groups derived from satellite remote sensing estimates of particle size distribution.
- Børshheim, K. Y., S. Milutinović, and K. F. Drinkwater: Total organic carbon and satellite-sensed chlorophyll and primary production at the Arctic Front in the Nordic Seas. In review at the *Journal of Marine Systems*.

RECENT POSTERS AND SLIDE PRESENTATIONS

- 05/05/2014:** 2014 NASA Ocean Color Research Team Meeting, Silver Spring, MD, USA. Poster title: “Carbon Biomass of Phytoplankton Size Groups Derived from SeaWiFS Observations”.
- 07/22/2013:** The 2013 Ocean Carbon and Biogeochemistry (OCB) Summer Workshop, Woods Hole Oceanographic Institution, Woods Hole, MA, USA. Poster title: “Partitioning Phytoplankton Carbon Biomass into Three Size Groups Using Satellite Ocean Colour Observations”.
- 05/14/2013:** The 45th International Liège Colloquium, Liège, Belgium. Poster title: “Partitioning Phytoplankton Carbon Biomass into Three Size Groups Using Satellite Ocean Colour Observations”.
- 10/31/2012:** Guest lecturer in the Global Climate Change course (ENVS 204-001) at the University of Pennsylvania, Philadelphia, PA, USA. Lecture title: “Viewing our planet from space”.
- 07/16/2012:** The 2012 Ocean Carbon and Biogeochemistry (OCB) Summer Workshop, Woods Hole Oceanographic Institution, Woods Hole, MA, USA. Poster title: “Assessment and propagation of uncertainties in input terms through an ocean-colour-based model of primary productivity”.
- 03/12/2012:** Colloquium at the Department of Earth and Environmental Science, University of Pennsylvania, Philadelphia, PA, USA. Presentation title: “Uncertainties in estimating ocean phytoplankton productivity from space”.
- 02/23/2012:** 2012 Ocean Sciences Meeting, Salt Lake City, UT, USA. Poster title: “Assessment and Propagation of Uncertainties in Input Terms through an Ocean-colour-based Model of Primary Productivity”.
- 06/10/2011:** Presentation and defense of PhD thesis at Nansen Environmental and Remote Sensing Center, Bergen, Norway: “The Influence of Input Uncertainties on Remotely Sensed Estimates of Ocean Primary Productivity”.
- 10/08/2010:** Trial lecture for PhD at the University of Bergen, Norway: “The carbon cycle’s role in the high latitude and Arctic regions (An Earth system perspective)”.

UNDERGRADUATE ADVISING AND TEACHING

04/25/2014: Evaluated students' posters at the University of Pennsylvania Earth and Environmental Science Senior Research Conference.

Autumn 2013 - present: Mentored three Penn undergraduate students in projects involving the manipulation and analysis of satellite data in oceanography.

Summer 2013: Advised two Penn undergraduate students during a summer project in phytoplankton ecological modeling.

Autumn 2012: Guided a Penn undergraduate student through a semester project based on ocean color remote sensing.

10/31/2012: Guest lecturer in the Global Climate Change course (ENVS 204-001) at the University of Pennsylvania. Lecture title: "Viewing our planet from space".

COMPUTING SKILLS

Operating systems: Mac OS X (advanced), Microsoft Windows (advanced), UNIX (entry level).

Programming languages: MATLAB (advanced), Python (entry level).

Other software: Adobe Acrobat (advanced), Adobe Illustrator (advanced), EndNote (advanced), GraphicConverter (advanced), LaTeX (entry level), Microsoft Excel (intermediate), Microsoft PowerPoint (advanced), Microsoft Word (advanced).