



Twenty-ninth International Conference of the  
System Dynamics Society

Washington, DC July 24-28, 2011

Volume 6 August 2011

## CONFERENCE SPONSOR NOTES



Once again the System Dynamics Society came through with another great conference. We enjoyed seeing old friends and making new friends, sharing ideas on modeling, and showing off some of our new AnyLogic features. It was the perfect venue to highlight our enhanced systems modeling capabilities and to introduce our new self-taught training books (which sold out in the first morning break!)

AnyLogic is your one-stop shop for simulation modeling. In addition to the system dynamics modeling featured at this conference, our software also supports agent-based and discrete event modeling. We are the only tool that allows you to build hybrid models by mixing these different techniques as appropriate. AnyLogic is a modern application built in Java, so it easily runs on all platforms (Windows, Mac, Linux) and has the ability to export its models as Java applets; now your customers and colleagues can run your models in any browser! Our recent release (version 6.6), has added to the suite of smart object tools in support of pedestrian, rail, and not traffic modeling. This adds to our SDS improvements, 3D, and host of other new features.

AnyLogic has always incorporated "getting support" directly into the software, and now we have added automatic customer feedback, which will allow us to stay even more in tune with our changing user requirements. We are continuously improving, not just the software but the overall experience, adding new resources to the website, improving our training, publishing a new book on AnyLogic, developing tutorial videos, and more. In addition to product improvements, we are improving our business models by making aggressive commercial moves such as reduced maintenance costs, special account programs for large companies, and special pricing for small, start-up companies. Stop by the website [www.anylogic.com](http://www.anylogic.com), e-mail [grivas@anylogic.com](mailto:grivas@anylogic.com), or call 480-ANYLOGIC to learn more about how AnyLogic can work for you.

### ANALYTIC SERVICES INC.



Analytic Services Inc. and ASysT thank the System Dynamics Society for a very successful conference in Washington, DC. We were honored to exhibit at the 2011 System Dynamics Conference, to sponsor its **Chapter and Special Interest Group Poster Presentation** and to present our work on *Mexico's Cartel Problem: A Systems Thinking Perspective* during the Conflict, Defense and Security panel.

Established in 2007, ASysT is a collaborative endeavor of Analytic Services. ASysT was created out of a recognized need to **apply** systems thinking principles to problems of national significance while simultaneously developing an educational enterprise for all levels of leadership, as well as practitioners, throughout the national security, homeland security, intelligence, and broader policy communities.

If you would like to learn more about Analytic Services or ASysT, please contact Robert Edson, Vice President of Enterprise Development, at [Robert.edson@asysti.org](mailto:Robert.edson@asysti.org) or 703-416-2000.

### Booz | Allen | Hamilton

Booz Allen Hamilton would like to thank the System Dynamics Society for the opportunity to attend and be a sponsor at this year's conference in Washington, DC. We would especially like to thank all the members of the Society

who helped organize and carry out a very successful event. We especially enjoyed meeting attendees and sharing ideas on how to model different problems.

For more information about Booz Allen Hamilton, and how we can help you solve your most complex problems, please see [www.boozallen.com](http://www.boozallen.com).



Evans & Peck would like to thank the System Dynamics Society for the opportunity to attend and be a sponsor at this year’s conference in Washington, DC. A special mention goes out to Roberta and the organising committee for carrying out such a well-organised and enjoyable event.

Evans & Peck is an international infrastructure-based advisory company based in Australia, China, and Hong Kong with over 20 years experience in providing strategic consulting services on systems modelling problems. We use a variety of modelling methods and techniques to suit the client, including simulation modelling (agent based, discrete event and system dynamics), portfolio optimisation, business process management, financial modeling, and executive dashboards.

For more information, visit [www.decisionmodelling.com](http://www.decisionmodelling.com).

We hope you enjoyed this year’s conference as much as we did and we look forward to seeing you all in Switzerland next year. Contact: Derek Burrows, e-mail: [dburrows@evanspeck.com](mailto:dburrows@evanspeck.com), Ph: +61 2 9495 0500



The GoldSim Technology Group enjoyed attending this year’s System Dynamics Society conference in Washington, DC.

Our software differs from traditional system dynamics approaches in that 1) it puts much greater emphasis on probabilistic simulation techniques to support representation of uncertain and/or stochastic systems; and 2) it provides a wide variety of specialized model objects (beyond stocks, flows, and converters) in order to make models less abstract (and hence more transparent) and help represent processes and events that cannot easily be represented using a traditional system dynamics approach. These differences are due to the fact that GoldSim is primarily used for engineering and scientific applications where quantitative probabilistic predictions of future performance are required (e.g., by regulators and other stakeholders) in order to inform and defend policy and design designs.

