Mathematics for Industrial Innovation, Life Sciences, and the Environment

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Abstract

Mathematical models are enabling advances in increasingly complex areas of engineering, technology and life sciences. One reason behind their growing success is the impetuous progress of computers power. Another, even more important, is the increasing demand of quantitative and rigorous tools for a better understanding of natural and biological phenomena, the optimization of industrial processes, the simulation of environmental phenomena and extreme events, In this presentation we will discuss the role of mathematical modeling in applied sciences, and show some results in different fields such as medicine, urban planning, industrial innovation, and sports.