Dana Meadows Award Presentation

R. Joel Rahn, Co-ordinator of the Dana Meadows Award Committee

The Dana Meadows Award is given for the best paper, ***by a student***, presented at the Annual Conference. The Award was first presented in 2001, at the Atlanta Conference, to honor the life and work of Dana Meadows, who died in February of that year, after 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 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 time with us.

The Dana Meadows Award is funded through an endowment established by the Society, initially by a generous donation from Jane and Allen Boorstein to found the Award in 2001, and by many subsequent donors whose support the Society gratefully acknowledges.

Currently, the winner receives a cash prize of $500 as well as conference registration and a travel stipend. As in previous years, Pegasus Communications has contributed a book prize to each of the Honorable Mentions as well as the winner. The members of the selection committee for the 2008 Award are Erich Zahn, John Sterman, Krystyna Stave, John Morecroft, Andy Ford and Richard Dudley.

In order to maintain the breathtaking suspense building up to revealing the winner of the Award, I will start with presenting the Honorable mention Awards for 2008. I ask all recipients to come to the stage as I announce their names and ask them to remain on stage for the announcement of the Award winner.

The Honorable mentions in the Dana Meadows Award competition for 2008, in reverse order of submission to the Conference, are:

Navid Ghaffarzadegan at Rockefeller College of Public Affairs and Policy, University at Albany, SUNY for the paper #466 "Effect of Conditional Feedback on Learning"

The paper received a High rating on quality measures from a majority of reviewers.
The author studied the effect of conditional feedback (namely, performance feedback received depending on whether the decision-maker makes a positive decision) on threshold learning. An SD model is used to show that, contrary to full feedback, conditional feedback makes learning dependent on how decision-makers interpret negative decisions. The model shows that with conditional feedback there is strong systemic bias typically leading to excessive false positives (people are not sufficiently selective). This paper contributes to a literature in psychology and decision making showing how the conditional availability of outcome information can thwart learning and lead to persistent, stable biased decision processes. One reviewer commented: "This is an excellent paper with a very important result that has significant impact on some of the assumptions about the use of feedback in System Dynamics models."

Hyunjung Kim at Rockefeller College of Public Affairs and Policy, University at Albany, SUNY for the paper "Broadening boundary perception in a multi-organizational context: Study of a community mental health program in New York State"

 In this paper, the author analyzes the perceptions of a public mental health program in New York State from several perspectives. The program has many stakeholders including the participants, their treatment providers and caseworkers, local program management agencies, and state-level management organizations.   The author

describes two models that were developed based on interviews and data from two different perspectives in the system. The first is from the perspective of the state-level agencies, and the second from the perspective of the local service providers. The analysis shows that the perspective makes a major difference in whether the program is considered to be stable and successful or in crisis. One reviewer commented: "I see this as a good example for a hybrid modeling approach and a good direction that SD modelers should engage in to increase communication between different fields and their people who basically discuss the same issue by taking different perspectives or model boundaries and by using different tools/methods. As one Committee member noted: The conclusion – to pay attention to system boundary issues when interpreting model analysis results – is an important one.

Out of the over 30 student papers submitted for this year's awards, these were regarded as excellent papers and worthy contributions to System Dynamics. The authors are to be congratulated for their efforts and their success in analyzing and providing insight into significant dynamic issues.

Enough suspense, this year's winner of the Dana Meadows Student Award for the best student paper presented at the annual conference is:

Antuela Anthi Tako in the ORMS Group at the Warwick Business School, for the paper titled " Model formulation in System Dynamics and Discrete-event Simulation: a quantitative comparison"

For this paper, the author carried out an experiment in which experienced SD and DES (discrete event) modelers built a working simulation of the same problem (a model of the UK prison system). The experiment consisted of gathering concurrent verbal protocols while the modelers worked on the model. Results show that there are differences in the distribution of activities between the two types of modelers, and in the prevalence of iteration among the steps of

modeling. The study provides the first empirical comparison of how people go through the modeling process, and as such is a valuable contribution.

 This year, the range of views of Committee members was particularly wide for all of the finalists but in the end, the Award Committee considered this paper to be an exemplary contribution meeting the objectives and the high standards of the Dana Meadows Award.