The age of integration: Biologically-inspired design as a strategy to combat the “silo” effect

The Center for Biologically Inspired Design at GA Tech is a response to global challenges in education and sustainable technology development. Our goal is to facilitate, develop infrastructure for, and promote interdisciplinary research and education. This represents an effort to train scientists for increasingly complex problems in sustainability and develop novel and benign solutions for these problems. The Center for Biologically Inspired Design is led by Biology and comprised of faculty from a variety of engineering and science disciplines, as well as architecture and industrial design. These faculty rely on interdisciplinary approaches to solve today’s complex problems. A key activity is studying biological systems for principles that have high potential to function as a template for addressing human challenges, such as the development of urban infrastructure systems or enabling the solar power industry. In addition, we focus on developing the pedagogy for interdisciplinary collaboration using theories derived from cognitive and learning sciences, and science education. Here, bio inspired design serves as a template for creative and interdisciplinary interactions, requiring biologists, engineers, and designers to learn how to communicate across disciplines and transfer ideas from different domains in a fruitful effort. I will describe some of the challenges and successes that we have experienced in developing this educational and research effort.

ABOUT THE SPEAKER

Marc Weissburg (right) is Professor of Biology and co-founder and Co-Director of the Center for Biologically Inspired Design. He obtained his PhD in Ecology and Evolutionary Biology from SUNY Stony Brook, and has an active research program in sensory ecology. He has taught biologically inspired design for undergraduate students, practicing professionals, and at NSF workshops for 10 years. His interdisciplinary efforts in BID include infrastructure and industrial ecology, the pedagogy of bio-inspired design and informal science education using bio-inspired design.

TUESDAY, MAY 13, 2014
2:00 - 3:30 pm, 310 Kelly Hall

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