



Student Chapter
of the System Dynamics Society

Snowball (3/2007)
4th Newsletter of the Student Chapter

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

The summer is finally here, and the ISDC 07 in Boston is rapidly approaching. We trust that most of us will be able to meet on this occasion to further develop our networks and enjoy the time.

For PhD students, presenting your work at the PhD Colloquium is the best opportunity to share your ideas and have excellent feedback: see chapter 5 of this newsletter! For other students, regular presentations and informal chats will provide plenty of ideas to improve your work. If you are not aware of who is working in your area, have a look at the major SD research groups worldwide in the headline.

With the arrival of the ISDC conference, this council's mandate is coming to an end and in the Chapter meeting a new council will be elected. Over the last year, the council has been working to provide the members with new means of communication and networking in order to make our community more interconnected. We firmly believe that the next council will be able to do even more and better with your help. Do not hesitate to send us your wishes and concerns in advance to be discussed during the Chapter meeting (see the Outlook section), and if you want to contribute more - prepare your candidature!

Best wishes for a great Summer time,

The Policy Council of the Student Chapter

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1. **Headline: Major Research Groups on SD Worldwide**

Fifty years ago in 1957 the System Dynamics society was founded and since then System Dynamics has grown and spread throughout the whole world. Below you find a table with the main groups of research in SD around the world. If you have information on groups that have not been included in this list, please contact us.

1. System Dynamics Group University of Bergen

Location: Bergen (Norway)

Web: <http://www.ifi.uib.no/sd/>

Area of research: National Development Planning, Cognitive Psychology, Environment Issues and Eigen Values Analysis

2. System Dynamics Group MIT

Location: Boston, MA (USA)

Web: <http://sysdyn.clexchange.org/sd-group/>

Area of research: Applied Economics, Organizational Behavior, Business Process Modeling

3. System Dynamics Group University of St. Gallen

Location: Saint Gallen (Switzerland)

Web: <http://www.ifb.unisg.ch/org/ifb/ifbweb.nsf/wwwPubInhalteEng/System+Dynamics?opendocument>

Area of research: Management, Economics

4. System Dynamics Group University of Lugano

Location: Lugano (Switzerland)

Web: <http://www.lsm.eco.unisi.ch/>

Area of research: Management

5. System Dynamics Group University of Palermo

Location: Palermo (Italy)

Web: <http://www.unipa.it/~bianchi/>

Area of research: System Dynamics applications to organization restructuring and growth management issues

6. System Dynamics group London Business School

Location: London (UK)

Web: <http://www.london.edu/sysdn.html>

Area of research: Business Dynamic

7. System Dynamic Group Universidad Politecnica de Catalunya

Location: Barcellona (Spain)

Web: <http://www.catunesco.upc.es/ads/adse.htm>

Area of research: Management of natural resources, Environment Studies, Biology

8. System Dynamics Group Dartmouth College

Location: Hanover, NE (USA)

Web: <http://engineering.dartmouth.edu/research/complex-systems/index.html>

Area of research:

9. System Dynamic Group Universidad Nacional de Colombia

Location: Medellin (Colombia)

Web: <http://pisis.unalmed.edu.co/>

Area of research: Energy, Experiments, Urban Planning

10. Millennium Institute

Location: Washington D.C (USA)

Web: <http://millennium-institute.org>

Area of research: National Development Planning

11. Technical University Lund
Location: Lund (Sweden)
Area of research: Environmental Studies

2. PhD Colloquium Ahead!

The next International System Dynamics Conference is only two months away and the preparations for it are underway. As in the past seven years, there will again be a PhD Colloquium, where students from all over the world will present their System Dynamics oriented research.

The Format

The 8th PhD Colloquium, organized by Chintan Vaishan and Stefan Groesser, will take place on 29th July 2007 in the same location where the conference is located (Seaport Hotel, Boston). It begins at 8:45 am and lasts until 5:30 pm. The lunch break will be around 12:30 am. We have in total six plenary presentations of PhD Students. Two of these will be presented in a row, succeeding by thirty minutes lasting workshops/discussions that will be moderated by the PhD Colloquium organizers. After the plenary presentations, we will have the poster presentation session that will last for one hour. The whole PhD Colloquium will be framed by a guest speech and a panel discussion featuring leading researchers in the field of System Dynamics.

The Content

In this PhD Colloquium we will touch upon a wide variety of topics. We have work devoted to practical applications (e.g., automobile industry, tourism branch) of SD as well as theoretical and conceptual work (e.g., SD and strategic management). The very first time slot is reserved for a special guest speech which will be delivered by Professor Sterman. He will talk about an essential topic for every PhD Student and scientific worker. The concluding panel discussion will be on academic versus action research using System Dynamics that will feature both academics and practitioners.

Acknowledgements

We especially want to thank the professional reviewers for the effort they have put into evaluating the PhD students' work: this has improved the quality of the papers and, hence, the quality of the content presented at the PhD Colloquium.

Further information about the PhD Colloquium at
<http://www.systemdynamics.org/chapters/student>

3. Knowledge Stock

In the following, we put together a list of interesting and important recent publications in the field of System Dynamics. We enclosed two PhD dissertations and some scientific papers. The papers were published in the Sys-

tem Dynamics Review, while the PhD dissertations are available online (or will soon be).

