



Plenary Session

Past, present and future of symbolic computation at Wolfram Research

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Abstract

For over 30 years Mathematica has been the World's leading symbolic computation platform. While its early versions focused on 'computer algebra' applications, the Wolfram Language that powers Mathematica has always implemented a much broader and more abstract symbolic representation that has allowed the unification of disparate ideas such as automatic theorem proving, machine learning, euclidean geometry, knowledge representation, and publishing.

The presentation will give a high-level view of Wolfram's vision for symbolic computation and show how it enables and unifies these, and other computational ideas. It will also share some of Wolfram's current focus and future directions.

Short Bio

As Director of Technical Services, Communication and Strategy at Wolfram Research Europe, Jon McLoone is central to driving the company's technical business strategy and leading the consulting solutions team. Described as “The Computation Company”, the Wolfram group are world leaders in integrated technology for computation, data science and AI including machine learning. With



over 25 years of experience working with Wolfram Technologies, Jon has helped in directing software development, system design, technical marketing, corporate policy, business strategies and much more. Jon gives regular keynote appearances and media interviews on topics such as the Future of AI, Enterprise Computation Strategies and Education Reform, across multiple fields including healthcare, fintech and data science. He holds a degree in mathematics from the University of Durham. Jon is also Co-founder and Director of Development for computerbasedmath.org, an organisation dedicated to a fundamental reform of maths education and the introduction of computational thinking. The movement is now a worldwide force in re-engineering the STEM curriculum with early projects in Estonia, Sweden and Africa