



# System Dynamics NEWSLETTER

Volume 18 – Number 2

June 2005

## Contents:

<b>From the President</b> ..... 1	<b>Member News and Notes</b> ..... 5	<b>2005 Boston USA Conference...</b>
<b>From the Executive</b>	Appointments and Awards	<b>Information</b> ..... 12
<b>Director</b> ..... 2	CONSIDEO Freeware	Venue
<b>Publication and Contact</b>	Diversity Committee	Program
<b>Information</b> ..... 3	Initiative for System Dynamics	Contacts
<b>2005 Governance</b> ..... 4	in the Public Sector	Deadlines
Officers	SYDIC Website	PhD Colloquium
Policy Council	Publications	Social Program
Chapter Representatives	PhD's Awarded	Thursday Workshops
Special Interest Group	<b>Member Events</b> ..... 8	Modeling Assistance Workshop
Representatives	ANZSYS Conference	<b>2006 Nijmegen Conference</b>
<b>Request for News and</b>	Asia-Pacific Multi-Conference	<b>Announcement</b> ..... 14
<b>Call for Photos</b> ..... 5	Fordham University	<b>Sponsor News</b> ..... 15
<b>Dana Meadows Award</b>	Pre-Conference Workshop	<b>Additional Sponsors</b> ..... 26
<b>Endowment Fund Update</b> .... 5	Latin-American Conference	
	PhD Research Colloquium	

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## From the President, *Graham W. Winch*

Dear Members:

As we move into June, the thoughts of many of us in the Northern hemisphere move towards summer pursuits – for some baseball or another Australia vs. England ‘Ashes’ cricket series (no comments about either the Boston Red Sox or the Aussies!), but for everyone the annual System Dynamics Conference in July must be a major highlight in their diaries. Every indication is that the 2005 conference in Boston will again be a record breaker. There has been a deluge of paper submissions and the head office and programme team have been doing a fantastic job keeping the schedule on track.

The expected high number of paper acceptances does present a serious challenge, as we try to keep the number of sessions in parallel at any time as low

as possible to avoid presenting participants with too many conflicting choices. The System Dynamics Conference traditionally places major emphasis on poster sessions, either for papers the thread chairs judge would be more suited to an informal presentation/discussion mode or to meet a number of authors’ personal preferences. Our conference, unlike many others, fully integrates poster sessions into the programme, with the poster presentations grouped into thread-based clusters in dedicated slots with no competing scheduled activities.

This year’s conference will introduce an innovative new session format. The research session is a modified parallel session format in which a moderator will be responsible for collating presentation materials and integrating the work of a number of different researchers into a coherent

framework. The moderator will introduce the session with a summary of the theme and of each paper, and will link the papers to prior work and related research. Authors will then speak briefly on their own research, highlighting the issue, approach, and findings to date. The purpose of research sessions is to provide a forum for dialogue among authors working on similar themes. We hope the dialogue will promote learning for all, including the audience, participants, and moderator.

Congratulations to all authors with papers accepted for the programme; we look forward to hearing and discussing your work.

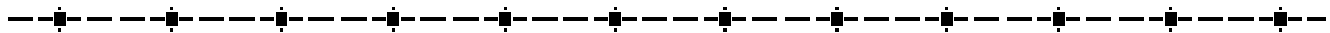
A new membership scheme will be announced and launched at the conference this year. Following the generous offer of the *System Dynamics Review's* publisher, John Wiley & Sons, to provide a limited number of free copies of the journal, the Society has decided to waive the equivalent professional fee elements to enable us to offer new complimentary full Society memberships. These will be used to support the spread and development of the field, and the Society, in under-represented areas. A small group chaired by Bob Cavana, of Victoria University in New Zealand, was charged with developing the original proposal, which was approved at the Winter Policy Council Meeting, and designing an application process and then evaluating the applications.

The criteria and process are still being finalised, but it is intended that the application be as simple as possible and the award of complimentary memberships as inclusive as possible. Two situations are envisaged: new members can be supported where chapters are developing or proposed, to assure the necessary critical mass; and young academics in developing economies can be supported while moving to a first appointment in an organisation where system dynamics is not currently featured and no local members are present. All complimentary memberships will be for a limited period and will be offered where there is a high probability that the recipients will be able and motivated to move quickly to normal membership in their own right.

Any comments or general suggestions concerning the complimentary membership scheme (but not nominations at this stage please!) can be directed to Bob or myself at bob.cavana@vuw.ac.nz or graham.winch@plymouth.ac.uk. This is an exciting initiative and we hope the first recipients will be benefiting in 2006.

I look forward to seeing you in Boston for the big event of our year.

Graham



## **From the Executive Director, *Roberta L. Spencer***

Dear Members,

For the past two years, the Society office has been lucky enough to have an undergraduate work-study student available to help us. Among other tasks, our student, Shaquala Williams, captured all the first author names in the System Dynamics Bibliography along with their bibliography entries. This seemed like a never-ending job! Then she searched in our database for corresponding e-mail addresses. In 2004, we contacted the first half of the alphabet. The project was halted over the summer break. In March of this year, we completed the second half of the alphabet. All first authors we could locate with an e-mail address were contacted and asked to “clean up” their entries.

For each author sent a message, there were four never contacted because we do not have an e-mail address on file. A general message was sent to the System Dynamics Listserve to try to reach more authors. To conclude this cleanup project, I would like to ask any author or co-author who was not contacted and did not see the message on the listserv to please take a few moments to check your bibliography entries. The goal is to improve the accuracy and usefulness of the System Dynamics Bibliography; updating the quality will benefit all of its authors and users.

The Bibliography can be found on the Society website,  
<http://www.systemdynamics.org/biblio/sdbib2.html>.

Please send corrections and additions by e-mail to the Society office at [system.dynamics@albany.edu](mailto:system.dynamics@albany.edu).

Please review and edit with the following in mind:

- Check to make sure each entry includes your full name as you prefer it to appear (not nickname), year, title, journal or book title, volume and number, paging, publisher, place of publication, and ISSN or ISBN. There should be no abbreviations except vol. or no. Please refer to the Chicago Manual of Style at <http://www.lib.ohio-state.edu/guides/chicagogd.html> if you need more specific direction.
- Your addition of keywords and abstracts not under copyright is especially encouraged. Keywords are important, because they are used not only to find research references but also to locate potential collaborators who are doing work in a particular area.
- Please delete entries that have been superseded, i.e. working papers when there is now a published version.
- The preferred language is English, but all titles will be included if they deal specifically with the fields of system dynamics and systems thinking. Transliterations of titles not in English would be

appreciated. If there are accented letters and special characters, please include. Acceptable file formats for attachments include Endnote, Excel, Word, or plain text.

Our bibliographer, Jennifer Ferris, routinely adds entries from the *System Dynamics Review* and our conferences. (The Bibliography includes works in conference proceedings from our own conferences only.) The policy for additions to the Bibliography can be found on the Bibliography page of the Society website. Please continue to send any new works to the Society office for inclusion. If you happen to note an entry by another author that seems incorrect, and you know how to contact him or her, please spread the word. If all your entries are correct, there's no need to contact the office.

Thanks to the hundreds of authors who have responded already – it's made a difference! If you have something to correct or add to the Bibliography, we will be very pleased to hear from you.

Roberta

P.S. Congratulations to Shaquala, who graduated this May and will start law school in September. We will miss her!



## Publication and Contact Information

### System Dynamics Society

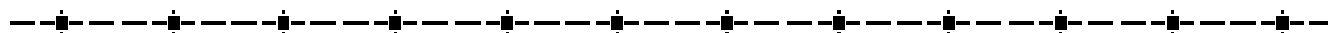
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Website: <http://www.systemdynamics.org>

Please send letters, news, photographs, and ideas for the newsletter.

The System Dynamics Newsletter is published four times a year by the System Dynamics Society.

*Editors:* Graham W. Winch, Roberta L. Spencer, Robin S. Langer, and Jennifer I. Rowe.



## 2005 Governance

### Officers

Graham W. Winch <i>President</i>	Michael J. Radzicki <i>President Elect</i>	Robert L. Eberlein <i>Past President</i>
Jay W. Forrester <i>Founding President</i>	David W. Packer <i>Secretary</i>	David F. Andersen <i>VP Finance</i>
Deborah Lines Andersen <i>VP Publications</i>	Ginny Wiley <i>VP Members &amp; Chapter Activities</i>	Robert Y. Cavana <i>VP at Large</i>
James M. Lyneis <i>VP Meetings</i>	Brian C. Dangerfield <i>Ed., System Dynamics Review</i>	

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### Policy Council

Deborah Campbell David Lane Scott Rockart Etiënne A.J.A. Rouwette <i>(2003 - 2005)</i>	Allen L. Boorstein David Exelby Tim Haslett Gianliborio G. Marrone <i>(2004-2006)</i>	Henk A. Akkermans Scott T. Johnson J. Bradley Morrison James P. Thompson <i>(2005-2007)</i>
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### Chapter Representatives\*

Rohita Singh <i>Australasia</i>	Pierre J. Ehrlich <i>Brazil</i>	Qifan Wang <i>China</i>
Oleg Pavlov <i>Economic Dynamics</i>	Walid Badr <i>Egypt</i>	Emmanuel D. Adamides <i>Hellenic</i>
Habib Sedehi <i>Italy</i>	Michiya Morita <i>Japan</i>	Namsung Ahn <i>Korea</i>
Isaac Dyner <i>Latin America</i>	Birgitte Snabe <i>Student</i>	Birgit Kopainsky & Silvia Ulli-Beer <i>Switzerland</i>
Brian C. Dangerfield <i>United Kingdom</i>		

### Special Interest Group Representatives

Jean Ellefson <i>Business</i>	Carol Frances and Michael Kennedy <i>Education</i>
Anastássios Perdicóúlis <i>Environmental Dynamics</i>	Jack Homer and Geoff McDonnell <i>Health Policy</i>
Jose Gonzalez and Klaus Breuer <i>Security</i>	

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\*Chapter proposals have been received from Russia and Pakistan; we expect to list contact information in the next newsletter.

