

Vassar College Math & Stats and DSS COLLOQUIUM



From Volcanoes to Robots: The Hidden Geometric Pattern Shaping our World

Noah Giansiracusa
Bentley University

Thursday, April 2
4pm Rocky 300

Abstract. On the northern coast of Ireland is a remarkable natural formation called the Giant's Causeway. Nearly perfect pentagons and hexagons reach up from the sea in stone columns. In the 18th century, these shapes helped geologists discover our planet's volcanic past. In the 19th century, the geometric pattern responsible for these shapes helped Darwin shore up a gap in his theory of evolution, and it helped end a cholera outbreak. In the 20th century, this same pattern helped telecom companies design cell tower networks. And in the 21st century, it helps autonomous robots navigate. How can one geometric pattern do so much? Come find out!

Bio. Noah Giansiracusa is a math professor at Bentley University (a business school near Boston) and a faculty associate at Harvard. He's appeared on CNN, NBC, BBC, and written for a range of outlets including TIME, Scientific American, Washington Post. He's written two books: *How Algorithms Create and Prevent Fake News* (2021) and *Robin Hood Math: Take Control of the Algorithms that Run Your Life* (2025). His work has been praised by multiple Nobel laureates, an Ironman champion, and the most powerful woman in hedge funds, among others.