

Mathematic Models and Human Learning

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Thomas Griffiths developed mathematical models of higher level cognition. He focuses on the abstract computational problems that underlie inductive human cognition, such as probabilistic reasoning, learning causal relationships, acquiring and using language, and inferring the structure of categories. He researches the ideal solutions to those problems using ideas from probability theory and Bayesian statistics, used to calculate the likelihood of a hypothesis. These statistical tools allow him to analyze human learning and link computer science research to artificial intelligence and machine learning. His innovative research won him a 2011 [Janet Taylor Spence Award for Transformative Early Career Contributions](#) from the Association for Psychological Science (APS).

[Q&A with Thomas L. Griffiths](#)