



SISP 1111

Physics in Movies

Course Description

Physics is in our vicinity and movies are entertaining. Scenes of movies are sometimes described in a grossly exaggerated manner violating the laws of physics. By analyzing the situations portrayed in some movies featuring action, sci-fi and fantasy, we seek to illustrate the correct and incorrect concepts of physics. This could help students think scientifically and critically; and recognize the empirical, theoretical and philosophical foundation of physics.

Topics

1. Space Travel and Time Travel
2. Matter, Energy and Interactions
3. Computers and Robots
4. Searching for Extraterrestrial Intelligence
5. Human Teleportation
6. *The Real History of Science Fiction* (Documentaries)

Grading Scheme

- Course Participation (10%)
- Project Report (30%)
- Final Assessment (60%)

[Topics and grading schemes are subject to change as deemed appropriate. Students will receive information and guidelines in class on how they will be assessed for the course.]

Attendance Requirement

Class attendance is expected and required. The minimum attendance required is 70%.

Instructor

Dr Yee Fai Ng

Dr Ng is an instructor in physics at HKUST. He received his PhD in surface physics from the University of Hong Kong. He is experienced in developing and teaching courses ranging from UG to MSc level, including large-scale common core courses and experiential learning courses. Besides regular teaching at the University, Dr Ng has been promoting science to secondary school students by teaching at the Summer Institute Plus, the Center for the Development of the Gifted and Talented and the Physics Olympiad at HKUST. Dr Ng believes that science is not confined to ivory towers and therefore he is also enthusiastic about giving various talks on popular science for the public, secondary school students and the University staff.