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פרופסור יעקב אליאשברג
המחלקה למתמטיקה
אוניברסיטת סטנפורד
ארה״ב

Lecture   *הרצאה*

"HISTORY AND CLASSICAL METHODS OF THE H-PRINCIPLE"

The Lecture will take place on
Monday, 21 December 2015, at 12:15,
Room No. 006, Schreiber Building,
Tel-Aviv University, Ramat-Aviv.

ההרצאה תתקיים ביום שני
21 בדצמבר 2015, בשעה 12:15,
בחדר מס׳ 006, בבניין שרייבר,
אוניברסיטת תל-אביב, רמת-אביב.

Lecture   *הרצאה*

"RENAISSANCE OF THE H-PRINCIPLE IN SYMPLECTIC TOPOLGY"

The Lecture will take place on
Wensday, 23 December 2015, at 14:10,
Room No. 007, Schreiber Building,
Tel-Aviv University, Ramat-Aviv.

ההרצאה תתקיים ביום רביעי,
23 בדצמבר 2015, בשעה 14:10,
בחדר מס׳ 007, בבניין שרייבר,
אוניברסיטת תל-אביב, רמת-אביב.

ABSTRACT

In geometry and topology, as well as in applications of Mathematics to Physics and other areas, one often deals with systems of partial differential equations and inequalities. By replacing derivatives of unknown functions by independent functions one gets a system of algebraic equations and inequalities. The solvability of this algebraic system is necessary for the solvability of the original system of differential equations. It was a surprising discovery in the 1950-60s that there are geometrically interesting classes of systems for which this necessary condition is also sufficient. This led to counter-intuitive results, like Steven Smale's famous inside-out "eversion" of the 2-sphere and John Nash's isometric embedding of the unit sphere into a ball of an arbitrary small radius. Many more instances of this phenomenon, called by Mikhail Gromov h-principle ("h" stands for homotopy), were since then found and continue to be discovered, most recently in symplectic topology.

In the first lecture I will describe the main ideas and classical methods and results of the h-principle, and in the second I will discuss recent breakthroughs on the flexible side of symplectic topology

Light refreshments will be served
before each lecture

כיבוד קל יוגש רבע שעה לפני
כל אחת מן ההרצאות