Objective

To seek a data scientist / research position with focus on simulations and machine learning

Executive Summary

* Statistical analysis and data assimilation
* Numerical modeling and prediction
* Probabilistic modeling of extreme and rare events
* Nonlinear physical dynamics

Skills

* Statistical/quantitative methods: Monte-Carlo Simulations; Cluster Analysis; Discriminant Analysis; Multidimensional Scaling; Principal Component Analysis; Canonical Correlation Analysis; Multivariate Regression; Singular Value Decomposition; Finite Difference Approximation, Objective Mapping; Spline Approximation
* Numerical/analytical model design
* Programming skills: Python, Matlab, R, Fortran, C-shell, LaTeX
* Operating systems: LINUX, Windows, Mac

Professional Experience

**10/ 2010—Present Naval Research Lab Stennis Space Center, MS**

*Leading National research center in global ocean modeling and forecasting*

**Research Scientist**

* Developed conceptually new 3D idealized oceanic models for process-oriented studies
* Numerically, found important implications of diffusion scheme choice to credibility of upper-ocean circulation forecasts
* Developed and implemented adjoint-less 4DVAR assimilation system with 3D Navy Coastal Ocean Model that significantly improved operational forecasts for the Adriatic Sea

Professional Experience

**06/ 2007—10/ 2010 Oregon State University Corvallis, OR**

*College of Ocean and Atmospheric Sciences. One of top US institutes in coastal ocean studies*

**Postdoctoral Research Associate**

* Developed and validated 3D hydro-dynamic and biological-physical models of the coastal ocean
* Explored numerically energetic ageostrophic circulation patterns that have strong impact on circulation and marine life
* Improved numerical forecasts for ocean hypoxia that is dangerous for marine ecosystems

**09/ 2005—06/ 2007 Russian State Hydrometeorological University St. Petersburg, Russia**

*Dept. of Mathematics and Applied Mechanics. Leading Russian engineering school in Hydromet field*

**Senior Lecturer**

* Taught Theory of Probability, Mathematical Statistics, and Linear Algebra at undergraduate level with emphasis on hydro-meteorological processes
* Improved prediction of estuarine floods in St. Petersburg region in frame of NATO-funded international program

**11/ 1999—08/ 2005 State Oceanographic Institute St. Petersburg, Russia**

*One of top Russian research institutes in statistical hydrometeorology*

**Research Assistant; Ph. D. Candidate**

* Developed statistical analysis methods of oceanographic and meteorological processes
* Performed ensemble hydro-dynamic modeling and multivariate statistical analysis of the Baltic Sea dynamical and hydro-chemical fields
* Created comprehensive informational system on hydrometeorological and hydro-chemical regime of the Baltic Sea

Education

**2005** **PhD in** **Physical Oceanography State Oceanographic Institute St. Petersburg, Russia** Dissertation: "Multivariate statistical analysis of the Baltic Sea hydro-meteorological fields"

## 2000 MS in Hydrometeorology St. Petersburg State University St. Petersburg, Russia

## 1998 BS in Hydrometeorology St. Petersburg State University St. Petersburg, Russia

Additional Courses

* Reproducible Research, Johns Hopkins University @ Coursera, Jul., 2015
* Getting and Cleaning Data, Johns Hopkins University @ Coursera, Mar., 2015
* R-programming, Johns Hopkins University @ Coursera, Feb., 2015
* Data Scientist’s Toolbox, Johns Hopkins University @ Coursera, Jan., 2015
* Objective Data Assimilation, Univ. of South. Miss., Stennis Space Center, MS. Jan-Apr 2012
* Biological Oceanography, Oregon State University, Corvallis, OR. Jan-Mar 2010
* Variational Data Assimilation, Oregon State University, Corvallis, OR. Jan-Mar 2009
* GIS-ArcView, St. Petersburg State University, St. Petersburg, Russia. Feb-May 2005
* Satellite Oceanography Summer School for PhD students, EURISY, Vigo, Spain. June 2003