



# CENTER OVERVIEW



## About CURENT

The Center for Ultra-wide-area Resilient Electric Energy Transmission Networks, or CURENT, is a part of the National Science Foundation's prestigious Engineering Research Center program. The NSF and the U.S. Department of Energy have awarded an \$18.5 million grant to improve the nation's electric power transmission system to reduce blackouts and increase reliability, controllability and efficiency of power grids.

CURENT draws faculty and staff from four universities, with the University of Tennessee, Knoxville as its lead institute. The center is also housed at UT Knoxville in the newly-opened Min H. Kao Building. Northeastern University, Rensselaer Polytechnic Institute, and Tuskegee University are the three partner institutes, and each school will provide important research and collaboration to facilitate CURENT's mission.

The center focuses on three major areas: **research**, **industrial collaboration and innovation**, and **education & outreach**.

The industrial collaboration and innovation component will build entrepreneurship into the academic culture of the center, and will form long-term partnerships with organizations with the goal of accelerating technology transfers of research into commercially viable products.

Partnership with industrial members will be a tiered system to fit the varying needs of firms of different

natures and sizes, and will create broad-based industry participation. Depending on contributions, firms can be Associate, Full, or Principal Members. Principal members have intellectual property rights and a strong influence on research directions, while lower membership ranks will still offer influence and access to CURENT's knowledge base and students.

Meanwhile, education & diversity initiatives will address concerns that the United States is falling behind in science, technology, engineering, and mathematics (STEM) exposure and knowledge in the classroom and create a new generation of engineers. Both pre-college (K-12) and university level students will benefit from a variety of programs and experiences designed to stimulate interest in learning STEM subjects and inspire more students to pursue advanced knowledge of engineering.

The center is led by Director Kevin Tomsovic, Professor in UT's Electrical Engineering and Computer Science Department, and Deputy Director Yilu Liu, a UT Governor's Chair Professor. CURENT's grant funding is set for five years, with the option of extending for an additional five years, potentially totaling ten years of funding for the center.

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