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Jessica M. Libertini*, libertinijm@vmi.edu. *Simple Models for the Complex Problem of Measuring and Improving Sustainable Development.*

In 2015, the Interdisciplinary Contest in Modeling (ICM) asked students to develop a way to measure and compare countries' relative levels of sustainable development, present a targeted 20-year plan to help improve the sustainable development for one underdeveloped nation, and model the impact of their plan. The issue of sustainable development is a complex one, as we must look for a balance between the preservation of natural resources for future generations and the use of those resources today to promote improvements in a society's well-being. Despite the complexity of the problem, some of the strongest submissions leveraged relatively simple mathematics in powerful ways. In this talk, we will present some of these contest-winning approaches. (Received September 12, 2019)