

***The University of Alabama
Department of Computer Science
Colloquium Series***



**Dr. Sergiu Dascalu
Department of Computer Science and Engineering
University of Nevada, Reno**

**Cyberinfrastructure Developments for Nevada Climate Change Research, Education and Outreach:
Challenges, Progress So Far, and the Road Ahead**

Tuesday, March 2nd

Presentation at 11:00 a.m. in AIME 110

Abstract:

In this talk we will present work done so far in two ongoing and related NSF-funded projects aimed at improving Nevada's cyberinfrastructure (CI) for climate change research, education, and outreach. The need for computing infrastructure improvements in Nevada will be described and the challenges associated with researching and developing two key components of the projects, a climate change data portal and a software framework for enhanced model interoperability, will be discussed. A component of the data portal, the software framework for model interoperability is aimed at dealing with traditional issues related to coupling scientific models through new solutions for end-user interaction, model description, and data representation. Details of the main requirements, architectural solutions, and implementation aspects of the data portal will be provided, and existing methods and approaches for coupling environmental models will be examined. A description of the main features and capabilities of the proposed software framework for enhanced model interoperability in climate change research will also be included in the presentation. The talk will conclude with an outline of our CI group's plans for future work.

Bio:

Sergiu Dascalu is an Associate Professor in the Computer Science and Engineering Department at the University of Nevada, Reno. He has a Master's degree in Automated Control and Computers from the Polytechnic of Bucharest, Romania and a PhD in Computer Science from Dalhousie University, Halifax, Nova Scotia, Canada. His main research interests are in software engineering and human-computer interaction, in particular in requirements specification, software tools for interdisciplinary research, software processes, simulation environments, and user interface design. Sergiu is the Director of the Software Engineering Laboratory (SOELA) at UNR and serves as leader of the Nevada cyberinfrastructure group in a 5-year \$21-million NSF EPSCoR project aimed at improving the state's infrastructure for climate change science, education, and outreach. In addition, he is the Nevada lead for model interoperability in another NSF-funded project that involves cyberinfrastructure developments for the Western Consortium of Idaho, Nevada and New Mexico. Sergiu has also served as PI or co-PI on several other projects funded by NASA, ONR, and the industry. He received three best paper awards at international conferences and is the recipient of UNR College of Engineering Lemelson Award for Innovation and Entrepreneurship 2005 as well as the Nevada Center for Technology and Entrepreneurship Faculty Advisor Award 2009.