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## Symbolic AI models as a tool for discovery - Examples from physics and mathematics

*Wednesday, 17 December 2025 14:45 (45 minutes)*

Training AI models on instances of hard problems can provide insights on the underlying phenomenon. I will present two examples from theoretical physics and pure mathematics: learning the bootstrapped amplitude symbols of the 3-gluon form factor, in planar  $N=4$  supersymmetric Yang Mills, and learning interesting properties of the Collatz sequence.

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