Center for Complex Systems and Enterprises Distinguished Lecture Series
Infranomics: Dealing with Evolutionary Systems Concepts and Applications
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ABSTRACT: Complexity of socio-technical systems and processes e.g. critical infrastructures, Internet of Things, space technologies and their wide range of impacts during their life cycle brought into the discussion the emerging new disciplines which are considered to be integrated into the operational concept of Infranomics [after infrastructure (supporting vital societal technical functions) and nomics (after Gr. νόμος nomos, set of rules)] which is considered to be the discipline emerging from the interaction between individuals of diverse backgrounds collaborating on sustainable/resilient infrastructures. Knowledge and understanding of, inter alia, resiliency as it applies to infrastructures and their governance has only begun to scratch at the many complexities that surround this problem. Most research is still very orthodox or disciplinary in nature. The lack of adequate methods is a constraint to further development of understanding as well as an area that requires further elaboration. The seminar will address concepts such as governance, resilience and fragility; recent research results in the field of energy security, satellite vulnerability and space debris orbits management, as well as the use of concept of systems’ hysteresis will be presented in view of trigering a debate for future research and specific application domain.

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