

Heidelberg / Toronto, 10 October 2008



To honor the enormous contribution that the applied mathematician Lee Segel made to the Springer journal *Bulletin of Mathematical Biology (BMB)* and the field of mathematical biology as a whole, Springer, in partnership with the Society of Mathematical Biology (SMB), is funding a series of prizes based on papers published in the *BMB*. This year's prize for the best original research paper has been awarded to Tomas de-Camino-Beck and Mark Lewis for their paper [A new method for calculating net reproductive rate from graph reduction with applications to the control of invasive species](#)¹. The prize for the best student research paper went to Emma Jin and Christian Reidys for their paper [Asymptotic enumeration of RNA structures with pseudoknots](#)². The awards were presented at the annual conference of the SMB, which took place in Toronto, Canada, from 30 July to 2 August 2008. The winner of the prize for the best review paper will be announced at the 2009 SMB conference.

In their winning paper, Tomas de-Camino-Beck, currently a postdoctoral fellow at the Pennsylvania State University, USA, and Mark Lewis, Senior Canada Research Chair in Mathematical Biology at the University of Alberta in Edmonton, Canada, present a newly discovered, simple method to calculate the net reproductive rate of a population using life cycle graphs.

The best student research paper, submitted by Christian Reidys, Professor for Mathematics at Nankai University in Tianjin, China, and Emma Jin, a PhD student of mathematics also at Nankai University, covers a novel approach for categorizing RNA (ribonucleid acid) pseudoknot structures in terms of the maximal number of mutually intersecting base pairings. It also develops a general framework for their exact and asymptotic enumeration.

“We are delighted to sponsor the Lee Segel Prizes in cooperation with the Society for Mathematical Biology,” said P.K. Maini, Editor-in-Chief of the *BMB*. “This prize honors outstanding contributions to the field of mathematical biology and will help to promote and advance important research findings in this promising scientific area.”

The *BMB* is the official journal of the Society for Mathematical Biology. It is devoted to research at the junction of computational, theoretical and experimental biology. The articles published in the journal offer a combination of theory and experiment, documenting theoretical advances with clear exposition of how they further biological understanding. The journal aims to be of major interest to theorists as well as to experimental biologists.

The Lee Segel Prizes were established this year by the *Bulletin of Mathematical Biology* in association with the Society for Mathematical Biology. A \$5,000 prize for the best original research paper and a \$3,000 prize for the best student research paper are awarded every second year; a \$4,000 prize for the best review paper is given every third year. A committee appointed by the SMB Board of Directors and the Editor-in-Chief of the *BMB* judges and gives out the prizes, taking on board advice of referees and referee reports. For this year's awards, all articles accepted from January 2006 were considered.

1. de-Camino-Beck, T. and Lewis, M.A.: *A new method for calculating net reproductive rate from graph reduction with applications to the control of invasive species*. *BMB*, 2008, Issue Volume 69, Number 4 / May, 2007, DOI 10.1007/s11538-006-9162-0, Pages 1341-1354.

2. Jin, E.Y. and Reidys, C.M.: *Asymptotic enumeration of RNA structures with pseudoknots*. *BMB*, 2006, Issue Volume 70, Number 4 / May, 2008, DOI 10.1007/s11538-007-9265-2, Pages 951-970.

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