## Request for News

Our plan to publish four issues of the *System Dynamics Newsletter* every year, continues with this, the second issue of this year. Please send us your letters, news, photographs, and ideas to be included in one of the newsletters! Additionally, if you would like to contribute an article of interest to our community, please send your suggestion to the Society office.

All past newsletters, back to 1988, are available on the Society website under "Publications." The recently added "Society Status Report of 1983-84" (and the conference keynote address of 1983) by Jay W. Forrester, capture some of our history.

## Call for Photos (and other bits of history)

The 2007 conference will celebrate the 50th anniversary of the founding of the field. We are looking for historical event photos, documents of historic significance, any kind of artifact of interest to display at the 2007 conference.

Where you at the bullfight in Seville? Did you play soccer in 1981 in Rensselaerville? Do you have any photos, documents, or articles, or stories of notable events, conference or otherwise? There have been many remarkable occasions during the past fifty

years, some momentous and some amusing. We are hoping that folks who have these bits of history will share them. If you have an item that could be copied and displayed at the 2007 conference, please send it to the Society office. Items may be in electronic form or hard copy. Credit will be given to contributors. This should be interesting and fun. Start looking through your old stuff! Thanks, Roberta

## Dana Meadows Award Endowment Fund Nears Goal

The endowment fund is within \$2,000 of the \$60,000 goal! We expect to be able to announce that we have reached our goal during the award presentation at the Boston conference. To date sixty-four individuals have contributed. Additionally we have had two organizations donate: the UK-based Operational Research Society and the Sustainability Institute. Special thanks to Allen and Jane Boorstein who generously helped establish the award in 2001.

To learn more about the award, find out how to contribute, and see the list of donors, please visit the website:  
<http://www.systemdynamics.org/Awards/DMA/DMSAEFD.htm>

A list of Previous Winners can be found on the Society Awards page of the Society website.

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## Member News and Notes

### Appointments and Awards

As of January 1, 2005, **Henk Akkermans** has been appointed Professor for the Stork Aerospace Chair in Aerospace supply network dynamics. This chair is sponsored by the Dutch Aerospace Cluster and the Ministry of Economic Affairs.

Henk Akkermans' main interest is in designing effective policies to manage the dynamics of supply chains and networks in the high-tech industries of aerospace, electronics, and telecom.

Akkermans studied information management in Tilburg and Japanese in Leiden. He defended his PhD thesis entitled "Modelling with Managers" at

Eindhoven Technical University in 1995. From 1991, he has combined an academic position as assistant professor at TU Eindhoven with a business consultant role at BSO/Origin and at McKinsey. From 2000 onwards, he has conducted his consulting work from his own firm, Minase, where he continues to work.

At Tilburg University, Henk Akkermans teaches a course on Systems Thinking and Modelling. His research focuses on highly decentralized inter-organisational supply chains and networks. He develops system dynamics and agent-based models of real-world settings. His special interest is in the evolution of inter-organisational relationships and the interrelations between collaboration and performance.

**David C. Lane** was recently given an award for system dynamics teaching by the London School of Economics. The relevant criteria for the award was “evidence of ‘outstanding performance’ ... over a period of two years or more in ... teaching quality and innovation or higher-than average commitment with sustained quality of delivery.” Much student feedback data concerning the last ten years of system dynamics teaching - to both MSc. OR/Decision Sciences students and MSc Management students - was examined. David is of course pleased with this award and has added that he is “very much aware that having a great subject to teach helps a whole lot.”

*Congratulations Henk and David!*

## **CONSIDEO Freeware Available**

CONSIDEO is proud to announce CONSIDEO COMMUNITY EDITION, the first product in a line of System Thinking Tools. It is a qualitative analysis tool that supports you to analyze and solve complex problems in a systematic and workflow-oriented way. By using CONSIDEO COMMUNITY EDITION, you will gain understanding of the problem structure and get support to find the most efficient leverage for solving your problem. Furthermore, CONSIDEO COMMUNITY EDITION helps you to communicate your model to somebody else effectively by providing a user-friendly and transparent cause and effect structure.

CONSIDEO COMMUNITY EDITION can be used intuitively. It also offers guidance on how to apply the system dynamics method. This allows you to keep your mind on the problem and its solution.

The freeware-version “CONSIDEO COMMUNITY EDITION” is available at our website:  
[www.consideo.de](http://www.consideo.de)

We would be glad to get your feedback. Thank you,  
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Tel: +49-451-3909-100  
Fax: +49-451-3909-499  
e-mail: [info@consideo.de](mailto:info@consideo.de)

## **Diversity Committee Happenings**

*Deborah Campbell and Peter Hovmand*

While Society membership has grown by over 40% from 1999, the representation of women has remained

flat at 12%. Thus, in July 2004 the Policy Council unanimously approved the formation of a committee to work on tracking and improving the diversity of the System Dynamics Society.

One of our first initiatives was to pilot a diversity survey, which was included in the annual renewals starting last October. Over 350 surveys have been returned, which represents approximately 38% of the Society membership. The initial results are interesting and point to a continuing problem of women comprising only 13% of the System Dynamics Society.

As we developed the survey, a number of people raised important issues about how diversity would be defined for the System Dynamics Society. While gender was one of the primary motivations for the formation of the committee, members suggested that other dimensions of diversity might also be important to consider. Thus as the work of the Diversity Committee enters its second year, we would like to open up the dialogue with members about how diversity impacts participation in the Society and begin developing potential solutions.

Toward that end, we are planning a roundtable discussion for any interested attendee at the upcoming conference in Boston. The home office has also established a listserv for the Diversity Committee, which members are encouraged to join. This will provide another venue for folks to discuss topics of diversity and the committee’s work. Members interested in participating can sign up by sending an e-mail containing “subscribe DIVERSITY Firstname Lastname” to [listserv@listserv.albany.edu](mailto:listserv@listserv.albany.edu).

We anticipate a major revision of the survey based on members’ feedback from the roundtable and listserv discussions. Our goal is to move to an online survey. This will make it much easier to complete the survey, and improve the quality of the information we have to monitor our efforts to diversify the Society.

Finally, we are looking to add a few more members to the committee to improve our representation of the Society, and will have a committee meeting in Boston. If you are interested, please contact Deborah Campbell ([deborah-campbell@comcast.net](mailto:deborah-campbell@comcast.net)) or Peter Hovmand ([phovmand@wustl.edu](mailto:phovmand@wustl.edu)). So look for the Diversity Roundtable and Diversity Committee Meeting on the conference schedule, and see you in Boston!

## The Initiative for System Dynamics in the Public Sector

The Rockefeller College of Public Affairs and Policy at the University at Albany is home to the Initiative for System Dynamics in the Public Sector. David Andersen, George Richardson and Rod MacDonald first formed the Initiative in 2001 for the purpose of providing training and modeling services to government agencies in New York State, and to create modeling opportunities for PhD students in the System Dynamics Group at Rockefeller College.

Over the past year the Initiative has been under contract with the Division of Disability Determinations of the Office of Temporary and Disability Assistance, the Governor's Traffic Safety Committee, and the Home Health Care Association of New York State to develop formal models to address a variety of public policy issues.

On the training side, the Initiative has provided training in systems thinking and system dynamics to the New York State Education Department, the New York State Office of the State Comptroller, and to Regional School Support Centers across the state.

Hyunjung Kim, a first-year PhD student, has been working with the Initiative in the development of training courses in systems thinking and on group model building projects in the education sector. Sasha Lubyansky, a second-year PhD student, was the lead modeler for the Initiative on a project to examine surge capacity issues for the Home Health Care Association of New York State.

Many of this year's projects are expected to continue into the next fiscal year, and to provide the basis for follow-on modeling and training projects. In addition, the Initiative anticipates undertaking a new project with the National Institute of Justice to examine the influence of technological improvements on people and resources in the criminal justice system.

## System Dynamics Italian Chapter (SYDIC) Website Redesigned

Stefano Armenia, from "Tor Vergata" Rome University is re-designing the Italian Chapter website. In this way we are trying to give (after a long time!) a possible good and new "lymph" to our Chapter. The new website will be dynamic and distributed. This will allow different organizations associated with

SYDIC around in Italy to interact autonomously with the website allowing each one to update their reserved area and hence publishing on-line their system dynamics activities. The first version of the new SYDIC (SYstem Dynamics Italian Chapter) website is now complete. This project will be developed by students of **Habib Sedehi's** department (Rome "La Sapienza" University - Communication Science Faculty) in conjunction with Stefano Armenia and his colleagues of "Tor Vergata" University - Engineering Faculty. Take a look!

<http://www.unipa.it/~bianchi/ita/sydic.htm>

## Publications

**Diana Fisher**, *Modeling Dynamic Systems: Lessons for a First Course*, isee systems, (Lebanon, NH): 2004.

<http://www.iseesystems.com/store/modelingbook/default.aspx>

**Usman A. Ghani**, *Dynamic Governance: New Practices and Theory for Excellence at the Summit of Business*, PFS, 2005.

[usman@DynamicGovernance.com](mailto:usman@DynamicGovernance.com)

**Finn Jackson**, *The Escher Cycle: Creating Self-Reinforcing Business Advantage*, Thomson Corporation, (Mason OH): 2004.

<http://www.theeschercycle.com/>

## PhD's Awarded

It is our pleasure to announce that many of the Society's student members have recently received their PhD's.

