



**Student Chapter**  
**of the System Dynamics Society**

**"Snowball"**  
**2<sup>nd</sup> Newsletter of the Student Chapter**

Dear Member of the Student Chapter of the System Dynamics Society,

Thank you all for your warm welcome to the first snowball. The many comments of appreciation and suggestions for improvement give us energy and ideas to move on. In particular, we are forwarding you the message of Jay W. Forrester, who is encouraging our activities and pointing to the merit of reaching out more openly to undergraduate students: what is your opinion in this regard? (See discussion at point 2).

This second Snowball is also the occasion to introduce another important communication tool of the Student Chapter: the Chapter's list-server. The list-server has the purpose of providing a channel for direct communication between members, for participatory discussion on pressing themes, and for sharing knowledge and ideas (see details in the Headline).

Finally, you will notice that we are now moving towards a clearer framework for Snowball, one that will help to incorporate and organize your input more efficiently. As Snowball picks up, we need more and more ideas and contents to keep it rolling. The topic for the next Headline will be Global Warming from a System Dynamics perspective. The discussion will be entirely based on your input (see point 5)... so, what do you think about it?

We also profit of this occasion to wish you all a Merry Christmas and a Fabulous New Year.

Best Wishes,

The Policy Council of the Student Chapter

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## **1. Headline: The list-server is on!**

We have wonderful news for you. The list-server of the Student Chapter is active and running. Today, the members of the Student Chapter will receive via email an invitation to join the list. The only thing you have to do is to accept the invitation and to sign up. A fruitful discussion can begin. In case you do not get an invitation, just go to the URL <http://www.systemdynamics.org/mailman/listinfo/student-list> where you can register yourself.

The purpose of the list-server and the accompanying forum is to provide a channel for direct communication between members, for participatory discussion on pressing topics, and for sharing knowledge and ideas among the interested in the Student Chapter and System Dynamics.

We have a new volunteer who helps the policy council to manage the moderation of the list-server and forum. His name is Paco Forni. But let us listen to what he tells us about himself:

*"Hello everyone! I am from Italy, and currently I am a master student at the University of Bergen (Norway), interested in social science and education. I obtained a bachelor degree in sociology from the University of Bologna (Italy), completing at the moment my master thesis in System Dynamics which focuses on research about the supply of science teachers in the Norwegian education system. I am really interested to use the System Dynamic methodology in other fields of science. Other than this, I like to read a lot, especially to read and collect Japanese comics. Besides this, I also enjoy watching movies."*

## **2. Feedback: comments and suggestions about the Chapter, the website and the newsletter "Snowball"**

First of all, we want to thank you for the feedback you gave us. We were especially pleased that Professor Forrester took the time to share with us his ideas. We find his feedback particularly valuable and therefore cite here his email:

*"Thank you for letting us know about the quality, progress, and enthusiasm of the students in System Dynamics. I encourage your activities and progress.*

*I do have a question: The emphasis seems to be mostly on PhD. students, which may be quite enough territory. On the other hand, there is merit in someone reaching out aggressively to undergraduates (you do mention them), and to kindergarten through 12th grade students, their teachers, and parents; do these other groups fall within your future plans, or should there be other web sites for that purpose? We are building a K-12 activity in System Dynamics through the Creative Learning Exchange, [clexchange.org](http://clexchange.org), and the discussion group that is run through the Exchange.*

*Jay W. Forrester*

*(taken from: Email to Stefan Grösser ([stefan.groesser@ikaoe.unibe.ch](mailto:stefan.groesser@ikaoe.unibe.ch)), Saturday, 14. October 2006 02:04 am)*

Up to now, as Professor Forrester indicated, the focus of the Chapter has mainly been on graduate students, as the large majority of our members belong to this category. Our constitution mentions as one of our key objectives to “arouse interest among undergraduate students” and that we should “extend and unify the knowledge of feedback systems among students all over the world” ...with no distinction of grade. Reaching out to undergraduates and K12 would then be in line with our constitution, and the question is now: how much emphasis should be given to reaching out to these categories of students? What kind of activities should the Student Chapter be doing in this respect?

We have promptly established a link between the Creative Learning Exchange and the Student Chapter websites, but more could be done, if we decide to invest more resources in this direction. Please send us your opinion on this topic, as this will be the base for our work in the next months.

Besides Professor Forrester’s, we received valuable feedback from several of you who suggested to create a space for posting book ads and reviews, as well as presentations or reviews of newly started or completed projects. We think this is a great idea and adapted the structure of Snowball in order to provide you the space for your contributions. You will find books and reviews under “knowledge stock”, project reviews and presentations will go under “inflow and outflow”. The contents of these sections will be based on your contributions. If you wish, give a hint on a recent publication that you found very useful, or want to let the other members know about your newly started or completed project. Please send us an email with the contents you would like to post. Brief descriptions with links to more detailed contents are preferred.

