



# Microgrids: Transforming Critical Infrastructure with Systems Engineering to meet Modern Challenges

June 4, 2019

Please register via [Eventbrite](https://www.eventbrite.com), link in email or see <http://www.incose.org/cleveland>

5:00 PM – 8:00 PM EST  
Presentation starts at 6:00 PM  
Das Schnitzel Haus  
5728 Pearl Rd  
Parma, OH 44129

**Speaker: John Juhasz**

## **Abstract:**

Our energy systems and national electrical grid are undergoing a dramatic and significant transformation unprecedented since the early days of electricity as conceived by Edison and Tesla. This time, the transformation must be guided by a disciplined systems engineering life-cycle process, enabling developers to address the numerous vulnerabilities and unacceptable risk factors inherent in our main grid. It is well established that a sustained loss of electrical power on a wide-spread basis could create an existential threat to our civilized existence.

The new architecture - in the form of Microgrids and derivative forms of distributed energy resources, are already underway in many places such as Puerto Rico. With properly designed configurations, they hold forth the promise of resolving the threat issues confronting our national electrical grid. However, a rigorous systems approach to the design of microgrids will be essential to avoid the pitfalls that led to our current vulnerabilities. This presentation will provide a macro-view of our energy systems, key vulnerabilities, and the evolution of microgrid systems.

## **John's Bio:**

John Juhasz is CEO and President of Telepath Systems, Inc. (TSI) - a scientific non-profit entity organized for the purpose of advancing the education, practice and adoption of systems engineering and MBSE methods. With TSI as the managing entity, he serves as organizer and general chair of the annual EnergyTech conference. He is a practicing systems engineer and entrepreneur with nearly 5 decades experience in various industry sectors, including automotive, aerospace, telecommunications and energy. He is an INCOSE CSEP (Certified Systems Engineering Professional), and has been involved with INCOSE since its inception in 1991. He was a co-founder and first president of the Cleveland/Northern Ohio chapter of INCOSE. He co-founded the Power & Energy Systems Working Group and the Critical Infrastructure Protection and Recovery Working Group. He is and active member of InfraGard and currently serves as NEO Infragard Sector Chief for Energy,

Mr. Juhasz has engaged in systems engineering activities in various programs in aerospace, including NASA's International Space Station and the Constellation System space exploration program, among others, developing and applying model-based engineering methods. In automotive systems, he led OnStar system development efforts at Opel/GM Europe. He holds a total of nine patents dealing with innovation on vehicle information systems and adaptive braking systems. He was awarded the coveted Rockwell "Engineer of the Year" award for his innovative work on vehicle information systems.

Mr. Juhasz holds a Bachelor and Master's degree in Electrical Engineering from Cleveland State University, and a Master of Business Administration from University of Detroit. He served as Adjunct Professor at Baldwin Wallace College in the MBA program, teaching Management Decision Models and Information Systems.

We hope to see you there!

Food and drink will be available for purchase at the venue.