On March 11, 2005, **Hördur V. Haraldsson** defended his PhD dissertation "Developing Methods for Modelling Procedures in System Analysis and System Dynamics" opposing Prof. Robert Y. Cavana, Victoria School of Management, New Zealand. The evaluation committee consisted of Prof. Jose Gonzales, Faculty of Engineering and Science, Agder University College, Norway, Prof. Per Hagander, Dept. of Automatic Control, Lund University, and Prof. Bengt Nihlgard, Plant Ecology and Systematics, Lund University. The thesis is published at Lund University and is available by request from the author, [hordur.haraldsson@chemeng.lth.se](mailto:hordur.haraldsson@chemeng.lth.se)

**Agata Sawicka's** PhD dissertation, approved at the University of Bergen, Norway, 2004, is titled "A comparison of heuristics and biases in judgment under

uncertainty and misperceptions of dynamics in feedback systems.” Agata did her PhD research at the cell “Security and Quality in Organizations,” Agder University College. Her supervisors were professors Jose J. Gonzalez and Pål I Davidsen. After her PhD dissertation, Agata got a postdoctoral fellowship from the Norwegian Research Council. Her research focuses on “Disseminating Insights from Complex Models to a Broader Audience: Case of System Dynamics Models.” Agata is a member of the research cell “Security and Quality in Organizations,” Agder University College, which is lead by professor Jose J. Gonzalez.

**Ignacio J. Martinez-Moyano** received his PhD this May from the University at Albany. His dissertation, titled “Rule Dynamics: Toward a Theory of Rule Change in Organizations,” was supervised by Dr. George P. Richardson and Dr. Rogelio Oliva and was recognized with the Excellence in Doctoral Research Award by the faculty of the Rockefeller College. Ignacio is joining the Decision and Risk Analysis Group at Argonne National Laboratory in Chicago,

Illinois where he will continue his research on the behavioral aspects of insider cyber-threat risks.



Ignacio Martinez-Moyano and Dr. George P. Richardson at the University at Albany, Commencement, May 2005.

A hearty “congratulations” to all!

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## Member Event Announcements

### ANZSYS Conference Announcement

11th Annual ANZSYS Conference / Managing the Complex V  
Christchurch, New Zealand ---5-7 December 2005  
Conference theme “Systems Thinking and Complexity Science: Insights for Action”

Following the success of the previous ANZSYS conferences and “Managing the Complex” events, it is a pleasure to announce the 11th Annual ANZSYS / Managing the Complex V Conference. The conference will be held in the city of Christchurch in New Zealand from 5-7 December 2005, and will be co-hosted by the Institute of Environmental Science and Research Limited (ESR), New Zealand, and the Institute for the Study of Coherence and Emergence (ISCE), USA. A lively forum for discussion and debate will be provided for a wide range of academics and practitioners in the fields of systems thinking,

complexity science and management. People from other disciplines who have an interest in the application of systems thinking and complexity approaches will also be invited to participate.

We are bringing together thinkers and practitioners in the fields of systems thinking and complexity science as it seems to us that there has been a significant international resurgence in these areas in recent years. It would appear that this has been driven by at least four simultaneous forces:

- people right across the public, private and voluntary sectors looking for new ways to manage or deal with increasingly complex and multi-faceted problems;
- the obviously systemic character of many high-profile issues that transcend national boundaries, from global warming to international violence;

- the popularization of a number of systems approaches in the mid-1990s, especially among managers and policy makers;
- and the simultaneous popularization of complexity science, sparking major interest in new approaches to managing uncertainty.

The fields of systems thinking and complexity science have many similarities, yet they are being developed by two overlapping research communities that have unique insights to bring to bear on the management of ‘wicked’ problems. We believe that, by providing forums at this conference in which people working at the frontiers of complexity and systems thinking can learn from one another, significant new insights for action can emerge. Paper(s) can focus on theory, practice or a combination of the two. This conference will provide a great opportunity to meet others with similar interests and to communicate with a wider audience, so we really want to encourage you to participate. Papers (up to 10 pages of A4, double-line spaced) must be submitted by 1st July 2005 and will be double-blind refereed. Papers can be e-mailed to [anzsys2005@isce.edu](mailto:anzsys2005@isce.edu)

For full details please visit the conference website at: [http://isce.edu/ISCE\\_Group\\_Site/web-content/ISCE%20Events/Christchurch\\_2005.html](http://isce.edu/ISCE_Group_Site/web-content/ISCE%20Events/Christchurch_2005.html)

## **Report on the Sustainable Development of Asia Pacific--Multi-Conference on the Applications of System Dynamics and the Disciplines of Management**

*Ms. Ying Qian, PhD candidate and Prof. Xu Li*

The Sustainable Development of Asia Pacific--Multi-Conference on the Applications of System Dynamics and the Disciplines of Management will be held from Nov 4th to 6th, 2005, at Tongji University, Shanghai, China. Conference paper submission has already started. A wide range of topics will be covered and discussed at the conference, including recycling economy, regional and national economic dynamics, public management and policy, financial system dynamics, M&A and industrial dynamics, business dynamics, logistics and supply chain management, R&D project management, health care policy reform, simulation for decision making, system dynamics for R&D and Innovation, system dynamics and systems thinking, complex nonlinear dynamics etc. Papers

may be submitted until July 22nd. Looking forward to your works.

On May 7th, 2005, the conference Chair, Professor Qifan Wang, hosted a meeting with the members of the Organizing Committee to handle some crucial preparation issues such as formalizing the process for paper review, future publishing of the conference papers, scheduling the agenda of the conference. The preparation for the conference is going fine.

Program topics planned:

- Opening Ceremony: Professor Wu Qidi, the Vice Minister of Ministry of Education of China, is invited to deliver a keynote speech.
- Recycling Economy Forum: We plan to invite Professor Qian Yi, and Guo Chongqing, to come give presentation. Both of them are members of Chinese Academy of Sciences/Engineer. Professor Zhu Dajian will deliver a report with the topic “Recycling Economy in China.” He has given a lecture on this topic to the leaders of UN environment department. During his visit in the US, he also lectured on this topic at Harvard University and Texas A&M University. And he will give a lecture on this topic at Yale in July.
- Special Issues of China Forum: This forum will be focused on economic topics specially related to China.
- Graduate Student Forum: In this forum, people will discuss how to apply system dynamics together with other principles and approaches to conduct further PhD study. We invite PhD students and master students to share their dissertation topics, research insights and experiences.
- System Dynamics Theory Study Forum: One example for this forum is the study “Basic In-Tree model of System Rate” from Professor Jia Ren’an, director of Nanchang System Dynamics Research Institute. Using this method, the model building process will be more standardized.
- Forum of the Development of Management Science and Systems Science.

We warmly welcome your participation.



**Fordham University  
Graduate School of Business  
2nd System Dynamics Workshop**

**Fordham University Graduate School of Business** cordially invites you and a guest to attend the 2nd System Dynamics Pre-Conference Workshop.\*

Thursday, July 14, 2005, 9 AM – 5 PM,  
McMahon Hall

Fordham University Business Schools  
Fordham University at Lincoln Center  
113 West 60th Street (and Columbus Avenue)  
New York, NY 10023-7484 USA

Registration:  
US\$40 per person (on or before July 7, 2005)  
US\$50 per person (after July 7, 2005)

RSVP via e-mail by July 1st to:  
Ms. Haiyan Yue  
Deputy Director, System Dynamics Consultancy  
E-mail: hyue@fordham.edu

For more information contact:  
Nicholas C Georgantzas, PhD  
Professor, Management Systems  
Director, System Dynamics Consultancy  
(917) 667-4022 | E-mail: georgantzas@fordham.edu

\* Participants attending this event qualify for a 10 percent discount off the registration fee for the 23rd International Conference of the System Dynamics Society in Boston later this summer.

**Theme: Pathways to superior performance**  
This one-day workshop will acquaint you with system dynamics, the bedrock for systems thinking. Dr Nicholas C. Georgantzas and other accomplished members of the System Dynamics Society will present ideas, software tools and applications of system dynamics.

Most of us live and work in and about business ecosystems with complex dynamic behaviors. And poor performance often results from our very own past actions or decisions, which come back to haunt us.

Unlike other social sciences, system dynamics shows exactly how circular cause and effect chains interact within a system to affect performance through time. You too can now leverage this insight to achieve vast, self-sustaining performance improvements.

With today’s business world in perpetual motion, performance-related problems derive from systems, processes and methods, not from individual workers. People do their best, but their best efforts cannot overcome the poor performance of dysfunctional systems.

Is your company trying to squeeze the heroic efforts of outstanding people to improve performance? Stop! Learn to create systems that routinely permit excellent performance to result from the ordinary efforts of ordinary people. Change your system now to change what your people do and how they perform. Changing your people will change neither your system nor its performance.

Know how to lead from the clarity that only comes from understanding systems. Do not abdicate your leadership before you know how.

**Mark your calendar!**

**Third Latino American and Colombian  
Conference of the Latin American  
Chapter of the System Dynamics  
Society**

**Objective:** To extend system dynamics methodologies and applications that contribute to the solution of problems in industry and government, specially, related to planning, policy, markets, the environment, technology and education.



**Conference Venue:** Cartagena has been designated National Patrimony in 1959 and Cultural Patrimony of Humanity. This beautiful “Walled City” on the Caribbean is a wonderful tourist site because of its historical wealth, its delicious gastronomy and its magical beaches.

**Topics** Methodology and Applications of System Dynamics in:

- Planning
- Social systems
- Economics
- Energy
- Environment
- Technology and innovation
- Contributions to education
- Other applications.

