

This is to certify that

GABRIELE DE LUCA

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

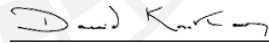
**Introduction to Agent-Based Modeling (Summer
2019)**

[.complexityexplorer.org](http://complexityexplorer.org)

September 17, 2019



Anamaria Berea, Lead Instructor



David Krakauer, Santa Fe Institute President