Sergey Krivov

Research Assistant Professor, Computer Science

Education
Ph.D. Computer Science, Intercultural Open University, The Netherlands, 1999
M.Sc. Mathematics, Novosibirsk State University, Russia, 1990

Research Areas
Semantic Web technology; Graphic representation and smart navigation of large ontologies; Simulation of ecological and social systems; Probabilistic measures of complexity, organization, and adaptation; Application of Bayesian networks to ecological evaluations

Dr. Krivov came to the US after working as a Consultant for Unitech Infosys, India where he was developing algorithms for analysis of genomes. In 2001 Krivov joined the Ecoinformatics team of the Institute for Ecological Economics in Maryland. He has been working on the NSF sponsored project "A Web-Accessible Knowledge Base for the Integrated Analysis and Valuation of Ecosystem Services." The Institute moved to UVM in summer 2002 to become the Gund Institute for Ecological Economics.

Ecoinformatics is one of the primary areas, where Dr. Krivov has been focusing his research and development efforts for the last few years. Ecoinformatics characterize the semantics of natural system knowledge. For this reason, much of today's ecoinformatics research relates to the branch of computer science known as knowledge representation, and active ecoinformatics projects are developing links to activities such as the Semantic Web.

Dr. Krivov's major contribution to the research and development of Semantic Web technology is his visual ontology editor GrOWL which he has developed for the NSF sponsored project "Enabling the Science Environment For Ecological Knowledge (SEEK)."

As part of the NSF sponsored "Project ARIES: an Integrated Digital Collaboratory to Support the Economic Valuation of Ecosystem Services," Dr. Krivov is working on the application of Bayesian Networks technologies to economic valuation of ecosystem services.

Dr. Krivov served as a reviewer for the U.S. Civilian Research and Development Foundation, and for the International Journal of General System, the Ecological Economics journal and several International Conferences.

Selected Publications:

- S. Krivov, R. Williams and F. Villa, GrOWL: A Tool for Visualization and Editing of OWL Ontologies, *Web Semantics: Science, Services and Agents on the World Wide Web 5*, 54–57 (2007)
- F. Villa, M. Ceroni M. and S. Krivov, Intelligent databases assist transparent and sound economic valuation of ecosystem services, *Environmental Management* 39, 887 (2007).
- S. Krivov, R. E. Ulanowicz, and A. Dahiya. Quantitative measures of organization for multiagent systems. *BioSystems*, 69 :39-54 (2003).
- S. Krivov, A. Dahiya, and J. Ashraf. From Equations To Patterns: Logic Based Approach To General System Theory, *International Journal of General Systems* 31(2): 183-205 (2002).

Current Research Grants:

- Co-PI "Project ARIES: an Integrated Digital Collaboratory to Support the Economic Valuation of Ecosystem Services ," National Science Foundation, 2007-2010

- Senior Researcher, "Enabling the Science Environment For Ecological Knowledge (SEEK)," National Science Foundation, 2002-2007

- Senior Researcher, "Ecosystem Services: Dynamics Modeling and Valuation to Facilitate Conservation," Gordon and Betty Moore Foundation, 2006-2007