**Important Dates:**

June 20, 2005	Abstract submission
July 11, 2005	Acceptance notification
September 5, 2005	Final version submission
October 3, 2005	Acceptance notification
November 30, 2005 – December 2, 2005	Conference dates

**Registration Fees:**

Academic and professional:	US\$150
Undergraduate Students:	US\$25
Postgraduate Students:	US\$50

**Tourist Program:** Depending on interests.

**Conference Chairs:** Isaac Dynner, Hugo Andrade

**Conference Committees:**

**Program Committee Chair:**

Rogelio Oliva (Presidente)

**Organizing Committee:** Gloria Elena Peña, Liliam Suaza, Ana Lucía Pérez, Paula Escudero

**Program Committee Members:**

Santiago Montoya, Adolfo Fonseca, Rafael Ruiz,

Antonio Quintero, Erik Larsen, Gloria Pérez, Martin Shaffernicht Santiago Arango, Camilo Olaya

**Local Organizing Committee:** Fernando Arenas, Kemel George, Ricardo Ariza, Isabel Bautista

**Marketing Committee:**

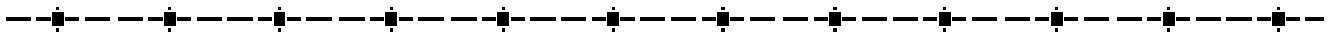
Ricardo Sotaquira, Lilia Gelvez

**The Albany-MIT System Dynamics PhD Colloquium**

The System Dynamics Groups from the Sloan School of MIT and the Rockefeller College of the University at Albany have been meeting two times a year. The meetings take place in Albany during the fall semester and in Cambridge during the spring semester. The groups have been meeting since 2000 to share their research projects and improve their knowledge on how to conduct system-dynamics related research. This tradition stands as an important bridge to connect the two universities, establishing a research network and academic partnership that will last for years to come.

In recent years, the event has expanded to include attendees and participants from other universities and organizations in the U.S and beyond, including Cornell University, Dowling College, Harvard Business School, Rensselaer Polytechnic Institute, Stuttgart University, University of Illinois at Urbana-Champaign, University of Massachusetts Amherst, Worcester Polytechnic Institute, Attune Group, Amber Blocks Ltd, PA Consulting, and the Sustainability Institute.

If you would like to learn more about the colloquium and the participants who have shared their work online, please visit any one of the previous ten events. The “Albany-MIT Colloquia” links can be found at the following website:  
[http://www.systemdynamics.org/society\\_activities.htm](http://www.systemdynamics.org/society_activities.htm)



# 2005 Boston USA Conference Update

The 23rd International Conference of the System Dynamics Society will be held July 17-21, 2005

**Conference Host:** System Dynamics Group, MIT Sloan School of Management, Cambridge, Massachusetts USA  
**Conference Partner:** PA Consulting Group, Cambridge, Massachusetts, USA

For updated details, please visit the Society website at: <http://www.systemdynamics.org>

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## Conference Venue

The Seaport Hotel in historic Boston offers the finest meeting destination facility on the city's vibrant harbor. It is in the heart of Boston's Seaport District overlooking the breathtaking panoramic view of Boston Harbor and the city skyline. It is located within minutes of the airport, financial district and the downtown area, filled with restaurants, shops, museums and attractions. Public spaces at the Seaport have wireless Wi-Fi access and each guest room is equipped with complimentary Internet/VPN access at T-1 speed. For detailed information about the Seaport Hotel please visit: <http://www.seaportboston.com/>



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## Program

The conference will bring together diverse perspectives on the application of system dynamics to broaden perspectives and foster dialogue and debate.

The conference program will consist of plenary, parallel, poster and workshop sessions demonstrating the state of the art in the theory and application of system dynamics. In addition, panel discussions, special interest group sessions, student colloquia, events of historic interest, vendor displays, exhibits, demonstrations, Society business meetings and other related gatherings will be scheduled. The conference schedule will provide time for relaxed social and professional interaction.

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## Contacts

Program Co-chairs:

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Workshop Chair:

Jack B. Homer, Homer Consulting  
Voorhees, New Jersey USA  
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Conference Manager:

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E-mail: [system.dynamics@albany.edu](mailto:system.dynamics@albany.edu)

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## Deadlines and Key Dates

- June 17, 2005* – Early conference registration deadline and hotel room registration deadline.
- July 17, 2005* – PhD Colloquium, Policy Council Meeting.
- July 18, 2005* – Boston Conference Opening!
- August 19, 2005* – Deadline for final paper versions for CD-ROM Proceedings.
- September 2005* – CD-ROM Proceedings mailed to conference registrants.

## PhD Colloquium at Boston

Dear students, faculty and all other practitioners,

This year the 6th System Dynamics PhD Colloquium will be organized at the main conference in Boston on Sunday July 17. Learning from and elaborating on past experiences, we feel a separate colloquium will have benefits over a “standard” parallel paper presentation because common problems related to PhD research in system dynamics can be identified and discussed in more depth, providing a unique opportunity for learning among all attendants. The objective of the Colloquium is to bring together PhD students working on foundations, techniques, tools, and applications for system dynamics and give them the opportunity to present and discuss their research in a constructive and international atmosphere. The Colloquium will also provide an opportunity for student participants to interact with established faculty and others in the wider system dynamics community. The diversity and the interactive setting should provide a unique learning opportunity for all participants of the colloquium. This year, the all-day colloquium will open with a speech given by Professor Repenning. The colloquium will consist of number of sessions with oral presentations followed up by parallel workshops, as well as a large poster session in the afternoon. The program of the day will be placed at the PhD Colloquium website by mid-June ([http://is.bwl.uni-mannheim.de/PhD\\_Colloquium2005](http://is.bwl.uni-mannheim.de/PhD_Colloquium2005)), accessible through the official System Dynamics Society 2005 conference website. We have received more than 20 submissions and we believe and hope it will be an interesting day with many fruitful discussions. This will especially be the case, if we can convince a larger number of senior academics to attend in one or more sessions of the day. We hope you can attend!

*PhD Colloquium Organization*  
Birgitte Snabe and Markus Salge

Mannheim University  
PhDColloq2005@is.bwl.uni-mannheim.de

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## Social Program

Freedom Trail Walking Tour (Tuesday afternoon at 2pm) - Jeanette Abad will be leading a walking tour of portions of Freedom Trail. The Trail takes visitors to many of Boston’s most famous historical sites. The tour will be starting from the lobby of the Seaport Hotel at 2pm. For further information contact Jeanette Abad at [jeanette.abad@paconsulting.com](mailto:jeanette.abad@paconsulting.com) or see <http://www.cityofboston.gov/freedomtrail/>

Cocktails at the Union Oyster House (Monday a 7pm) - PA Consulting Group will be hosting a cocktail hour at the Union Oyster House near Faneuil Hall in the Freedom Trail Room starting at 7pm on Monday evening. For further information contact Jeanette Abad at [jeanette.abad@paconsulting.com](mailto:jeanette.abad@paconsulting.com) or see <http://www.unionoysterhouse.com/>

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## Thursday Workshops

The Boston conference will offer 15 workshops for you to choose from. If you are planning on attending any of the workshops, you can find links to a tentative schedule as well as full workshop descriptions with titles, and presenters of each workshop in the program section of the conference web page at <http://www.systemdynamics.org/conf2005/index.htm>. Some workshop presenters ask that you bring certain materials or do some reading in advance so please read the specific workshop information carefully.

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## Modeling Assistance Workshop

Jack Homer and Roderick MacDonald will facilitate the Fifth Annual Modeling Assistance Workshop. Modeling assistance is available at the conference to enable modelers to discuss their specific modeling questions with modeling coaches. Modeling assistance opportunities include two public workshops, as well as the possibility of assistance at any time during the conference. Assistance is available for modelers with all levels of modeling ability, from beginner to advanced, with questions about a specific model that modelers are developing or studying, or to better understand something in a book, an article, or a software package. Modeling questions may deal with problem articulation, formulation of a dynamic hypothesis, formulation of a simulation model, model testing, or policy design and evaluation. Modelers should bring whatever materials they need to describe their question, including pencil and paper, books, posters, or laptop computers. Spectators are welcome to observe modeling assistance during the two public sessions.

To sign up or to coach, see detailed information at the conference website:  
<http://www.systemdynamics.org/conf2005/5thMAW.htm>

# The 24th International Conference of the System Dynamics Society Nijmegen, The Netherlands July 23 - 27, 2006

2006 conference of the System Dynamics Society will be held at the campus of Radboud University in Nijmegen, the Netherlands. A range of accommodations, from a luxury spa hotel to bed & breakfasts and economical hostels, is available within walking distance or up to a 15-minute bus (or bike!) ride depending on the location. Nijmegen is a small, friendly city and very easy to navigate. Nijmegen can be easily reached from Amsterdam Schiphol Airport by a 1.5 hour scenic train ride.



Nijmegen is the Netherlands' oldest city and celebrates its 2000th anniversary in 2005. The city offers historic sites and museums and borders beautiful forest countryside and polder landscapes, our unique low-lying terrains that have been reclaimed from water and are protected by dikes.

Radboud University is a leading research center in diverse fields such as human cognition, materials and magnetism, wetland ecology, and business law. The University enrolls 14,500 students in eight faculties and is renowned for its green campus, modern buildings, and state-of-the-art equipment. For more information, please visit the website of the Institute for Management Research at <http://www.ru.nl/fm/imr/>.

Conference meetings will be held in auditoria and parallel rooms. For coffee breaks and lunches the university restaurant and open-air bar are available. The conference program will consist of plenary, parallel, and poster sessions demonstrating the state of the art in theory and application of system dynamics. In coaching sessions and workshops, experienced system dynamicists will assist in working on modeling questions. The program will also include the PhD colloquium, panel discussions, special interest group sessions, vendor displays, exhibits, demonstrations, and Society business meetings.

The conference schedule provides ample opportunities for meeting with colleagues and friends, including an opening reception in the city centre and a conference banquet. Discussions in a relaxed atmosphere will contribute to the exchange of innovative ideas. We look forward to welcoming you in Nijmegen and combining academic and practical interests in a pleasant setting!

