

## Mathematics students win four prizes at national meeting

**St. Paul, Minn.** – Four posters contributed by Macalester summer research students received an Outstanding Presentation Award at the 2013 MAA Undergraduate Student Poster Session last month at the Joint Math Meetings in San Diego. The awardees include seniors **Hossein Alidaee, Mike Reeks, and Maxray Savage**, who, along with seven other undergraduate student researchers, developed their mathematics research last summer. They were mentored by Macalester Mathematics professors **Andrew Beveridge, Dan Flath** and **Tom Halverson**. Alidaee and Reeks did independent research at Macalester, while Savage was part of MAXIMA, a 12-student REU (Research Experiences for Undergraduates) that is co-hosted by Macalester and the Institute of Mathematics and its Applications at the University of Minnesota.

The session showcased the work of more than 500 undergraduate students presenting approximately 300 posters. The top 15% of posters, as judged by mathematicians at the conference, received the Outstanding Presentation Award.

Beveridge, who runs the MAXIMA REU and advised Alidaee, said the students' hard work paid off. "I am really impressed that our students stood out in this group of talented peers," said Beveridge. "They worked hard, developed some lovely results, and executed in the moment. It's pleasure working with them and watching their research develop."

"How Ideas Grow: Critical Mass in the Linear Threshold Model," was the name of Hossein Alidaee's poster and has become his honors project. Beveridge was his advisor.

"Pursuit-Evasion in Polygonal Environments: When Can Two Cops Win?" was a joint effort by Maxray Savage and has developed into his honors project, Rosalie Carlson from Harvey Mudd College, Claire Djang from Oberlin College and Stephen Ragain from Pomona College.

Beveridge was their advisor.

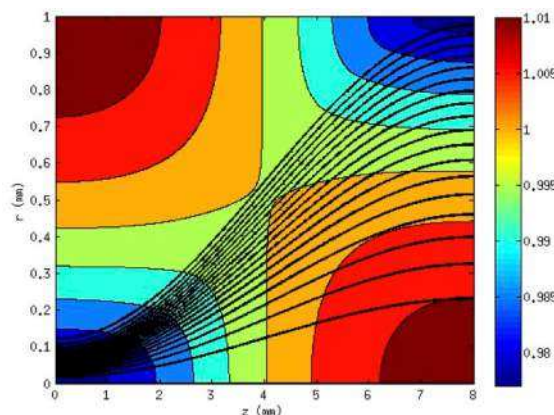
"Combinatorial Models for Diagram Algebras" was the name of Mike Reeks' poster which is also his honors project. His advisor was Tom Halverson.

"Design of laser beams in GRIN media for profile transformation and selective resonance," was a joint effort of Philip Burnham from Villanova University, Delani Cele from Ithaca College, Hyunmoon Kim from Princeton University and Tim Moon from Rice University. Dan Flath was their advisor.

The MAA (Mathematical Association of America) Undergraduate Student Poster Session started very modestly at the beginning of 1990 with fewer than 15 student projects. It now showcases more than 300



Refractive indices of laser beam converter from Gaussian beam to uniform beam in a GRIN rod



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projects and continues to grow each year.

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