

*This is to certify that*

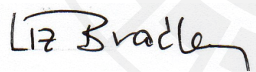
XINGHAO ZHANG

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

Nonlinear Dynamics: Mathematical and  
Computational Approaches (spring 2022)

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

March 06, 2022



Liz Bradley, Lead Instructor



David Krakauer, Santa Fe Institute President