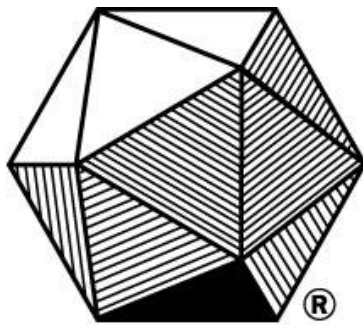


## ***Uri Zwick Receives The David P. Robbins Prize from Mathematical Association of America***



# **MAA**

## **MATHEMATICAL ASSOCIATION OF AMERICA**

*This Prize was established in memory of David P. Robbins by members of his family. Robbins, who died in 2003, received his Ph.D. in 1970 from MIT. He was a long-time member of the Institute for Defense Analysis Center for Communication Research and a prolific mathematician whose work (much of it classified) was in discrete mathematics. The Prize is for a paper with the following characteristics: it shall report on novel research in algebra, combinatorics or discrete mathematics and shall have a significant experimental component; and it shall be on a topic which is broadly accessible and shall provide a simple statement of the problem and clear exposition of the work. This Prize is awarded every three years.*

The Mathematical Association of America proudly awards the 2011 David P. Robbins Prize to Mike Paterson, Yuval Peres, Mikkel Thorup, Peter Winkler, and Uri Zwick for their innovative work on two papers:

*"Overhang," American Mathematical Monthly 116, January 2009; "Maximum Overhang," American Mathematical Monthly 116, December 2009.*

The two papers together solve, to within a constant factor, the classic problem of stacking blocks on a table to achieve the maximum possible overhang, i.e., reaching out the furthest horizontal distance from the edge of the table. The January paper was written by Paterson and Zwick, and the December paper was written by all five people named above.

The January paper proves the surprising result that  $n$  blocks can be (cunningly) stacked using suitable counterbalancing to achieve an overhang proportional to  $n(1/3)$ . (Many people have assumed that the overhang of about  $\log n$ , given by the standard calculus exercise, is optimal.)

The December paper gave a complementary argument showing that an overhang proportional to  $n(1/3)$  is, in fact, the largest possible for any balanced stack.

The papers describe an impressive result in discrete mathematics; the problem is easily understood and the arguments, despite their depth, are easily accessible to any motivated undergraduate.

*Uri Zwick is a professor of computer science at Tel Aviv University, Israel. He received his B.Sc. in computer science from the Technion, Israel Institute of Technology, and his M.Sc. and Ph.D. in computer science from Tel Aviv University. His main research interests are algorithms and complexity, combinatorial optimization, mathematical games, and*

*recreational mathematics. Zwick spent two years as a postdoc at Warwick University after completing his Ph.D. and has been collaborating with Mike Paterson ever since.*