האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

ADVANCED TOPICS IN NUMBER THEORY - 80775

Last update 08-10-2018

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Mathematics

Academic year: 0

Semester: 2nd Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Prof Yakov Varshavsky

Coordinator Email: yakov.varshavsky@mail.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Dr. Schneidman Ari

Course/Module description:

"Topics in representation theory of p-adic groups"

Abstract: Bernstein center is a categorical analog of the center of an algebra, and plays a central role in the representation theory of p-adic groups. The goal of my course to cover different classical and more recent topics, related to Bernstein center.

Prerequisites: I will assume very basic theory of representation of p-adic groups. Roughly speaking, I am going to assume the material, covered in the course 80960 "Representation theory of p-adic groups" by Jasmin Matz in the first semester.

Tentative topics:

1) Classical theory (see Bernstein notes on "Representations of p-adic groups") http://www.math.tau.ac.il/~bernstei/Publication_list/publication_texts/Bernst_Lecture_p-adic_repr.pdf

2) Classical paper "Trace Paley-Wiener theorem for reductive p-adic groups, by J. Bernstein, P. Deligne and D. Kazhdan https://publications.ias.edu/sites/default/files/Number55.pdf

3) More geometric proof of second adjointness ("Geometry of second adjointness for p-adic groups", Roman Bezrukavnikov, David Kazhdan, arXiv:1407.8519)

4) Recent paper "Bernstein components via Bernstein center", by Alexander Braverman, David Kazhdan, Roman Bezrukavnikov, arXiv:1512.08637.

Course/Module aims:

Learning outcomes - On successful completion of this module, students should be able to:

None

Attendance requirements(%):

0

Teaching arrangement and method of instruction: Lecture

Course/Module Content:
None

Required Reading:
None

Additional Reading Material:

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 %
TBA

Additional information: