The Role of Convergence in Education

Daniel J.C. Herr

Joint School of Nanoscience and Nanoengineering/UNC-Greensboro

This presentation examines attributes of Nanoscale STE(A)M^{+} education systems that align with and address strategic twenty-first century academic, government, industrial and societal needs. Such systems leverage the mutually supportive interdependence of all key stakeholders within the educational supply chain. They also nurture convergent, transdisciplinary and hands-on platform enhanced educational opportunities throughout this evolving environment. Key goals include: 1) Catalyze and sustain interest in Nano-STE(A)M^{+} education and 2) enable adaptive, convergent and innovative educational infrastructures.

Dr. Herr serves as professor and Nanoscience department chair at the University of North Carolina's Joint School of Nanoscience and Engineering (JSNN). He leads a highly collaborative and interdisciplinary team that explores and addresses emerging applied research opportunities, with a focus on nanobioelectronics, nanoenergy, computational nanotechnology, nanobiology/medicine, nanometrology, functional self-assembled nanomaterials and biomimetic systems. Dr. Herr also is passionate about communicating the joy of science and STEAM opportunities to the community and to the next generations of scientists, engineers, and other creative people. His current research interests include useful sustainable and smart nanoagriculture, self-assembled and biomimetic nanosystems, nanobioelectronics, composite nanomaterials, and nanoenergy.