

Department of Mathematical Sciences Colloquium

RALITSA AKINS, M.D., PH.D.

Department of Pediatrics, Texas Tech Medical School

Complex Systems and Computational Science: Real-life Solutions

There is a rapidly emerging field of knowledge intricately combining theoretically and empirically well founded scientific disciplines such as humanities, social and natural sciences, in new complex systems enriched with novel elements. These newly emerging complex systems call for a new attitude in resolving problems related to social and scientific networks.

Computational science coupled with computer simulation presents a novel approach in resolving complex system issues. Three real-life applications of computational/computer simulation solutions will be discussed:

1. Disaster management – patients surge in hospitals at time of natural disaster or bioterrorism attack
2. Dissemination of influenza model – bioterrorism preparedness for a bird flu pandemic
3. Development of science and teams – relatedness to the Chaos Theory

Participants will have the opportunity to discuss and suggest possible computational and/or dynamical systems approaches in resolving issues related to the aforementioned themes. An ongoing related research will be presented.

**Friday, February 1st, 2008 at 3 pm in BH 143
The University of Texas at El Paso**

Refreshments will be served in front of the colloquium room, 15 minutes before the start of the colloquium.

For further information, please contact Dr. Pavel Šolín, Bell Hall 220. Phone: (915) 747-6770, email: solin@utep.edu.