For updated details, please visit the Society website at <http://www.systemdynamics.org/>

## CONTACTS

<p><b>Organizing Chair</b> Etiënne Rouwette Methodology Department Nijmegen School of Management Radboud University Nijmegen The Netherlands e.rouwette@fm.ru.nl</p>	<p><b>Conference Chair</b> Jac Vennix Methodology Department Nijmegen School of Management Radboud University Nijmegen The Netherlands j.vennix@fm.ru.nl</p>	<p><b>Program Chair</b> Andreas Größler Mannheim Business School Mannheim University Germany agroe@is.bwl.uni-mannheim.de</p>
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**Conference Manager** Roberta L. Spencer, System Dynamics Society, [system.dynamics@albany.edu](mailto:system.dynamics@albany.edu)

## Sponsor News

### Atrivé

Atrivé are consultants with a passion for housing. We apply system dynamics and systems thinking in strategy development for housing associations and municipalities in the Netherlands.

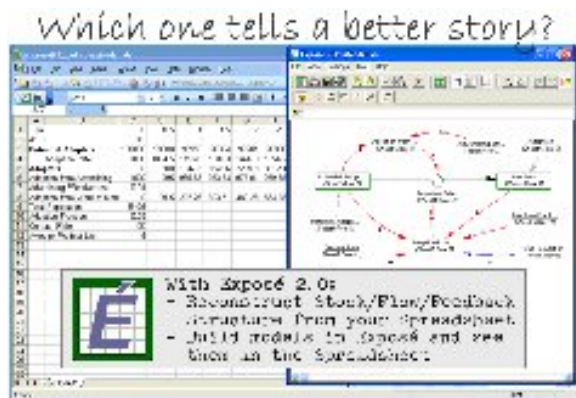
In early 2005, Atrivé took over Laagland Advies, well-renowned colleagues with a strong network on the municipal and care markets. Synergy is developing right now! We also published six systems thinking essays on the dynamics of the Dutch housing market and the current rent policy liberalisation reforms. We will present them on several national occasions.

Eppie Fokkema and Martijn Eskinasi enjoyed the 2005 European System Dynamics workshop very much and made a small contribution on fail factors in applying system dynamics in organisational consulting. We find the connection to the system dynamics community very inspiring and are looking forward to meeting you at the next conferences!

### Attune Group, Inc.

#### Bringing Systems Thinking to the Spreadsheet -

The Attune Group, Inc. will be releasing Exposé 2.0 in July 2005. Exposé is an add-in to Microsoft Excel that brings visualization and systems thinking capabilities to spreadsheets. Exposé 2.0 visualizes the interrelationships among the cells and variables in a spreadsheet model, identifies and reconstructs stock-and-flow and feedback loop structure found in spreadsheets. Exposé also allows the user to build models in the graphical environment using stock-and-flow and feedback structure. The equations are then translated into the spreadsheet instantaneously.



The objective is to enable the spreadsheet users to “see and feel” the logic behind their models, surface their mental models and assumptions and communicate them more effectively. Spreadsheet users understand the individual relationships among variables in their model but they do not have access to the “big picture” that connects the pieces together. In other words, system dynamics capabilities in spreadsheets can help spreadsheet users to better audit, analyze, understand, and communicate their models.

Exposé can make great system dynamics models accessible to an enormous number of spreadsheet users and help them to learn how different dynamic concepts can be better formulated. Messy, confusing and incorrect formulations of even simple dynamic concepts in spreadsheets are more common than one may expect. Any marginal improvement in spreadsheet models can have significant outcomes.

People seem to master spreadsheets more quickly perhaps because “numerical logic” is easier to grasp than “structural logic.” Many people can figure out the amount of “Savings in the Month of February” if they know its values in January and the “Purchases Made” (numerical logic). However, few people can easily see the stock-and-flow relationships. Exposé bridges the gap between the “structural logic” and “numerical logic.”

“Exposé has the potential to be a valuable product, especially for those engaged in financial modelling”

Michael Kennedy,  
Head of Department of  
Accounting and Finance  
London South Bank University

Exposé can help in teaching Dynamic Systems to K-12, colleges and graduate schools more effectively as most students already know how to work with spreadsheets.

If you would like to learn more about Exposé, contact [info@attunegroup.com](mailto:info@attunegroup.com).

An earlier demo version of Exposé is available for download at [www.attunegroup.com](http://www.attunegroup.com).

### Booz Allen Hamilton

Booz Allen Hamilton, a global strategy and technology consulting firm, has deep expertise in applying modeling and simulation for both public and private sector clients. System dynamics is a vital

aspect of the firm's extensive modeling and simulation toolkit. We use an integrated approach to help tackle complex problems in the areas of public health, international trade, energy, and budget and performance integration.

In 2003, Booz Allen worked with the Global Business Coalition to Fight HIV/AIDS, to develop a simulation of HIV/AIDS in India. Team members will present some of this work at the 2005 conference in Boston. Currently, we are combining our firmwide expertise to take the model one step further.

Similar simulation efforts have been conducted to mitigate the impact of external shocks on supply chain networks, develop European transportation strategies, and simulate maintenance and repair on damaged military equipment under hostile circumstances. Booz Allen is committed to helping clients understand and shape their complex environments through an interdisciplinary approach that brings system dynamics simulation together with statistical, econometric, and agent based tools.

## **CALIBRE**

Established in 1989, CALIBRE is an employee-owned management and technology services company. For seventeen years, CALIBRE has built and delivered practical, timely, best value solutions to solve management, technology, and program challenges.

CALIBRE uses systems thinking to provide new perspectives and new solutions to our customers' problems. Our models have been used in both federal and business organizations as management flight simulators and as learning environments. They have also been used in conjunction with balanced scorecards, in development of management metrics and as communication tools to educate stakeholders on policy decisions.

CALIBRE's Systems Thinking Group has a new leader, Mr. Bill Newnam, CALIBRE's Vice President for Strategic Planning & Decision Support. Bill has a strong operations research background and in that light he had us attend and present some of our work at the most recent INFORMS conference, held this past April, in Palm Springs, CA. While there we did a presentation on the importance of the "up front work" before diving in with optimization routines and how we employ systems thinking to, as Russell Ackoff likes to say "...not do the wrong thing righter!" The

OR community was very receptive to this line of thinking and we had some great discussions.

Some other things we have ongoing at the current time:

CALIBRE is the training partner for isee systems in the Washington DC/Northern Virginia area providing systems thinking and *ithink* workshops with a focus on systems thinking for government, but all are welcome to attend. Our next workshop is scheduled for 12-14 September. For details see [http://www.calibresys.com/workshops/index\\_sys.cfm](http://www.calibresys.com/workshops/index_sys.cfm)

We are involved with assisting the US Army in adapting institutional processes to support new operational approaches in the Global War on Terror employing a systems thinking approach.

More details about CALIBRE are available at our website [www.calibresys.com](http://www.calibresys.com)

## **CRA International**

**Modeling and Quantifying the Ripple Impact on Labor Productivity.** CRA International's Capital Projects Group, in collaboration with the Attune Group, Inc., is in the beta testing phase of a system dynamics model geared toward an interactive operational tool construction contractors can use to quantify and model the ripple impacts of change that affect labor productivity. The operationally focused system dynamics model seeks to facilitate the incorporation of various conditions and/or changes on a project, and then measure the resulting impact on baseline labor performance expectations. Since change and disruption are inevitable, planning and re-planning are critical to deploying labor effectively and efficiently, thus creating the greatest benefit to cost performance. As the frequency of project impacts increase, management's ability to adjust and re-plan is often greatly reduced. Identifying the impacts' true costs on current work and future activities is difficult, if not impossible, on an incremental basis. The application of an operational system dynamics model provides a tool to identify and manage the potential effects of these changes and disruptions on subsequent activities. The use of an operational system dynamics model can bring management's attention to the hidden effects and costs of changes, disruptions, and decisions.

As it is currently developed, the model captures a number of logical feedback loops between various factors of the project delivery system known to have potential contributory influence on labor performance. The model contains elements for considering change, both timing and frequency; requests for information; learning curve; material and equipment capacity; schedule pressure; delay; management capacity; planning time; and rework cycle. With these primary inputs, the fully developed model will provide management with the capacity to quickly examine the effects of impacts or decisions in various scenarios, and thus refine its understanding of the ripple effects on labor productivity. The tool is expected to be used contemporaneously with the project development, providing a reasonable and valid means to effectively demonstrate the casual relationships for decision-making.

### **Decision Dynamics, Inc.**

*Software Tools.* Since its incorporation in 1979, Decision Dynamics, Inc. (DDI) and its sister company, Decision Dynamics Technologies, Inc. (DDTI) have been providing satisfied government and commercial clients with the information they need to support effective decision-making. DDI builds and employs sophisticated simulation modeling tools that quantify the complex cost, performance and schedule tradeoffs among competing “what-if?” scenarios. The tools, called “FleetSight” and “Workflow,” utilize advanced, proprietary techniques to bring the capabilities of system dynamics to the program analysis world.

“FleetSight,” a program cost and analysis decision tool, replicates the causal logic of real-world relationships and captures a wealth of data, both hard and soft. FleetSight users define “what-if?” scenarios to include alternative management decisions, alternative assumptions about system relationships and/or alternative data points from different sources.

*Satisfied Customers.* Over the past ten years, DDI has focused on building a solid reputation for building advanced modeling tools. The Naval Air Systems Command, Naval Sea Systems Command, the US Marine Corps, the US Air Force, Northrop Grumman, United Defense LP, and the US Coast Guard Deepwater Program currently head the list of satisfied clients.

More information is available at our website <http://www.decisiondynamics.com/> or call our company president, Victor Thombs, at +1 703 250-1884.

