
Editorial

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Biographical notes: Steven D. Hart is a Lieutenant Colonel in the United States Army with 22 years of service in command and staff positions in Iraq, Kuwait, Panama, Germany, Korea and the USA. He is an Assistant Professor in the Department of Civil and Mechanical Engineering at West Point where he teaches courses on Infrastructure Engineering and Critical Infrastructure Protection. His other teaching experience includes design of steel structures, design of concrete structures, advanced structural analysis and the civil engineering capstone course. He is active in the American Society of Engineering Education, the American Society of Civil and The Infrastructure Security Partnership.

Adrian V. Gheorghe received his MSc in Electrical Engineering from Bucharest Polytechnic Institute, Romani, PhD in Systems Science/Systems Engineering from the City University, London, UK, MBA from the Academy of Economic Studies, Bucharest and MSc in Engineering-Economics from Bucharest Polytechnic Institute. In 2006, he was appointed as a Professor of Engineering Management and Systems Engineering, and offered the Batten Endowed Chair on System Engineering. His research interests include risk and vulnerability assessment for complex systems, systems engineering modelling for critical infrastructures, system of systems engineering, sustainable development, homeland security related research and policy science implementation.

In March 2010, The Infrastructure Security Partnership (<http://www.tisp.org>) submitted an information paper to the President of the United States with specific recommendations for including critical infrastructure resilience in future national security strategies. The second recommendation was to 'Coordinate the development of educational programs in resilience'. In support of this recommendation, this special issue of the *International Journal of Critical Infrastructures* contains the best papers from the first annual West Point Critical Infrastructure Symposium held at the United States Military Academy at West Point, New York on April 29th and 30th, 2010. This inaugural event was focused on students at the bachelors and masters level in programs of study related to critical

infrastructure protection and resilience. The symposium was attended by 52 students from seven universities representing a variety of academic majors including engineering, economics, emergency management, history, mathematics, modern languages, emergency management, and homeland security. The presentations were organised in five divisions:

- understanding the all-hazards environment
- network and target assessments
- building a resilient society
- rapid restoration
- implementing security, protection, and resiliency solutions.

The symposium was designed to foster a multi-disciplinary approach to infrastructure resiliency. To facilitate this approach, a diverse group of moderators representing different facets of infrastructure resiliency led the divisions. The moderators, in the same order as the division they led were:

- Dr. Paul Mlakar, United States Army Corps of Engineers Engineering Research and Development Center
- Dr. Eve Hinman, President and Founder, Hinman Consulting Engineers
- Dr. Mike Chumer, Research Professor, College of Computer Science, New Jersey Institute of Technology
- Dr. Dale Jones, Wilder School of Government and Public Affairs Virginia Commonwealth University
- Mr. Dennis Schrader, former Deputy Administrator of the National Preparedness Directorate in FEMA.

These moderators reviewed and selected the best papers in their divisions which are included in this issue. The papers represent different levels of academic achievement and different perspectives on resiliency. Karen Marsico, who holds a Post-masters Certificate in Systems Engineering, applies societal systems engineering principles to suggest improvements to the United States Power Delivery System. Joseph Briere earned a Master of Arts in Homeland Security and Emergency Preparedness and proposes an all-hazards approach to the functioning of local and regional fusion centres. Timothy Mathieu and Alexander Rao, both undergraduate students in homeland security, perform a vulnerability assessment of three drinking water systems and suggest improvements to a recognised risk assessment methodology. Alexander Nikssarian, an undergraduate student in economics, applies infrastructure resilience concepts to the banking and finance systems. Finally, James Myers and Michael Sorrentino Jr., both undergraduate civil engineering students, conduct a regional critical infrastructure assessment for a major transportation hub in the central USA.

Critical infrastructure resiliency must address many different infrastructures and so requires the participation of a diverse group of professionals. Long-term improvements in critical infrastructure resiliency require educating the next generation of professionals in many disciplines on principles of resilience. This symposium targeted both of these

necessities. These papers, selected based on their high quality, demonstrate the application of infrastructure resiliency in different disciplines. Some of the authors have only had a single course in infrastructure resilience and protection while others have completed advanced degrees in the subject. While these papers represent scholarly achievement commensurate with the background of the authors, the publication of these papers starts these young professionals on a lifetime of scholarly work and achievement sure to bear fruit during their upcoming careers.

The organisers of the West Point Critical Infrastructure Symposium wish to thank the publisher of the *International Journal of Critical Infrastructures* for publishing the work of this year's participants. The promise of this opportunity inspired participants and greatly improved the quality of all submissions. The second annual West Point Critical Infrastructure Symposium will be held April 29th and 30th, 2011. The call for papers can be found at <http://www.tisp.org>.