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**From Particle Physics to Education: The Role of Tinkering**

MATS SELEN, Univ of Illinois - Urbana

The love of tinkering is perhaps the single most universal trait among scientists. From designing an experiment to building a computer application to solving a differential equation, the cycle of "observe - explain - test - revise" is at the root of the scientific creative process. Driven by the love of tinkering, we have developed a small low-cost wireless lab system with the goal of putting real scientific instrumentation in the hands of anyone with a desire to innovate and explore. I will describe how this came about and how it has changed our view of introductory physics labs at the University of Illinois.