### **Delft University of Technology**

The Faculty of Technology, Policy and Management (TPM) at Delft University of Technology in The Netherlands offers system dynamics courses at both basic and advanced levels. The basic level course has been part of the TPM curricula since 1997, and is attended by approximately 150 students every year. The basic level course consists of a theoretical part and a project part, in which groups of two students make their own system dynamics model, based on a case description. Recent cases include water management and urban development. The advanced system dynamics course was taught for the first time in the spring semester of 2005. This course includes special topics, such as group model building, model testing and interactive learning environments. The course is based on recent literature, and includes tutorials on these topics. In addition, a guest lecturer is invited to relate the theory to practice for each of the topics. This year, we welcomed guest lecturers from Nijmegen University, Significant Consultancy, Accenture, Deloitte, and the Dutch Ministry of Justice. Groups of two students worked on a model of airport noise disturbance in parallel to the lectures.

Recent system dynamics related research at the Faculty of TPM includes a project, which was carried out for the Dutch Council of Public Health and Health Care, on measures to stimulate innovations in health care in The Netherlands. Two workshops were conducted to investigate possible effects of the adoption of innovations, and to identify measures to stimulate adoption of innovations. Approximately 20 people from different health care sectors were involved in the two workshops, during which causal loop diagrams were drawn up and used to identify possible measures. The results of the analysis were used by the Council in their report to the Dutch Minister of Health, containing measures to stimulate the adoption of proven innovations.

### **General Motors**

Led by Dan Roesch, GM Strategic Initiatives (GMSI) is a staff of General Motors Corporation responsible for analyzing major strategic initiatives for the

company. GMSI often develops detailed quantitative models of the automotive industry or specific aspects of it, in order to more accurately assess the likely impact of potential new strategies. Many of these are system dynamics models developed with the help of consultants Mark Paich, Lyle Wallis and Norm Torre of Decisio LLP. Within GMSI, Phil Keenan (phil.keenan@gm.com) presented a paper at last summer's System Dynamics Society conference in Oxford on the *Enterprise Model*, developed a couple years ago to take a broad look at the corporation and its marketplace, combining internal activities such as engineering, manufacturing and marketing with external factors such as competition in the new and used vehicle marketplaces. This summer he will present related research on *Incorporating Second Choice Information in Logit Choice Models* at the American Marketing Association's ART Forum. GMSI is now using a hybrid of system dynamics and agent-based modeling. Agent models represent consumers individually, rather than bucketing them into states (stocks). This avoids many of the mathematical difficulties with aggregation and the "curse of dimension" combinatorial explosion that can otherwise plague system dynamics models when consumers are classified across multiple demographic dimensions. This allows creating more realistic simulation models and eases the task of explaining to the computer how the real world works.

## Global Strategy Dynamics

Global Strategy Dynamics, based near London, UK, produces and distributes learning materials based on sound dynamic principles. We focus on the stock accumulation end of system dynamics in the area of strategy, whether commercial or not for profit. Our director, Dr. Kim Warren, teaches the approach at London Business School through MBA and executive programmes and also instructs on Strategy Dynamics through the WPI advanced studies program. Our sister company, Strategy Dynamics Solutions (SDS), provides management education into corporate and open courses.

Our portfolio of Microworlds (PC based business simulations), continues to grow and as well as creating bespoke microworlds, including a large scale model dealing with the introduction of a new product line in pharmaceuticals, we have also added "Strategy Dynamics in Action" teaching packs for independent

trainers (also in Spanish and German) and the LoFare Airlines Microworld to the catalogue.

Additionally, the **mystrategy**® mapping and modelling software, developed by HVR Consulting as a practical tool for managers, enables whiteboard sketches of their strategic architectures to be captured.

Our clients include academic institutions, consulting firms and corporate trainers and our licensing terms cater for these different markets. Our fully searchable website contains a wealth of information and demo downloads as well as having a private "Instructors" area where we make additional material available to individuals engaged in teaching.

Summary product list:

- Microworlds: Mobile Phones Subscribers, Brands Management, Beefeater Restaurants, Professional Services, Iglu.com, eBank, LoFare Airlines, Oil Producers, People Express.
- Simulation software: mystrategy® Reader and single user, corporate and academic licenses.
- Other teaching materials: Strategy Dynamics in Action teaching materials, Mastering Strategy Dynamics 10-lecture video course.

Visit [www.strategydynamics.com](http://www.strategydynamics.com) for more information or pick up a CD at the Boston Conference.

Wishing everyone involved in the Boston Conference, in whatever capacity, an enjoyable, instructive and interesting conference.

## Hall, Vasil & Dowd, CPA's

**Hall, Vasil & Dowd (HVD)** provides professional consulting, financial, and tax services to individuals and closely held businesses. We take a long-term approach to each client's needs and to our interactions with our clients. Through open communication, we build the trust necessary to maintain satisfying on-going relationships.

**Tax Services** - The core business of HVD is tax-related services, including tax advice, tax planning, and tax preparation. In order to provide accurate and timely guidance, our tax specialists remain fully versed in the constantly changing US tax laws at both the federal and state levels.

Entity selection (corporation, partnership, LLC, etc)

- Estates and trusts
- Mergers and acquisitions
- Pension and profit sharing plans
- Retirement planning

**Accounting and Management** - Whether you are a long established corporation or a new business venture, HVD can help you develop and implement the best accounting policies and procedures for your particular situation. We can provide an overall review of your business operations or focus on specific problem areas. We advise a diverse clientele, including closely held businesses, start-up businesses, and even large governmental agencies.

- Accounting systems and design
- Business continuity planning (succession)
- Buy/Sell Agreements
- Capital expenditure and long range planning studies
- Financial statements (compilations and reviews)
- Management planning

**Forensic Accounting and Litigation Support Services** - HVD offers a range of litigation support services, including forensic accounting and expert witness testimony.

- Divorce
- Forensic accounting investigation
- Shareholder disputes
- Tax implications

For more information contact Hall, Vasil & Dowd, CPA's at 30 Church Street, Suite 310, Belmont, MA 02478 • (617) 484-0000 • Fax (617) 489-0521

### **HVR Consulting Services Limited**

HVR is pleased to extend its sponsorship of the Society's activities in 2005. This follows HVR's role of Conference Host to the Oxford 2004 Conference.

HVR continues to expand its consulting activities with a series of engagements spanning its government and industry clients. System dynamics has been incorporated within other HVR capability areas, notably systems engineering during the last year.

HVR has now trained over 300 people in its system dynamics-based cost estimating tools for the US Department of Defense and the UK Ministry of Defence. OSCAM is a joint US and UK program providing rapid assessments of the operating and

support costs of high value capital assets and their component systems. Using system dynamics, OSCAM represents the business processes that drive costs and their relationship to management policies in order to assess the impact of alternative maintenance strategies and operating policies on the cost and availability of these assets.

For more information go to: [www.oscamtools.com](http://www.oscamtools.com) and [www.hvrgroup.com](http://www.hvrgroup.com)

HVR is one of the UK's leading suppliers of system dynamics modelling and consultancy for businesses and governments worldwide.

### **isee systems**

isee systems (formerly High Performance Systems) is the world leader in systems thinking software. Founded in 1985, isee developed STELLA®, the first software to bring systems thinking to the desktop. In addition to STELLA which is used primarily by educators and researchers, isee offers iThink® for business simulation.

Celebrating its 20th Anniversary Year, isee has recently announced several new products that will help to expand its reach and achieve the company's mission of spreading systems thinking.

New products include:

- Japanese versions of STELLA and iThink 8.1, incorporating all the latest isee technology and allowing Japanese users to work and learn in their own language.
- A free isee Player that is easy to use and enables anyone to explore models created with STELLA or iThink without a full installation of either product. isee Player can be downloaded from isee's website for use on both Windows and Macintosh computers.
- Diana Fisher's new book *Dynamic Systems Modeling: Lessons for a First Course*. Aimed at secondary and college level educators, this book offers a complete curriculum for a one-semester or one-year course in system dynamics. Diana Fisher is a well-known educator in the field of system dynamics and author of the award-winning book, *Lessons in Mathematics: A Dynamic Approach*.

isee products have substantial global reach in business, education and government. Thousands of individuals and organizations in over 80 countries use

isee's modeling and simulation software to gain insight and shared understanding of the systems in our world.

To learn more, visit [www.iseesystems.com](http://www.iseesystems.com) or call (603) 643-9636.

## **John Wiley & Sons Ltd**

As the publishers of the *System Dynamics Review*, Wiley are delighted to again be sponsoring the System Dynamics Society's Annual Conference.

Members of the System Dynamics Society automatically have access to the online edition of the *System Dynamics Review* via Wiley InterScience®. Visit the journal homepage at [www.interscience.wiley.com/journal/sdr](http://www.interscience.wiley.com/journal/sdr) to access the full text of any article published from 1997 to date.

Whilst online, why not sign up for *My Profile* – to organize and store the services, links, searches and other tools that add value and efficiency to your research.

Discover a full set of personalization tools on Wiley InterScience® - set E-mail alerts to notify you when each new issue of *System Dynamics Review* is published online, or when new content is added that matches your Saved Search criteria; or why not try out our Pay-Per-View service which allows you to purchase individual articles to other Wiley journals without the need for a subscription!

We look forward to seeing you at the Wiley stand in Boston, where System Dynamics Society members can receive 15% discount on any Wiley book purchased. Don't forget, System Dynamics Society members also receive a year-round 15% discount on all Wiley books when ordered online via <http://www.wiley.com/>. At the shopping cart, simply enter the promotion code WAZ, under 'discount offer' and the discount will be applied to your order.

