The Disruptive Role of Technology in Learning
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"Technology at our Core."

This is one of the strategic priorities the Stevens community adopted in our 10-year Strategic Plan. True to this priority, Stevens faculty and students are deeply engaged in exploring new ways to leverage technology across all disciplines and domains to develop new and better approaches to a range of problems facing our global society.

Technology has revolutionized the way we communicate, transformed whole industries and created occupations that previously did not exist. The next decades and beyond promise to be no less dynamic as technological innovation continues to provide new capabilities and create new challenges.

Technically-oriented institutions like Stevens must continue and even strengthen the preparation they provide to students so that they develop the skills, abilities, and agility for personal and professional success in such a dynamic environment. At Stevens, we also take seriously our responsibility to instill in our graduates not only the orientation toward incremental innovation, but also a propensity for "disruptive innovation," – innovation that changes the way we live, work, communicate, travel, invest, socialize, and more.

One of the five "foundational pillars" of our Strategic Plan is STEM (science, technology, engineering and mathematics) education and research. A statement from our Strategic Plan summarizes our lofty goal:

"Stevens will create a new paradigm that elegantly combines stellar learning opportunities and trailblazing research as inseparable components of a 21st century education."

We are currently deeply engaged in a number of projects that seek to radically advance teaching and learning. Of course, technology has enormous potential to improve how and what we teach and learn, and it is a distinctive feature of a Stevens education. It enables improved access to education through asynchronous learning technologies that facilitate instruction and collaboration not restricted by time or location; through virtual software and cloud-based technologies, such as the Stevens Virtual Learning Environment, which simplify continuity of research and learning without restriction by device or machine; through advanced research and laboratory spaces, like the Hanlon Financial Systems Lab, which aid hands-on learning with the latest in industry-standard technology to equip students with both theoretical and practical knowledge; through the Co-op program and internships, Senior Design Projects, and many more experiences that build our students' real-world experiences outside of the classroom.

These examples illustrate some of the distinctive features of a Stevens education that ensure that the learning outcomes for our graduates translate into career outcomes, making our graduates marketable and in demand across technology, engineering, business, finance, and many other fields.

But, Stevens is also advancing the frontiers of learning and thinking through innovative research programs that utilize technology in novel ways. Mathematics professor Alexei Miasnikov and his colleagues have developed a machine-mediated learning analysis and feedback system that dramatically improves the learning outcomes of introductory calculus courses. College of Arts & Letters professor Alex Wellerstein has developed visualization tools to explore and understand nuclear threats in the 21st century, and Biomedical Engineering faculty member George McConnell is applying engineering approaches to advance understanding of neurological and psychiatric diseases such as autism and OCD.

The potential is literally limitless.

Without doubt, technology is a significant contributor to Stevens' rising rankings in ROI and mid-career salaries of graduates, for which we are currently ranked #3 and #10 respectively, according to PayScale.com's 2015 reports. Technology is a key reason that our students land successful first jobs and build successful careers at companies as diverse as Lockheed Martin, Exxon-Mobil and L'Oreal, to Ernst & Young, Disney, Johnson & Johnson, and Goldman Sachs. Technology is a catalyst for the success of Stevens graduates.

But technology also holds the promise for transformative and disruptive innovations that will change the future of teaching and learning. With the talent and dedication of our faculty and researchers, Stevens will surely be a significant player in this emerging and critically important domain.

Per aspera ad astra,

Nariman Farvardin
President, Stevens Institute of Technology