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Flattening the Mathematics Curriculum

The structure of the standard North American university mathematics curriculum has not changed substantially in the past fifty years, if not longer. For mathematics majors, the required introductory course is almost universally calculus and the entire curriculum is cumulative in nature. Viewed as a tree, it is narrow at the base and bushy at the top where the most mathematically-rich courses are found. In this talk, I will discuss ways in which the curriculum can be "flattened" to provide multiple pathways into mathematics for a variety of audiences. A flatter curriculum also allows rich mathematical topics to be introduced earlier than in a conventional curriculum. There is also the potential for interesting linkages with other disciplines.