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Computation in an Interdisciplinary World

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Abstract

Until recently the history of technical subjects has been one of ever increasing specialisation and fragmentation. Jon McLoone will argue that the rapid increase in automatic computation has helped reverse this trend.

Speaking from his perspective as a developer for Wolfram Research, makers of computational technologies such as Mathematica and Wolfram|Alpha, he will describe the recent and current shifts in technology and discuss the challenges of developing software for interdisciplinary research. Using examples that cross the traditional disciplinary boundaries he will show symbolic computation can provide some of the solutions. These examples will including some glimpses of the forthcoming release of Mathematica. McLoone will also discuss the future needs of researchers and society as a whole, in an increasingly technical and increasingly diverse world, and make a case for how education must respond to the changes.

Jon McLoone, has worked for Wolfram Research since 1992, in development, technical marketing and strategic roles, he is also currently the Content Director for ComputerBasedMath.org, a project to redefine math education with computer based computation at its core.