UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Quantum Chaos And Black Holes

2425-1-113R-08

Obiettivi

An introduction to quantum chaos, and its connection to the physics of quantum black holes.

Contenuti sintetici

Introduction to classical chaos, quantum chaos and random matrix theory. BGS conjecture and semi-classical chaos. Thermalization and scrambling, the bound on chaos. JT gravity as a matrix integral, the black hole information paradox, quantum chaos and CFTs, a tensor model for 3D gravity.

Programma esteso

PhD Class on Quantum Chaos and Black Holes

For more information on the topics covered, see syllabus.

The class will be held:

Tuesdays 12,19, 26 of November + Dec 10 - 16.30-18.30 @ U2-03
Wednesdays 13,20,27 of November + Dec 11 - 9.30 - 11.30 @ U2 - Room 5017

Prerequisiti

Most of the class can be followed simply with a background in quantum mechanics. For the later part of the class, a knowledge of QFT is required and I will assume at least basic knowledge of the AdS/CFT correspondence.

Modalità didattica

Lectures

Materiale didattico

Lexture notes with references will be available

Periodo di erogazione dell'insegnamento

Fall

Modalità di verifica del profitto e valutazione

Pass/fail based on presence/interaction during the class.

Orario di ricevimento

By e-mail

Sustainable Development Goals