cells, thermophysical properties, hydrogen storage materials, materials transformations, CO_2 separation and concentration, and CO_2 sequestration and storage. These priorities are closely aligned with the U.S. Department of Energy's Hydrogen and Fuel Cell Technology Program, which funded much of Sofronis's prior research. In addition, these areas of focus reflect those highlighted as potential areas of collaboration between the United States and Japan in a November 2009 meeting between United States President Barack Obama and then Japanese Prime Minister Hatoyama Yukio.

The Institute will eventually involve more than 200 researchers and staff, with more than 25 principle investigators divided among the eight research themes. The researchers span multiple disciplines, including physics, chemistry, materials science and engineering, geosciences, and ocean science.

Several other institutions are collaborating on the project, including the University of Tokyo and the National Institute of Advanced Industrial Science and Technology in Japan, the Dalian Institute of Chemical Physics and Tsinghua University in China, Imperial College London in the United Kingdom, the Swiss Federal Institute of Technology, and the University of California–Berkeley, Massachusetts Institute of Technology, and Sandia National Laboratories in the United States.

"As we all know, fundamental scientific research to understand complex and interrelated phenomena requires support characterized by longevity. It is precisely this type of an environment for the international research community that I²CNER strives to create with the generous support from the government of Japan," said Sofronis.

The WPI program is run by the Japan Society for the Promotion of Science, a government agency that supports programs to advance science research in Japan. The program was created in 2007 to fund research, establish international research environments in Japan, reform research organizations, and create new domains of interdisciplinary research.

The other WPIs include the Advanced Institute for Materials Research (Tohoku University), the Institute for the Physics and Mathematics of the Universe (University of Tokyo), the Institute for Integrated Cell-Material Sciences (Kyoto University), Osaka University Immunology Frontier Research Center (Osaka University), and the International Center for Materials Nanoarchitectonics (National Institute for Materials Science).

For more information on the World Premier Institutes, visit www.jsps.go.jp/english/e-toplevel. Additional information on I²CNER can be found at http://i2cner.kyushu-u.ac.jp/en.

Kendra Redmond

U.S. releases reports on STEM jobs

www.esa.doc.gov/reports/women-stem-gender-gap-innovation
www.esa.doc.gov/reports/stem-good-jobs-now-and-future

The U.S. Department of Commerce's Economics and Statistics Administration (ESA) released two reports that profile U.S. employment in the science, technology, engineering, and mathematics (STEM) fields. "STEM: Good Jobs Now and for the Future" reports U.S. growth in STEM jobs overall while "Women in STEM: A Gender Gap to Innovation" finds, as expected, that there are fewer women than men in STEM jobs and attaining degrees in STEM fields as well as a wage disparity based on gender.

Over the past 10 years, growth in STEM jobs was three times greater than that of non-STEM positions. STEM employment is expected to continue to grow at a faster rate than other jobs in the coming decade (see Figure 1). Meanwhile, STEM workers are also less likely to experience joblessness.

Further findings show STEM employees command higher wages, earning 26% more than their non-STEM counterparts. STEM degree holders also enjoy higher earnings, regardless of whether they work in STEM or non-STEM occupations. Likewise, college graduates—no matter what their major—enjoy an earnings premium for having a STEM position.

Through initiatives such as Race to the Top and the "Educate to Innovate" campaign, President Obama has made STEM education a key priority and has laid out an ambitious goal to move U.S. students from the middle of the pack to the top of the pack internationally in science and math achievement over the next decade.

While women make up 48% of the U.S. workforce, only 24% hold STEM jobs. Over the past decade, this underrepresentation has remained fairly constant, even as women's share of the college-educated workforce has increased.

Women with STEM positions, how-

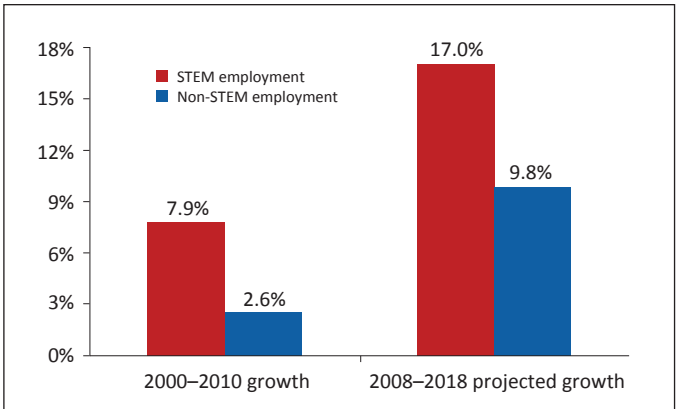

Figure 1. Recent and projected growth in science, technology, engineering, and mathematics (STEM) and non-STEM employment. *Source*: Economics and Statistics Administration calculations using Current Population Survey public-use microdata and estimates from the Employment Projections Program of the Bureau of Labor Statistics; ESA Issue Brief #03-11 (July 2011).

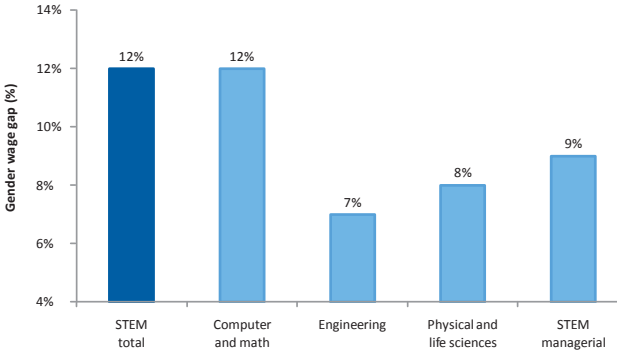

Figure 2. Regression-adjusted gender wage gap of college-educated STEM workers by occupation, 2009. Estimates are for full-time year-round private wage and salary workers age 25 and over. *Source*: ESA calculations from American Community Survey public-use microdata; ESA Issue Brief #04-11 (August 2011).

ever, earned 33% more than women in non-STEM jobs in 2009, exceeding the 25% earnings premium for men in STEM. Women in STEM also experience a smaller gender wage gap than their counterparts in other fields.

Engineers make up the most male-dominated STEM occupational group but also the one with the smallest regression-adjusted gender wage gap (see Figure 2). Female engineers earned 7% less per hour than their male counterparts.

According to the "Women in STEM" report, "Physical and life sciences occupations, the most gender-balanced STEM group, have an 8% wage gap, and STEM managers a 9% gap." Data on materials engineering and materials science are captured within the engineering category.

Several possible factors contribute to the discrepancy of women and men in STEM positions, including a lack of female role models, gender stereotyping, and less family-friendly flexibility in STEM fields. Yet regardless of the causes, the findings of this report offer important evidence to inform policy efforts to encourage and support women in STEM, according to the Department of Commerce.

"We haven't done as well as we could to encourage young people to go into STEM jobs—particularly women—which inhibits American innovation," said Acting Secretary of Commerce Rebecca Blank. "Closing the gender gap in STEM degrees will boost the number of Americans in STEM jobs, and that will enhance U.S. innovation and sharpen our global competitiveness." □