

Dana Meadows Award 2015 Announcement

Text by Tom Fiddaman, Chairman of the Dana Meadows Award Committee

The Dana Meadows Award is given for the best student paper presented at the System Dynamics Conference. The Award was first presented at the Atlanta Conference in 2001, to honor the life and work of Dana Meadows. Dana pursued a long and brilliant career in education and research focused on a systems approach to social and environmental issues. From her contributions to *Limits to Growth* to her later writings in *The Global Citizen*, Dana was an inspiration to generations of students and researchers in System Dynamics.

The Dana Meadows Award is instituted by the Society to bring recognition to the very best student work and thereby, to inspire students to contribute to the growing body of theory and applications of System Dynamics inspiration that Dana demonstrated throughout her career.

The Award is funded through an endowment established by the Society, initially by a generous donation from Jane and Allen Boorstein to launch the Award in 2001, and by many subsequent donors whose support the Society gratefully acknowledges. Currently, the winner receives a cash prize of \$750 as well as conference registration plus travel expenses (up to a combined maximum of \$750).

The members of the selection committee this year were Florian Kapmeier, John Sterman, Krystyna Stave, Özge Pala, and Richard Dudley, with Tom Fiddaman presiding.

The DMA Committee receives manuscripts from across the wide spectrum of topics presented at the Conference and seeks to recognize a representative sample of award-worthy papers (that also meet the criterion of excellence). The mix of short-listed topics inevitably varies from year-to-year and a balanced view of award-worthy work can best be seen in the history of winners, rather than in a snapshot of a single-year.

Before announcing the winner let me offer some general comments for the benefit of the many students applying in the future. First, I encourage all of you to continue submitting good work. After an initial screening, Committee members read and discuss your manuscripts carefully. In doing so we enjoy a unique and valuable 'window' on current student research, the best of which is very good indeed.

We urge future applicants to consider one piece of advice: when you submit a paper, make sure you first read the Award guidelines carefully, and stick to the rules as you write your manuscript! Papers that ignore the guidelines, by neglecting to provide a word count, for example, will be deemed ineligible and are screened out of the short-listing process.

Honorable Mentions

This year, the committee recognized three runners-up, in no particular order:

Henry Bartelet, for "Coral reef degradation in the Philippines," which explores the structure and behavior of coral reef degradation and management.

Alba Rojas-Cordova and Niyousha Hosseinichimeh for "Trial Termination and Drug Misclassification in Sequential Adaptive Clinical Trials," which explores drug trial management operationally and statistically.

Derek Chan, for “Dynamics in Market Formation Across Socioeconomic Class: Impact of Market Infrastructure and Mechanisms,” which explores the effects of market segmentation on equitable transformations.

Winner

The 2015 winner is Arash Baghaei Lakeh, with Navid Ghaffarzadegan, for “The Dual-Process Theory and Understanding of Stocks and Flows.”

Many behavioral studies now document cognitive limitations in stock-flow understanding, but improvement on dynamic management tasks has been elusive. This paper documents behavioral experiments that show performance improvements available through triggering of analytic thinking modes.

Dual-process theory suggests that people have two levels of reasoning, System 1 (intuitive) and System 2 (reflective). The experiments suggest that triggering System 2 can improve performance, even in the absence of stock-flow education. This in turn implies that some observed performance problems could be due to thinking in the wrong mode, rather than lack of system understanding. Priming participants to consider biases, anticipate difficulty and justify their conclusions mitigate those problems.

The authors caution that these are modest and tentative steps toward understanding, but they are important, perhaps now more than ever, as social media encourages faster and less-reflective thinking.

Arash also received an Honorable Mention in 2015 for “Does Analytical Thinking Improve Understanding of Accumulation?” which tested subjects on Amazon’s Mechanical Turk platform, identifying several interventions, including priming for analytical thinking, that condition performance on stock flow tasks.