The first one is the Doctoral thesis of Wheat Jr. I. David, University of Bergen, which highlight the use of feedback methodology to approach teaching in macroeconomics. (Wheat Jr. I. David, "The Feedback Method: A System Dynamics Approach to Teaching Macroeconomics", University of Bergen, (2007)) The PhD papers can be found at the following web address (<http://hdl.handle.net/1956/2239>)

The second one is Doctoral thesis of Johannes Wiik, University of Bergen, which documents insights on different policies of tradeoffs in computer security. (Wiik Johannes, "Proactive versus reactive policy tradeoffs: in computer security and more generally in other areas", University of Bergen, (2007)) The PhD is not yet available on the web.

Further interesting articles have been published in the latest System Dynamics review. The article of Thomas Fiddaman about the global policy context of climate change is very insightful and timely. (Fiddaman, "Dynamics of climate policy", System Dynamics Review, Issue 23 Volume I, page 21 - 34 (2007))

Another interesting article of Matthew A. Cronin and Cleotilde Gonzalez has been published as well in the last System Dynamics Review and it focus on three empirical studies on , subjects misperceived the relationship between stock and flows. (Cronin. and Gonzalez, "Understanding the building blocks of dynamic systems", System Dynamics Review, Issue 23 Volume I, page 1 – 17 (2007))

4. Inflow and Outflow: Santiago Arango

This time, we could win Santiago Arango to share with us his experiences from his PhD study. Thanks Santiago.

"I finished my PhD at the University of Bergen, Norway, in December 2006, after a bachelor in Civil Engineering and a master in Water Resource Management. My thesis supervisor was Prof. Erling Moxnes, and I have been working closely with professors I. Dyner and E. Larsen. The topic in my study is about cycles in commodity markets with particular interest in electricity markets. I explored the underlying causes of market fluctuations, going beyond traditional economics explanation based on external shocks. As research method we chose laboratory experiments. To link the thesis to the existing literature, we start by investigating the simplest economic model of cycles (the Cobweb model) with standard conditions, linear demand, and constant costs. Step by step, we relax strong assumptions by adding complexity to the first model. The thesis contributes to a better understanding of endogenous causes of market fluctuations. It is available at <https://bora.uib.no/handle/1956/2027>.

I had a topic in mind before I started; however, the selection of the supervisor is fundamental in order to have your topic in good shape. It

seems very difficult to me to pursue a PhD when only having a SD background. The PhD should be together with an appropriate knowledge and research from the field of the research problem. There is also a need for hard work; inspiration comes as long as you keep working.

During my PhD I had visited three universities (Cash Business School at City University, London; NTNU in Throndeim, Norway and Universidad Nacional de Colombia). The exchange views and experiences with the scientific community provide fruitful results. I recommend going not only to the SD community, but also to other related conferences and workshops. It gives you a broader perspective and a better view of your own work.

My years in Bergen were unforgettable. I met lovely people in an extremely beautiful country. I have called Norway Legoland, where everything is set in the right place! I found a very good living atmosphere despite the stereotypes about Norway, and a terrific people to work with. In short, the living circumstances definitely support you, when you go for a PhD. Currently; I am an assistant professor at the Universidad Nacional de Colombia. I am involved in consulting and research projects with international institutions and companies. My research interests include are energy markets, system simulation, experimental economics, and system dynamics. You are all invited to Colombia for a research visit."

5. Outlook: Student Chapter Meeting at the ISDC 2007

After the PhD Colloquium we will hold the Student Chapter Meeting. This is the official yearly meeting of the Student Chapter where most administrative and strategic decisions are made. This year we have eight major points on our agenda:

1. Presentation of the Current Policy Council
2. Introduction of New Members of the Chapter
3. Summary of our activities during the last year
4. Discussion of Wishes and Concerns of the Chapter Members
5. Challenges Ahead
6. Opening of candidatures for the Positions in the Policy Council
7. Election of New Policy Council
8. Closing of the Student Chapter Meeting

The positions of the policy council that will need to be fulfilled are:

- President
- Chapter representative
- Webmaster
- Editor of the Newsletter
- Moderator for the List-server of the Student Chapter

The president and chapter representative are institutional figures: you can read more about their functions on the Chapter's Constitution. The other three positions have become indispensable for the functioning of the

Chapter over the last year and we will propose to institutionalize them in the Chapter's meeting.

If you think you can contribute more directly to our Chapter's activities, do not hesitate and propose your candidature at the Chapter's meeting. If you need further information about the tasks please contact Matteo or Stefan.

This meeting also provides the possibility for the policy council and the members of the student chapter to meet in real life. Therefore, we would like to discuss wishes and concerns of the student chapter members. What could be improved in the student chapter? What services would be beneficial to you that can be offered by the Student Chapter?

Send us your Wishes and Concerns for a Discussion in the Chapter Meeting! We very much appreciate your comments. Please send us your input in advance via email. We will put these on the agenda for the discussion. (Email to: stefan.groesser@ikaoe.unibe.ch).

Looking forward to seeing you in Boston,

The Policy Council of the Student Chapter