
THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE
Algebraic Geometry and Representation Theory Seminar

Room 155 ,Ziskind Building
on Monday, Feb 18, 2019at 11:15

Part 1 at 11:15-12:30 Part 2 at 13:00-14:00
Shachar Carmeli WIS

Ambidexterity in Chromatic Homotopy Theory

Abstract:

Poincare duality provides an isomorphism between the homology and cohomology of a compact manifold, up to a shift. For π -finite spaces, i.e. spaces with finitely many non-zero homotopy groups, all of which are finite, there is a similar duality only for \mathbb{Q} -coefficients, but no such duality exists with \mathbb{F}_p coefficients. However, as shown by Michael Hopkins and Jacob Lurie, there is a duality between the homology and cohomology of π -finite spaces with coefficients in some extra-ordinary cohomology theories called Morava K-theories. This property of Morava K-theory is called ambidexterity. I will explain what is ambidexterity, some of its consequences and our contribution to the subject.

This is a joint work with Lior Yanovski and Tomer Schlank.