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Siebel Energy Institute Established with \$10 Million Grant

Global consortium for collaborative energy research celebrates debut by providing grants to 24 engineering and computer science teams

Redwood City, Calif.—August 4, 2015—The Siebel Energy Institute, a consortium for innovative and collaborative energy research dedicated to advancing the science of smart energy, marked its official launch today with the announcement of 24 research grants nearing \$1 million. The winning research proposals, led by engineering and computer science experts from the Institute's member universities, will accelerate the development of algorithms and machine learning to improve the performance of modern energy systems.

The Institute is a consortium of eight research institutions: Carnegie Mellon University, École Polytechnique, Massachusetts Institute of Technology, Politecnico di Torino, Princeton University, University of California at Berkeley, University of Illinois at Urbana-Champaign, and University of Tokyo. The Thomas and Stacey Siebel Foundation established the Institute with a \$10 million grant. The Institute is supported by an Industry Advisory Board that initially includes Pacific Gas & Electric, Honeywell, C3 Energy, and other leading energy companies and industry influencers, who have partnered with the Institute to foster active collaboration with the private sector.

"We created the Siebel Energy Institute to stimulate the best minds in engineering and computer science to work collaboratively on the science of smart energy," said Chairman Thomas M. Siebel. "Our goal is to advance innovations in data analytics and machine learning to improve the safety, cyber security, reliability, efficiency, and environmental integrity of the advanced smart grid."

Specifically, smart-connected devices across today's energy system collectively generate massive amounts of information. Highly sophisticated statistical algorithms are necessary to integrate and correlate the data, create data-driven statistical models with predictive power, and extract value from this otherwise incomprehensible stream of information.

"Leading universities are beginning to dedicate research teams to this area, but we have the opportunity to accelerate innovation," said S. Shankar Sastry, dean of the College of Engineering at Berkeley and director of the Institute. "The grants we announced today are a catalyst for research that could ultimately break new ground in energy systems analytics."

Inaugural Grants Revealed



Researchers, scholars, and industry experts gathered at today's launch event in San Francisco to announce and celebrate the Institute's inaugural grant recipients. The Institute's Executive Committee, which includes representatives of all consortium member institutions, selected the recipients from a field of nearly 60 submissions.

Twenty-four teams received either \$50,000 or \$25,000 seed grants, which will be used to develop research proposals to advance the science of machine learning to respond to electrical outages and cybersecurity attacks, manage increasingly complex load factors such as electric vehicle charging and integrating renewable energy sources onto the power grid, and optimize the power value chain. The researchers will focus on how to apply advanced analytics to improve energy efficiency, grid reliability, and customer engagement. The Siebel Energy Institute will grant 40-50 such research awards annually, in addition to providing ongoing financial support to funded projects.

Using the Siebel Energy Institute grant awards, the research teams will develop larger research proposals and grant submissions to government entities and foundations within a leveraged funding model designed to attract \$100 to \$200 million in funded research over the next five years.

"The mission of the Siebel Energy Institute is to dramatically accelerate primary research to advance the science of machine learning and analytics as it relates to energy, oil and gas, and power systems," said Siebel. "All research that is supported by the Siebel Energy Institute will be freely available in the public domain through the Non-Exclusive Royalty Free (NERF) license protocol used by consortium member universities. "

For more detailed information on each inaugural research grant, visit http://www.siebelenergyinstitute.org/2015-research-grants/.

Siebel Scholars Program Expanded

The Siebel Energy Institute also today announced its partnership with the Siebel Scholars Foundation in expanding the Siebel Scholars program to recognize and engage outstanding leaders in the field of energy science at its consortium member universities. Annually, these eight institutions will each select a topranking graduate student—based upon academic excellence and leadership in energy science—to participate in the Siebel Scholars program. Each Siebel Scholar will receive a \$35,000 award for his or her final year of graduate studies. These students will join an ever-growing, lifelong community of more than 1,000 past and present Siebel Scholars that includes their peers from leading graduate schools of business, computer science, and bioengineering.

About Siebel Energy Institute

The Siebel Energy Institute is a consortium for innovative and collaborative energy research. The Institute funds cooperative research grants to advance the science of data analytics, including statistical analysis and machine learning, to accelerate improvements in the safety, security, reliability, efficiency and environmental integrity of modern energy systems. Member universities include: Carnegie Mellon



University, École Polytechnique, Massachusetts Institute of Technology, Politecnico di Torino, Princeton University, University of California at Berkeley, University of Illinois at Urbana-Champaign, and University of Tokyo. The Siebel Energy Institute fosters research collaboration among these premier universities and spurs the greatest minds in engineering and computer science to address the most pressing energy challenges of our time. Learn more at www.siebelenergyinstitute.org.

About Siebel Scholars

The Siebel Scholars program was founded in 2000 by the Siebel Foundation to recognize the most talented students at the world's leading graduate schools of business, computer science, bioengineering, and energy science. These include: Carnegie Mellon University; École Polytechnique; Harvard University; Johns Hopkins University; Massachusetts Institute of Technology; Northwestern University; Politecnico di Torino; Princeton University; Stanford University; Tsinghua University; University of California, Berkeley; University of California, San Diego; University of Chicago; University of Illinois at Urbana-Champaign; University of Pennsylvania; and University of Tokyo. Today, our active community of over 1,000 leaders serves as advisors to the Siebel Foundation and works collaboratively to find solutions to society's most pressing problems. For more information about the Siebel Scholars program, please visit www.siebelscholars.com.

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