The Hebrew University of Jerusalem

Syllabus

Introduction to Quantum Chaos - 80855

Last update 20-08-2020

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Mathematics

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: דן מנגובי

Coordinator Email: dan.mangoubi@mail.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

Prof Dan Mangoubi

Course/Module description:
  How is Chaos in a dynamical system reflected in the corresponding quantum system?

Classical-Quantum correspondence (Egorov's Theorem).

Shnirelman's Theorem (1974)
describes the Laplace Eigenfunctions of an ergodic dynamical system.

Weyl's asymptotic of eigenvalues.

Tools: Microlocal analysis and pseudo-differential operators.

Course/Module aims:

Learning outcomes - On successful completion of this module, students should be able to:
  First acquaintance with the field.

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:
 ראו תיאור הקורס.

Required Reading:
 -

 Additional Reading Material:
  Zworski, semi-classical analysis

  Course/Module evaluation:

End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 100 %
unknown

<u>*Additional information:*</u>