

Physics at the Movies

Language

English

Course content and objective

In today's world, a wide array of captivating movies and TV series delve into the realm of physics, often transcending mere entertainment and science fiction to rigorously explore fundamental questions about space, time, matter, and energy.

This course leverages popular media to illuminate complex physics concepts:

- **The Big Bang Theory:** Using the American sitcom, we will discuss the origin and evolution of the universe.
- **Interstellar:** Christopher Nolan's film will serve as a basis to explore the concepts of gravity and black holes.
- **Oppenheimer:** This movie will help us delve into the birth of nuclear energy and the accompanying moral dilemmas of our time.
- **Quantummania:** We will conclude with an exploration of the quantum world as depicted in Marvel's and other films.

By examining these films and series, we will gain a deeper understanding of key physics principles through the lens of popular culture.

Faculty for the course

Anna Ceresole. Theoretical Physicist, Director of Research of the National Institute of Nuclear Physics, Turin Division, at UniTO.

She has previously been teaching Physics at PoliTO, after a PhD at Suny Stony Brook, NY and several years at CALTECH in USA.

Her research involves the study of quantum fields and gravitational theories. She is passionate about science communication by various means, including theatre. She will move next on a science diplomacy post at the Italian Representation of UNESCO-Paris. <https://www.strings.to.infn.it/personal/ceresole/>.