Istituto Universitario Sophia

Cattedra Piero Pasolini

Academic Year 2022/2023

Lost in Infinity

A series of lectures exploring the world around us

Webinar

November 17 - 2022
5:00 PM - 6:00 PM
Marcin Zygmunt
University of Silesia, Poland

Counting Infinities
A never-ending story

A fundamental mathematical concept that is very different from the world we perceive around us is the notion of infinity. What is infinity? Is it a number greater than all the others, or is it some completely different object? Is there only one infinity, or are there many more? And if so, how are they different?

January 19 - 2023
5:00 PM - 6:00 PM
Ugo Gianazza
University of Pavia, Italy

The Devil's Staircase
Do we need infinity to study finite phenomena?

In the characterization of physical phenomena, the Infinitesimal Calculus, originally introduced by Newton and Leibniz, has proved to be extremely successful, even going beyond our expectations. At the core of calculus lies the concept of the infinitely small and the infinitely large, without which none of its theoretical tools could have developed. It might seem weird, or even contradictory, that to study finite phenomena we need to use infinite quantities.

March 16 - 2023
5:00 PM - 6:00 PM
Paul O'Hara
Sophia University Institute, Italy

No Cloning
The world of quantum entanglement and the 2022 Nobel Prize in Physics

Can we always duplicate or clone an object? For example, we may independently draw a right hand and a left hand such that they are mirror images of each other. We can then repeat the process ad infinitum and make as many copies as we wish. In quantum mechanics, subatomic particles like electrons can form infinitely many pairs that are mirror images of one another although neither particle can be individually duplicated or cloned, as demonstrated by the winners of this year's Nobel Prize in Physics

May 13 - 2023
9:00 AM - 7:00 PM
Symposium
Lost in Infinity

Info and registration:
cattedrapasolini@sophiauniversity.education

Istituto Universitario SOPHIA University Institute