

אנו שמחים לארח את

**Mr. Ido Roll**  
**Human Computer Interaction Institute in Carnegie Mellon**  
**University, Pittsburgh.**

***Knowing 'Further' – The Effect of Symbolic Invention Tasks on the Flexibility of Students' Knowledge***

Sense-making activities can help students develop deeper understanding and acquire better self-regulation skills. One example for such activities are structured invention tasks, in which students are asked to invent novel solution to mathematical problems prior to receiving formal instruction.

In this talk I will describe a series of studies in which we evaluated the effect of invention tasks and identified which cognitive processes are facilitated by the different task elements. We found that students who invented during instruction were more likely to invent valid solutions to novel problems in future situations. We also found that reasoning using mathematical notations was necessary to drive this effect, and have proposed a mechanism that explains it.

Last, I will demonstrate the ability of an Intelligent Tutoring System to facilitate the invention process using two intertwined models of the learner: a meta-cognitive model of the invention process and a cognitive model of the target domain concepts.

ההרצאה תתקיים ביום ב' ה-6 ביולי 2009, בשעה 14:00

בחדר ההרצאות במעמק"ה, הבניין הרב תכליתי, אוניברסיטת חיפה.

**נשמח לראותכם בין אורחינו**

המעוניינים באישור כניסה לרכב לאוניברסיטה - אנא שלחו מייל לאתי לברן:

[elevran@univ.haifa.ac.il](mailto:elevran@univ.haifa.ac.il)