## **Lane Press of Albany**

Lane Press of Albany, Inc. has been in business for over 80 years serving many associations, corporations, universities, and government with all kinds of printing and design needs. We specialize in two to four color offset printing, die-cutting (for pocket folder needs) and full graphic services available. For more information see our website: <http://www.lanepressofalbany.com/>

## **Ledet Enterprises, Inc.**

Ledet Enterprises, Inc. is an 11 year old consulting company created to help manufacturing sites become more reliable by engaging workers in defect elimination as a daily habit. This approach was created at DuPont based on a system dynamics model of the value of maintenance in a capital intensive manufacturing facility. The major product offered is The Manufacturing Game® workshop, which was inspired by playing the Beer Game. It is a two day event for front line workers to experience the value of eliminating small defects on a daily basis instead of waiting until they propagate into expensive and time consuming breakdowns. It gives participants a bird's eye view of a manufacturing facility. They experience in a short time what could take years to experience in the "real world." Actions launched as part of a workshop have typically resulted in 40% fewer failures and a third lower costs. Delivering world-class performance requires the engagement of the majority of the workforce in eliminating small defects before they become performance-limiting problems. The Manufacturing Game® inspires front-line workers to take action to eliminate defects and the reactive work that these defects create. The Manufacturing Game® has been used by over 150 companies worldwide and 29,000 people. DuPont, BP, Honda, Whirlpool and ExxonMobil are a few of the companies that have used The Manufacturing Game® to improve performance.

We are now working on a combination of system dynamics and agent based models for creating sustainable organizational change. Since leaving DuPont, we have participated in several site transformations that have sustained performance improvements for more than 10 years in spite of many management changes and several changes of ownership. Our original system dynamics model evaluates the effect of operations best practices. However, it does not include structures that account for the 10 years of sustained performance.

## **Minase**

At Minase, life remains interesting. One week, we are trying to help a major telecom player not just to sell, but also to be able to deliver new telecom products to customers successfully. In itself, not a real system dynamics issue, but one where we stay true to our approach of bringing all the relevant players of the

network involved to the table and engage them in a series of structured group problem-solving sessions to create both a workable solution and broad organisational support for that solution. As in most of the big organisations that we work for, this requires some adjustment from our clients, as they expect consultants to snatch their problems out of their hands, run away with them and present them with a solution later on - only to find that the solution isn't so reality-proof and certainly not broadly owned by all the relevant players.

Another week we are deeply involved in some delightful system dynamics modelling of the dynamics of staff hiring and training in a call center. Next to the many deep and methodological strengths of quantitative modelling and simulation there is the advantage that you can show hard numbers. "With 2% additional training costs we can shorten call duration with over 20% and increase the number of new customers with almost 40%." These are sentences that are read with much attention by all financial folks, regardless of the many assumptions that must be made to arrive at such figures.

What else? Oh, the integral translation of the 15th century Minase chain poem was published this month (in Dutch, sorry), Henk Akkermans was appointed as professor in Aerospace supply network dynamics at Tilburg University, our system dynamics training courses are due in September 2005 and Minase is clearly alive and thriving for over five years now, this very month!

### **Northwater Capital Management Inc.**

Northwater Capital with offices in Toronto and New York has been one of the Society's sponsors for the last two years. The firm is 16 years old and has 83 employees. It specializes in investing money for very large pension and university endowment funds in "synthetic" replications of market indexes and in the hedge funds.

The firm has over \$8 billion dollars under management and is a leader in a relatively new approach to investment management called "Portable Alpha" that is rapidly becoming the favored approach by large institutional investors. The approach breaks investments into what are called in the investment industry, "alphas" and "betas". The beta is the market factor in investing. By investing in betas the investor is taking on systematic risk by being exposed to broad

market trends that can't be diversified away. The alpha element of the investment is that portion that is added by active management. Northwater uses hedge funds and private investments to add this element to the portfolio. The risk in this part of the portfolio is unsystematic, that is, diversifiable. So Northwater is able to add a very consistent alpha to the market returns that are generated by the indexed portfolios.

Northwater uses system dynamics in two main ways. First, the firm has created an internal five day course to teach every person in the firm about systems thinking. Sometime in the first year of employment each person goes away to a luxury country hotel to learn the basics of the field. The course attempts to create a base line of knowledge across the firm on how to "think in loops." The second use is to describe market dynamics affecting the firm's investment portfolios. The firm has found the Society to be very helpful in providing resources for its system dynamics efforts.

### **PA Consulting Group**

PA Consulting Group is proud to be a conference partner this year. At the upcoming conference we will be hosting a walking tour of the Freedom Trail, cocktails at the Union Oyster House, and a program management workshop. Alan Graham, Tom Mullen, and Ritu Sharma will be presenting papers at the conference. Ken Cooper, Tom Kelly, and Sharon Els will be running the program management workshop. Jeanette Abad will be leading the Freedom Trail walking tour.

PA Consulting Group is a leading management, systems, and technology consulting firm, operating worldwide from over 40 offices in more than 20 countries. The former system dynamics boutique, Pugh-Roberts Associates, is now part of PA's Decision Sciences Practice and continues to perform ground-breaking work. Recent work for the Joint Strike Fighter (JSF), London Underground, Ford, and UK Department for Transport, amongst others, has achieved big impact on important problems through the use of system dynamics. At JSF, we helped re-plan one of the world's largest and most complex development programs, balancing many difficult constraints, uncertainties, and priorities across 3 different versions of the airplane and nearly a dozen different customers from many nations. For the London Underground, our work was instrumental in

facilitating the restructuring of the world's second largest underground transportation system. At Ford, program simulation models were used to analyze and improve the performance of over 100 new vehicle developments. For the UK Department for Transport, simulation is being used to assess the effectiveness of different congestion-mitigation strategies. And for a number of telecommunications firms, dynamic simulation is transforming the way strategic decisions are being made.

For further information please contact Sharon Els at [sharon.els@paconsulting.com](mailto:sharon.els@paconsulting.com) or +1 617 252 0227.

### **PAR-Group, Nijmegen School of Management, Radboud University Nijmegen**

The PAR group is an interdisciplinary group of researchers of the Faculty of Management Sciences of Radboud University Nijmegen. We focus on developing and using participatory research and intervention methods for strategic problems and organizational change. These methods are presented in academic and postdoctoral courses, used in applied research projects and studied in academic research.

### **Pegasus Communications, Inc.**

What's New at Pegasus Communications?

*One on One with Dennis Meadows: Growth on a Finite Planet*—For more than 30 years, Meadows has studied the effects of unfettered growth in population and industry on the life of the planet. His conclusions are sobering—we are dangerously depleting the resources our lives depend on. In this eye-opening vision of possible futures, Meadows spells out the dangers of collapse, examines the ways of thinking that have led to this critical point, and offers direction to those who are ready to become part of the solution. DVD, 45 minutes

Order the DVD for \$125 through July 31—almost 30% off! View clips at [www.pegasus.com/m2/media.html](http://www.pegasus.com/m2/media.html)

*Listening to the Volcano: Conversations That Open Our Minds to New Possibilities* by David Hutchens, illustrated by Bobby Gombert. The newest book in our Learning Fable series explores how engaging in meaningful conversation on a regular basis can enable people to overcome their tendency to wait for a dire

threat, like an erupting volcano, to collaborate and take positive action in the workplace and beyond.

Order the book for \$15.95 through July 31—a 20% savings! Learn more at [www.pegasus.com/fables.html](http://www.pegasus.com/fables.html).

The 15th Annual Pegasus Conference—Systems Thinking in Action®

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### **Powersim Solutions, Inc.**

Over the last year at Powersim Solutions, we put significant emphasis on enhancing the capability of our ExPlan® and ExTrain® platforms for delivering decision support and management training solutions. The ExPlan® platform has been improved to include additional functionalities such as base scenarios, index-based inputs, base data view, and variance analysis.

ExPlan® now offers three different configurations to suit a variety of needs. Executive Dashboard™ provides executives with a single strategic view of the organization focusing on corporate objectives and policies that define the direction for the business. Dynamic Controls™ helps managers to test-drive alternative strategies and evaluate the impact of potential decisions that control the business. Strategy

Analyzer™ enables managers to experiment with potential scenarios and evaluate the influence of external factors that may affect the business environment.

The ExTrain® platform has also been extended to include a war-game configuration, which allows users to take on different roles in the same simulation and compete with each other, instead of playing against a pre-programmed competitor. The war-game version can also be configured for simulations where users interact in a collaborative manner. We also upgraded the ExTrain® platform to .NET framework, which along with new features for decision history, data import, printing and facilitation, improves the overall experience of a training simulation.

In addition to development efforts, we implemented both decision support and training solutions for a variety of companies such as America Online, Discover Business Services, Novellus Systems and American Red Cross.

We are currently seeking partners who are interested in licensing our application platforms for delivering their simulation models for management training, decision support or strategy and scenario planning. For more information about partnering and licensing ExTrain® and ExPlan®, please contact:

Powersim Solutions  
585 Grove Street, Suite 130  
Herndon, VA 20170

Phone: +1 703 467 0910  
E-mail: solutions@powersimsolutions.com  
www.powersimsolutions.com

## Proverbs Corporation



Proverbs Corporation's core business is still tools for problem solving and decision support in strategic management and the 3rd generation of the Balanced Scorecard implementation, simulation, and optimization of production, services, industry, and health care.

Within the last year, we have added a new area of interest mainly in nonlinear dynamics of human brain modeling from the psychology and neuroscience point of view. Marek Susta has joined a psychiatry/psychology team at the First Faculty of

Medicine, Charles University in Prague as a senior researcher.

Because of quite large changes in the Czech Republic (CZ) education system, we have prepared a project called "Economic Literacy and Systems Thinking for Basic and Secondary Schools" (post-Soviet modification of the K-12.) Thanks to Pegasus for help and support in our effort to spread the project all over the CZ and Slovakia.

