



<http://scdsd.bluepink.ro>

Motto:

"There are three kinds of death in this world. There's heart death, there's brain death, and there's being off the network. "

Dr. Guy Almes <http://www.educause.edu/members/guy-t-almes-0>

Seminarul Stiintific - Comunicatii de Date si Sisteme Distribuite

Facultatea de Matematica si Informatica,

Universitatea "Ovidius" din Constanta, Romania

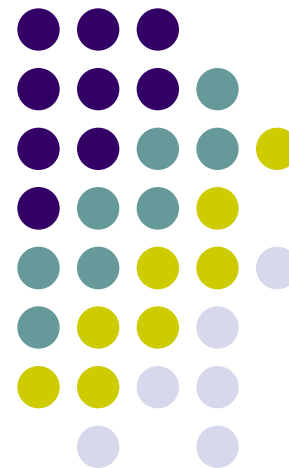
<http://math.univ-ovidius.ro>, <http://scdsd.bluepink.ro>

15 februarie 2013, ora 14.00, Sala AB1

**Research Challenges and Solutions for Energy Efficient
and
Robust Wireless Networking in Extreme Environments**

Dr. Radu Stoleru, Department of Computer Science and Engineering,
Texas A&M University, USA

<http://lenss.cse.tamu.edu/>



Abstract:



- Recent events have revealed our limitations in understanding, monitoring and controlling extreme environments. Examples of events range from natural or man-made disasters (e.g., Japan earthquake and tsunami, Hurricane Ike, Haiti earthquake) to underwater operations (e.g., Autonomous Ocean Sampling, Gulf of Mexico oil spill). In these events, very large physical areas are involved and due to the harshness of the environment and the scale of the event, it is impractical, if not impossible, to deploy an infrastructure that continuously monitors the entire area. Advances in wireless networking and micro-electro-mechanical systems, e.g., wireless sensor networks with sophisticated sensing/actuating technologies, represent enabling technologies that are envisioned to provide us unprecedented capabilities to understand, monitor and control extreme environments. The major challenges that hinder our progress, however, are the energy efficient and robust operation required for long term deployments in extreme environments. In this talk, I will present our recent work on theoretical foundations, network protocols, and systems that address the aforementioned research challenges. I will also overview the application process for admission in graduate programs in the US, and potential research opportunities for graduate students.

Bio:



• Dr. Radu Stoleru is currently an Assistant Professor in the Department of Computer Science and Engineering at Texas A&M University, and head of the Laboratory for Embedded & Networked Sensor Systems (LENSS). His research interests are in deeply embedded wireless sensor systems, distributed systems, embedded computing, computer networking and wireless security. He received his Ph.D. in computer science from the University of Virginia in 2007. While at the University of Virginia, he received from the Department of Computer Science the Outstanding Graduate Student Research Award for 2007. He has authored or co-authored over 60 conference and journal papers with over 1,800 citations. He is currently serving as an editorial board member for 3 international journals and has served as technical program committee member on numerous international conferences. His research has been funded by the National Science Foundation (NSF), Office of Naval Research (ONR), Environmental Protection Agency (EPA), the Naval Postgraduate School (NPS), the Institute for Applied Mathematics and Computational Science (IAMCS-KAUST), and Rockwell Collins Inc.



Some useful links for future collaboration in scientific research:

- http://lenss.cse.tamu.edu/project_distressnet.html
- http://lenss.cse.tamu.edu/project_topology.html
- http://lenss.cse.tamu.edu/project_multichannel.html
- http://lenss.cse.tamu.edu/project_koutofn.html
- http://lenss.cse.tamu.edu/project_fsn.html
- http://lenss.cse.tamu.edu/project_security.html

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