

This is to certify that

JULIÁN GUIRAL

has successfully completed the Santa Fe Institute's Massive Open Online Course

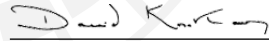
**Introduction to Agent-Based Modeling (Summer
2025)**

[.complexityexplorer.org](https://www.complexityexplorer.org)

August 04, 2025



Anamaria Berea, Lead Instructor



David Krakauer, Santa Fe Institute President