### **3. Knowledge stock: SD-Publications of Students and other SD-related material**

The “knowledge stock” is a space where members’ hints to recent interesting publications will be posted. Did you encounter in your research some cool publications that you think can be of interest to many of us? Do not hesitate, send us the reference (preferably if accompanied by an URL for download) and we will post it right here.

As with any other stocks, the knowledge stock also has to be initialized. For this, we selected the free available publications at the MIT-System Dynamic Group website (<http://web.mit.edu/sdg/www/publications.html>) as well as publications from the UiB-System Dynamic Group Website (<http://www.ifi.uib.no/sd/wp.html>). In addition, we want to ensure that everybody knows the main publication organ of the System Dynamics Society: the System Dynamics Review (<http://www3.interscience.wiley.com/cgi-bin/jhome/11215>).

Also, we thought of providing some more data-oriented stuff: the following websites contain statistical material which is useful when you create a System Dynamics model and are employing real macroeconomic data. Check them out at:

- <http://www.sourceoecd.org/rpsv/cw/vhosts/oecdthemes/99980010/v2006n14/contp1-1.htm>
- <http://caliban.sourceoecd.org/vl=3017146/cl=23/nw=1/rpsv/home.htm>

#### **4. Inflow and outflow: new members and recently graduated PhDs**

In this section, we want to provide a communication platform for incoming members to introduce themselves and for recently graduated PhDs to share with us part of their experience. Also, brief description of newly started projects and recently completed ones will also be posted here. This section will be entirely based on your input.

In the following, Hazhir Rahmandad, PhD from the MIT, writes about his motivation and experience during his PhD-study:

*"I learnt about System Dynamics taking two courses at Sharif University, Tehran, during 1998-99. The challenge and reward of conceptualizing models of social systems fascinated me and so I came to MIT to pursue my PhD under supervision of Professors Sterman and Repenning. I finished my PhD in September 2005, defending my thesis titled "Three Essays on Modeling Dynamic Organizational Processes". The essays included a theoretical, a methodological, and an empirical study. The theoretical part focused on the impact of delays between taking organizational action and observing the payoffs on the quality of organizational learning. The empirical piece augmented the theoretical work by looking at evolution of multiple-release product development capability in software industry. I documented how delayed workload coming from the field, after the release of a new product, can overwhelm the product development organization and erode useful practices. Finally, the methodological piece compares and contrasts an agent-based model of disease diffusion with the parallel, simpler differential equation model. The process sheds light into conditions under which the two models are different enough to justify the additional computation and complexity costs of going down the disaggregation path to the agent level. The overall results suggest that in many realistic conditions the aggregation assumptions used to build differential equation models of diffusion remain robust.*

*I found the process of defining and converging to a PhD topic to be the most challenging part of my PhD education. While taking courses and doing research on a specific topic are reasonably straight forward activities, deciding what topic to work on includes much uncertainty with respect to literature and framing, theoretical contribution, personal interest, data availability, and boundedness of the problem. I think these challenges are especially acute for SD students because in absence of a viable SD-specific job market, they need to resolve these uncertainties for yet another field in which they plan to present their work. I found two strategies*

*helpful in coping with this challenge, first, selecting another field in which one becomes an expert and knows enough to be able to frame his/her research in that field and signify the contributions in that field. Second, following the advice of experienced people who are familiar with both SD and the host field was a helpful strategy. In absence of such experts, one should try to have two mentors, one in the host field and one in SD. Overall the PhD experience was a great one which I enjoyed enormously, not only because of the specific research and learning around System Dynamics, but also because of the intellectually stimulating environment I spent my time in for over 5 years."*

## **5. Outlook for 2007**

For 2007, the Student Chapter has some more interesting and demanding tasks: the organization of the 8<sup>th</sup> PhD Colloquium, the building up of the Knowledge stock, management of the list-server and the forum. The website might also need further work, particularly if we decide to reach out more aggressively to undergraduates and K12.

The structure of Snowball will be also updated and consolidated based on your input, and a fixed schedule for next issues will be prepared: preliminary dates for release are March 15<sup>th</sup>; June 15<sup>th</sup>; September 15<sup>th</sup>; and December 15<sup>th</sup>, 2007.

Another important area of activity for next year will be the organization of the PhD Colloquium. We will issue a call for papers for the colloquium in next Snowball, so be ready: Christmas Time is convenient to think about the contents of your next paper.

The next Headline will be about the pressing topic of Global Warming be-held from the perspective of System Dynamics: what can we do as individuals, as SD students and as a Chapter to address this issue? The next headline will be built on your contributions, so send us a paragraph or two with your thinking on this issue!

Next year will be one of changes and challenges, and hopefully, with everyone's participation, one that will bring important successes for the Student Chapter.

With Best Regards,

The Policy Council