Marek Susta and Lubomir Kostron's effort to implement system dynamics education into the curriculum of the psychology studies at Masaryk University finally brought some fruits. "System Dynamics Modeling" became a self-reliant subject and the first graduates will serve as Marek's assistants for the upcoming semester.

We also publish books on system dynamics and systems thinking. These books are on our list for 2005: "Value Management Modeling," "Dynamic Strategy – Third Generation of the Balanced Scorecard," "Modeling in Social Sciences," "Lemmings etc., Translations from Pegasus" and finally the famous "Business Dynamics" translation.

### *Client references:*

- Hartmann-Rico, Inc. (Czech Republic)  
BSC implementation in the whole company including interconnection with an incentive system.
- Comar, Inc. (Slovak Republic)  
Strategy evaluation model using system dynamics approach.
- Precheza, Inc. (Czech Republic )  
BSC implementation in the whole company including interconnection with an incentive system. System dynamics model of production.
- Tos Varnsdorf (Czech Republic )  
Project "Company Performance" – Preparation for the BSC implementation and strategy evaluation.
- Czech Telecom (Czech Republic )  
Simulators for billing and pricing, strategic planning support and a behavioral model of the Telco market.
- Ministry Of Defence (Czech Republic)  
Simulator of human resources, strategic planning support.

## **SAIC, Science Applications International Corporation**

SAIC is the largest employee-owned research and engineering company in the United States, providing information technology, systems integration and eSolutions to commercial and government customers. From science to solutions, SAIC engineers and scientists work to solve complex technical problems in national and homeland security, energy, the environment, space, telecommunications, health care and logistics. With annual revenues of \$7.2 billion, SAIC and its subsidiaries have more than 42,000 employees at offices in more than 150 cities worldwide. More information about SAIC can be found at <https://issaic.saic.com/>.

## **Sol, Society for Organizational Learning**

SoL, the Society for Organizational Learning focuses on building capacity for aspiration, reflective conversation and systems thinking in organizations so that they can effectively achieve the results they desire most. We do this by forming local learning communities around the world composed of managers, consultants and researchers.

SoL offers a variety of ways to connect including organizational and individual membership, courses and events, and publications. Stop by our booth at the System Dynamics Society Conference to talk with Sherry Immediato and learn more about the opportunities listed below.

**Join SoL** as a Connections member and gain regular access to our online member directory, library, calendar, and other web-based resources, as well as our bi-monthly newsletter, the SoL FLASH; and receive a one-year subscription to *Reflections: The SoL Journal*. Contact us for a complimentary issue. Our next issue of *Reflections* features an article on systems thinking at Ford Motor Company by Marv Adams, Senior Vice President, Corporate Strategy and Chief Information Officer, and Jeremy Seligman, Director, Strategy and Competency.

### **SoL's 2nd Global Forum - A Symphony of Innovation: Leveraging Complexity to Create Knowledge and Confidence.**

Building on the success of our first Global Forum held in Helsinki in 2003, we will convene the 2nd SoL Global Forum in Vienna, Austria, 13-16 September

2005. Join about 400 members, friends and thought leaders from all over the world to focus on innovation and complexity in both small group learning labs and plenary sessions that blend emerging theory with practical application.

### **New SoL Course - Presencing: Collective Leadership for Profound Innovation and Change.**

Course Facilitators: C. Otto Scharmer, Beth Jandernoa and Arawana Hayashi, December 12 -16, 2005 The Warren Center, Ashland, Massachusetts. Based on the "U-model" featured in the book *Presence: Human Purpose and the Field of the Future*, by Peter Senge, C. Otto Scharmer, Joseph Jaworski, and Betty Sue Flowers, this experiential workshop for teams introduces individual and collective methodologies for sensing and facilitating profound change both within organizations and across societal systems. Early registration discounts end on June 30.

If you're unable to stop by our booth at the conference, learn more about these opportunities at [www.solonline.org](http://www.solonline.org).

## **The System Dynamics Group, University of Bergen**

The System Dynamics Group, University at Bergen (<http://www.ifi.uib.no/sd/>), has moved from the Department of Information Science to the Department of Geography. The move has been favourable for us. We have our own budget and conduct our business more or less as if we were a separate department. The move has inspired us to focus more than ever on issues related to national planning and development and to strengthen our relationship with the Millenium Institute, Washington, DC. Our fourth course has been designated to address these issues. Dr. Mohamed Saleh, Head of the Future Study Center, IDSC, The Cabinet, Egypt, has served as Adjunct Professor to substitute for Dr. Ali K. Saysel who left us last fall to return to Bogazici University, Istanbul. Our autonomy has encouraged us to perform beyond expectations in 2004 when 16 Master of System Dynamics candidates graduated from our program. Moreover, in order to increase the recruitment of Norwegian students to our program, we will offer a new course in the fall: "System Analysis for Social Sciences."

## Ventana Systems, Inc.

Ventana Systems, Inc. is pleased to announce the availability of version 5.4d of Vensim. We continue to improve the usability and capability of the software and now Vensim PLE boasts a number of features previously available only in the more advanced configurations. With the ability to create multiple views, develop control panel style interfaces and override variable behavior with arbitrary inputs in SynthesSim mode Vensim PLE has become an extremely powerful and flexible tool for teaching and learning system dynamics.

Vensim's revolutionary SynthesSim capability, available in all Vensim configurations, continues to delight users of big and small models alike. SynthesSim will work with any model, automatically providing you with sliders and showing you how model behavior changes as you move them. You can also effortlessly cut feedback loops by overriding the behavior of different model variables to localize the sources of dynamics.

More details on Vensim are available from our product website, <http://www.vensim.com/>. Ventana also provides consulting services and has deep experience in a number of areas including corporate strategy, supply chain control, project management and production control. For more information visit our website, <http://www.ventanasystems.com/>

## Worcester Polytechnic Institute (WPI) Advanced Distance Learning Network WPI Offers System Dynamics – Online

Worcester Polytechnic Institute (WPI) is pleased to be a sponsor of the System Dynamics Society. This sponsorship allows the university to publicly reinforce the importance of the study of system dynamics to our university and to academia. It is significant that we are associated with the both the fellow schools and practitioners whose goal it is to proliferate the use of system dynamics in helping to diagnose and solve complex problems.

The most innovative of our system dynamics offerings is the **Online Graduate Certificate Program**. Offered since 2003, this program allows students around the world to access class lectures, their faculty, and their fellow students through the Internet. Classes are kept small so students can get to know both their

instructors and classmates. The faculty of these virtual courses includes familiar names such as Khalid Saeed, Mike Radzicki, Jim Lyneis, Jim Hines, Bob Eberlein, Andy Ford, and Kim Warren.

Through the use of online discussion boards, e-mail, and other tools, students become familiar with the study and tools of various facets of system dynamics and get acquainted with each other. Virtual connections facilitate the ease of doing business and the business of learning, no matter where people reside. Almost all of WPI's online students agree that virtual study is both convenient and rewarding.

Nine courses on various system dynamics topics are available for online study with three semesters per year. These courses can be taken by qualified students as single courses, a graduate certificate, or integrated into an Interdisciplinary Masters of Science. Often a new student will start with one or two courses and then become admitted into either the graduate certificate or the M.S. Students who intend to receive a degree or certificate must be officially admitted after two courses. The courses currently offered at WPI include:

- System Dynamics Foundations
- Modeling and Experimental Analysis of Complex Problems
- System Dynamics for Insight
- Model Analysis and Evaluation Techniques
- Real-world System Dynamics
- Strategy Dynamics
- Environmental Dynamics
- Project Dynamics
- Macroeconomic Dynamics

The faculty advisor for WPI's Graduate Certificate in System Dynamics is Professor Michael Radzicki. His e-mail is [mjradz@wpi.edu](mailto:mjradz@wpi.edu). The program is delivered and administered by WPI's Advanced Distance Learning Network (ADLN). Their contact e-mail is [adln@wpi.edu](mailto:adln@wpi.edu) and phone in the U.S. is 508-831-5220.

## XJ Technologies

XJ Technologies, the vendor of AnyLogic software, is happy to share with the system dynamics community our excellent results for 2004 and exciting plans for year 2005. AnyLogic installed base is rapidly growing. Companies, governmental organizations and universities migrate to AnyLogic from traditional simulation tools as well start applying simulation in the areas where it was previously impossible due to the lack of adequate technology.

Our new clients list includes General Electric, Johnson & Johnson, Raytheon, Pitney Bowes, General Dynamics, Lockheed Martin, Eurosib, Gazprom, Russian Aluminum, Pfizer, Hewlett Packard, MERCUR, RTI International, Siemens and tens of smaller companies and universities.

AnyLogic's unique ability to support system dynamics, agent based and discrete event modeling on one OO platform allows modelers to efficiently vary the level of abstraction and adjust it to the needs of the specific problem. The well-known limitations of each of the three approaches no longer exist when modeling in AnyLogic, which helps our users to generate new insights in and at the borders of such areas as:

- Asset management
- Patient flow
- Market dynamics and competitive strategy
- R&D project management
- Health economics
- Dynamics of contagion
- Supply networks
- Business processes
- Transportation
- Pedestrian and vehicle dynamics

AnyLogic 5.3 being released in May 2005 includes new Business Graphics Library, Pedestrian Library (option), and numerous new examples.

In December 2005 we plan to release AnyLogic version 6, which will be a major advance in modeling technology. Being based on IBM Eclipse platform, AnyLogic 6 will offer the user the most modern and intuitive user interface and maximum possible extensibility. As the development environment will now be 100% Java, the users will be able to both run and develop models on Windows, Linux, Mac and other Java-enabled platforms.

In addition to AnyLogic software, XJ Technologies offers training and highest quality consulting services. Contact us at [www.anylogic.com](http://www.anylogic.com)

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## Additional Sponsors of the System Dynamics Society and/or the Boston Conference

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