



Distinguished Colloquium

Temple University

Computer and Information Sciences

GENI - Global Environment for Network Innovations

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Wednesday 10/20, 11am, Wachman Hall Room 447

Abstract:

The Global Environment for Network Innovations ([GENI](#)) is a suite of research infrastructure components rapidly taking shape in prototype form across the US. It is sponsored by the US National Science Foundation, with the goal of becoming the world's first laboratory environment for exploring future Internets at scale, promoting innovations in network science, security, technologies, services, and applications.

GENI will allow academic and industrial researchers to perform a new class of experiments that tackle critically important issues in global communications networks:

- Science issues — we cannot currently understand or predict the behavior of complex, large-scale networks
- Innovation issues — we face substantial barriers to at-scale experimentation with new architectures, services, and technologies
- Society issues — we increasingly rely on the Internet but are unsure that can we trust its security, privacy or resilience

GENI will enable researchers to explore these issues by running large-scale, well-instrumented, end-to-end experiments engaging substantial numbers of real users. These experiments may be fully compatible with today's Internet, variations or improvements on today's Internet protocols, or indeed radically novel "clean slate" designs.

The GENI project is now paving the way to such experiments by a "mesoscale" build-out through more than a dozen US campuses, two national backbones, and several regional networks. If this effort proves successful, it will provide a path toward more substantial build-out.

Bio:

[Chip Elliott](#) is Project Director for GENI, the National Science Foundation's virtual laboratory for exploring future internets at scale. He is Chief Engineer at BBN Technologies and an AAAS and IEEE Fellow with over 85 patents issued and pending. Mr. Elliott has served on many national panels and has held visiting faculty positions at Dartmouth College, Tunghai University in Taiwan, and the Indian Institute of Technology, Kanpur.

