

פרופסור ג'נט קונרד

המחלקה לפיזיקה, המכון הטכנולוגי של מסצ'וסטס, ארה"ב

Professor Janet Conrad

Department of Physics, Massachusetts Institute of Technology, USA

סמינר | Seminar

STERILE NEUTRINOS ON THICK AND THIN ICE

Abstract

This seminar will review the present case for the existence of sterile neutrinos, non-interacting Beyond Standard Model partners of the light neutrinos. Up until now, the experiments that have had impact on the question used short-baseline accelerator-detectors. In a novel step forward, the IceCube Experiment, located at the South Pole, turns out to be a power detector for testing the question of the existence of sterile neutrinos. This detector uses the Antarctic ice as a target for very high energy atmospheric and astrophysical neutrinos. I will describe the search my group has performed using this unusual detector.

The seminar will take place on Thursday,
8 June 2017, at 10:00, in Melamed
Hall (6), Shenkar Physics Building,
Tel Aviv University, Ramat Aviv

הסמינר יתקיים ביום חמישי,
8 ביוני 2017, בשעה 10:00,
באולם מלמד (6), בניין שנקר לפיזיקה,
אוניברסיטת תל אביב, רמת אביב

סמינר | Seminar

A NEUTRINO "MICRO"-SCOPE

Abstract

For many years, neutrino experiments were mainly designed as searches. Now that we have actually found signals, we are asking ourselves about the details for those events. This requires a better method of imaging the neutrino interaction. To this end, we have developed Liquid Argon Time Projection Chambers. The first to be built in the United States is the MicroBooNE Experiment, of which I am a founding member. I will describe the neutrino physics we would like to accomplish with this new detector and the detector physics involved in producing a successful LArTPC. Our hope is that the development of LArTPCs can be as important to neutrino physics as Leeuwenhoek's development of the high power microscope was to microbiology! Looking very closely, you never know what you will see!

The seminar will take place on Tuesday,
13 June 2017, at 15:00, in Holcblat
Hall (7), Shenkar Physics Building,
Tel Aviv University, Ramat Aviv

הסמינר יתקיים ביום שלישי,
13 ביוני 2017, בשעה 15:00,
באולם הולצבלט (7), בניין שנקר לפיזיקה,
אוניברסיטת תל אביב, רמת אביב

כיבוד קל יוגש לפני ההרצאות | Light refreshments will be served before the lectures