



אוניברסיטת בן-גוריון בנגב
Ben-Gurion University
of the Negev

The Faculty of Engineering Sciences

בימת דיקן הפקולטה למדעי ההנדסה

פרופ' גבי בן-דור, דיקן הפקולטה למדעי ההנדסה
מתכבד להזמין להרצאת אורח בימת-הדיקן



Prof. Shimon Y. Nof

PRISM Center, Purdue University, West Lafayette, Indiana, USA

ירצה בנושא:

Collaborative Robotics with CCT, Collaborative Control Theory

With the advent of humanoids, social robots, robotic sensors, and interactive robot teams, from Nano-robots and UAVs to large-scale robots, from soccer playing robots to maintenance robot crews, the complexity of dynamic interaction among the robots and between them and humans increases rapidly. Two of the interesting research frontiers in this area are the subject of collaboration planning and control, and CSS, Collaboration Support Systems. How can we optimize the collaboration process of the robots on the team? How can we keep them "on target" and prevent them from losing track of their envisioned assignments? These questions become more difficult when the team is in competition and adversary conditions, as in sports competitions and military assignments, or must complete a common task with shared resources under time and energy constraints, and in emergencies. The purpose of this lecture is to review different models and approaches that have been developed for planning and control of cooperative, coordinated, collective, interactive, and collaborative robots, and present emerging principles of CCT, the collaborative control theory which are applicable and have been applied for this type of problems. Challenges for future research in this area and implications to 21st Century engineering will also be outlined.

יום רביעי, א' בטבת תשע"א, 8 בדצמבר 2010

ההרצאה תחל בשעה 10:30

אודיטוריום בניין היי-טק (בניין 37 חדר 202) קומה 2

לפני ההרצאה יוגש כיבוד קל (10:00)