

Avi Krawitz

Professor Robert Aumann Receives Nobel Prize

Hebrew U game theorist wins Israel's eighth Nobel; Swedish king awards check, medal, diploma in Stockholm ceremony.



After dashing to Stockholm's Concert Hall with 27 members of his immediate family from the hotel where they stayed over Shabbat, Hebrew University mathematics Prof. Robert J. (**Yisrael**) Aumann accepted the 2005 **Nobel Prize** in Economics from King Karl XVI Gustaf, along with Thomas C. Schelling, a retired professor from the **University of Maryland**. The prize was awarded for their work done in the 1960s and 70's "that helped defense analysts use models to map out options available to an adversary and thus predict what the opponent might do in a confrontation," the Royal Swedish Academy of Sciences said. It noted Aumann's work in repeated game theory - the study of the emergence of patterns in behavior. The two will share \$1.3 million for the prize, which accords each a gold medal and diploma. The 75-year-old, German-born Aumann, an Orthodox Jew, moved with his family to the US in 1938 to escape the Nazis.

In 1955, he earned his doctorate at the **Massachusetts Institute of Technology** (MIT) on the subject of knots, which has since been applied to study the way DNA gets knotted in a cell, sometimes triggering cancer. He settled in Israel a year later, when he was immediately appointed to HU's mathematics department. He developed and taught his theories of game theory at the university's Center of Rationality, which he co-founded in 1991 and today still heads. The center brings people together from different backgrounds, such as mathematics, biology and psychology to deal with problems in an interdisciplinary manner.

Aumann has been a member of the **US National Academy of Sciences** since 1985 and has frequently collaborated with American colleagues. Aumann is the fifth Nobel laureate connected to the Hebrew University and is the first active faculty member to receive the award. Previous Israeli Nobel Prize laureates were **Shai Agnon** (Literature, 1966); **Menachem Begin** (Peace - with **Anwar Sadat**, 1978); **Yitzhak Rabin** and **Shimon Peres** (Peace, with **Yasser Arafat**, 1994);

Daniel Kahneman (who is also an American, Economics, 2002), and Technion professors **Aaron Ciechanover** and **Avram Hershko** (Chemistry, 2004). Aumann brought 34 family members - including his second wife Batya - his late wife, Esther's, sister whom he married only a week ago - to Stockholm. The family delegation of children, spouses, grandchildren and great-grandchildren moved before Shabbat to a hotel only 200 meters from the concert hall so they (minus babies and very small children) could rush there after the appearance in the sky of three stars signifying the end of the Sabbath.

Unable to push their way through the crowd at the front entrance, they sought a back door and entered 90 seconds before the king's arrival and the closing of the doors. He also brought along colleagues from the Center for the Study of Rationality and HU president Prof. **Menachem Magidor**. The Israeli laureate stood out among the other Nobel recipients, with his flowing white beard over his white bow-tie and a white crocheted kippa on his head. As he bowed to the king, the Royal Academy and the audience of 1,600 people, one of his sons in the hall demonstratively bowed back from his seat. Aumann also wore a watch presented to him specially for the occasion that they had engraved on the back with a verse from the Torah portion of the week referring to bringing honor to the world and one's descendants.

Sitting in the audience were Queen Silvia, Prince Carl Philip and the Princesses Victoria, Madeleine and Lilian. The two winners in economics were presented by Jorgen Weibull, member of the Royal Swedish Academy of Science and chairman of the Nobel Prize Economics Committee. Before he left Israel, Aumann said that what is needed to resolve international conflicts is historical, psychological and sociological analyses of the nature of war. Military conflict, he said, must be studied as diseases such as cancer are explored. "Once you understand the causes of it you can begin to try to cure it," he said. Rational motives are behind the wars that have plagued mankind since the beginning of civilization, he continued. Armed conflicts are not irrational; they can be studied by applying game theory using complex mathematical analyses of strategies involved in decision making, cooperation and conflict. Following the ceremony, a festive dinner was held in the grand Stockholm City Hall for 1,300 invited guests, and the Aumann family received kosher food.