



# 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 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 (UT), Knoxville as its lead institute. The center is 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 contributes 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 builds entrepreneurship into the academic culture of the center, and works to form long-term partnerships with organizations with the goal of accelerating technology transfers of research into commercially viable products.

Partnership with industrial members is a tiered system to fit the varying needs of firms of different natures

and sizes, and encourages 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 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 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, a 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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