

## Hugo Neu Corporation Sustainability Seminar Series Climate Resilience Thought Leaders Forum December 4, 2019

## Climate Resilience through Innovative Carbon Farming and Integrated Green Infrastructure for Healthy Waters, Ecosystems, and Communities

Thank you, Wendy, and thank you to the Hugo Neu Corporation for its sponsorship of today's program and for bringing this impressive group of speakers and thought leaders together here in Kearny Point, a model of forward-looking, innovative development, to discuss an issue that is of existential importance.

Stevens Institute of Technology is proud to be a partner in today's forum, and I'd like to spend a few minutes sharing with you a few examples that describe what Stevens is doing to advance the frontiers of sustainability research and develop new technologies that have the potential to reduce our dependence on fossil fuels; to predict and mitigate effects of climate change, particularly in urban areas; and to remediate and improve environmental systems.

One important area of research activity at Stevens is in energy harvesting, storage, and conversion. With grant funding, including from the National Science Foundation and PSEG, Stevens faculty are developing lightweight, flexible solar cell technologies that lend themselves to low-cost manufacturing; advancing battery technologies through novel materials design; and developing energy conversion methods to use biomass as a feasible energy source for the future. We are also working in the areas of wave energy conversion, green infrastructure, removal of contaminants from soil and groundwater, development of stronger, more sustainable construction materials, deep ocean farming for sustainable food production, remote sensing of the health of our oceans, and many more research initiatives that limited time prevents me from describing. Not only do our faculty lead these pioneering projects, but they engage both undergraduate and graduate students, who are passionate about sustainability, in this work. Dr. Dibyendu Sarkar, one of the organizers of this forum who will speak shortly, is the founding director of the Sustainability Management Graduate Program, and we have a very popular green engineering minor program and several graduate certificate programs. Also, each year, dozens of our senior design projects-a year-long, capstone, multidisciplinary projects that are often sponsored by external organizations to address a specific challenge—have sustainability as a key focus and deliverable.

And, I must briefly add one project of which I am extremely proud, which can be seen just a few miles east of here at the Liberty Science Center. In 2015, Stevens took first place—winning six of the 10 competitions—in the prestigious U.S. Department of Energy's Solar Decathlon, with its SU+RE House, which is short for SUstainable and REsilient. Inspired by the challenges New Jersey faced in the aftermath of Hurricane Sandy, this structure was designed and built by an interdisciplinary team of 30 students and faculty as a net-zero energy home that was resilient enough to withstand hurricane-force winds and flooding. It now serves as a powerful educational tool for the more than 750,000 visitors to Liberty Science Center each year.

Stevens is not only "talking the talk," but is also "walking the walk." We have implemented a Transportation Demand Management program to incentivize our community to reduce vehicle trips to campus; we participate in the Association for the Advancement of Sustainability in Higher Education STARS program and the Recyclemania program; and have initiated a number of other energy conservation and resiliency activities on our campus and in partnership with the City of Hoboken.

I am especially proud that Stevens is creating the talent pool that companies and local, state, and federal agencies and NGOs such as those represented here today, will depend on to advance their sustainability priorities in the next decade and beyond.

In closing, I hope that each of you will think of Stevens as a partner in achieving your sustainability objectives—whether they involve developing or testing new tools and technologies; providing continuing education programs for your current workforce; or securing talent for your future workforce.

On behalf of Stevens Institute of Technology, I congratulate the Hugo Neu Corporation and all of you on today's event, and I hope it will be a catalyst for many fruitful collaborations in the months and years ahead.

Our planet and future generations are depending on you.