**Recent Applications**

The software is widely used in the environmental and energy arenas, and most applications are used to support probabilistic risk analyses of complex systems. For example, Los Alamos National Laboratory is currently using GoldSim to perform probabilistic simulations of CO<sub>2</sub> sequestration in geologic reservoirs. Sandia National Laboratories is using the software to model the performance of large solar panel arrays. Private and public organizations worldwide use the software to model complex water management systems, with applications ranging from large water supply systems (e.g., the Central Valley of California) to water management at nearly 100 mines in Australia, South America, and Africa. The software is also widely used in the nuclear arena. Over 20 government organizations around the world use it to evaluate the long-term performance of radioactive waste management sites, and the US Nuclear Regulatory Commission is using the software to support probabilistic risk analyses at existing nuclear power plants.



Congratulations to the Society for a well-organized and well-attended conference. The Signature Research Program for Health Services and Systems Research (HSSR) at Duke-NUS Graduate Medical School Singapore was delighted to be a first-time sponsor of the 2011 International Conference of the System Dynamics

Society. We had a strong team participating in the conference, with four presentations and a poster session. We appreciated the opportunity to renew ties with old friends and colleagues as well as make new relationships.

HSSR is established as a center of academic excellence for research and education on the organization, funding, and delivery of health services. Our focus is on public health and clinical service innovation in an increasingly complex and connected world. HSSR employs a *systems perspective* to addressing critical health issues. Systems thinking cuts across all of our research priorities and recognizes the multiple leverage points and feedback loops involved. This includes health, social, economic, political, biological, and other systems.

With our expanding program in system dynamics applied to the healthcare field in Singapore, we hope to see many of you visit us. Please keep in mind we have positions available for an Assistant Professor, Research Fellows and Research Assistants. Duties and responsibilities for each position will vary somewhat, but will include the opportunity to:

(continued...)

HSSR at Duke NUS Graduate Medical School Singapore continued:

- Work closely with the team of researchers in the Health Systems Design Lab, a recently established laboratory within HSSR.
- Collaborate with multi-disciplinary researchers at Duke-NUS and other research institutes to develop a research agenda that involves the use of systems modeling to inform healthcare policy issues.
- Promote health systems capacity-building in research collaborations with local healthcare and academic institutions.
- Help build capacity by leading seminars and workshops and mentoring students.

We look forward to bringing an even stronger team to next year's Conference.



The Idaho National Laboratory would like to thank all this year's participants at the 2011 International System Dynamics Conference. It was nice to catch up with old friends and meet new ones. We would also like to thank the organizing committee. They did a splendid job. Very nice location and well-organized. We hope to see everyone next year in Switzerland.

The Idaho National Laboratory is a multi-disciplinary engineering laboratory with a focus on nuclear and renewable energy. There is, perhaps, no other national laboratory with an energy research legacy as long and proud as Idaho National Laboratory's. The laboratory continues to do excellent research in nuclear, hybrid, and electric vehicle testing, hydropower and geothermal systems. For more information on the Idaho National Laboratory, please visit our website [www.inl.gov](http://www.inl.gov). See you next year!



It was a pleasure meeting and connecting with so many of you in Washington, DC. We enjoyed sharing stories and learning about the important work being done across a wide range of fields and disciplines. We especially appreciate your feedback on the upcoming version 10 release of STELLA and iThink modeling software. isee

systems is committed to developing innovative ways to make it even easier to build, share, and learn from models of complex dynamic systems.

Thank you to the Society for recognizing the lifetime achievements of Diana Fisher. isee systems has had the honor of collaborating with Diana in support of K-12 education for many years. Her books, *Modeling Dynamic Resources: Lessons for a First Course* and *Lessons in Mathematics: A Dynamic Approach*, continue to be an excellent resource for teachers incorporating system dynamics into their curriculum, as well as for business professionals wanting to teach themselves the dynamic modeling process.

Congratulations to Sarah Boyar, recipient of this year's Barry Richmond Scholarship Award. Sarah is a recent graduate of the Master's Program in System Dynamics at WPI and presented a portfolio of her work to the scholarship committee. An essay about her teaching philosophy combined with aspirations to teach system dynamics to lawyers (potential judges) and medical doctors were things Barry would have been excited about. In conjunction with our partners, isee continues to be a resource for tools, training, and teaching materials that enable people to think and act more systemically. To learn more, visit [www.iseesystems.com](http://www.iseesystems.com), e-mail [support@iseesystems.com](mailto:support@iseesystems.com) or call (603) 448-4990.



We were very pleased to be a sponsor for this year's conference and are already making plans for next year. Please keep Jantz Morgan in mind when you review your investment options.

Jantz Morgan LLC is an emerging investment management company founded on the premise that superior quantitative models will significantly outperform over the long-term. We combine system dynamics with sound financial principles to create powerful stock selection and portfolio management processes, engineered to provide outstanding long-term investment opportunities. Our objective is to provide our clients with active return at an acceptable level of asset volatility in a diversified portfolio. We aspire to do all this while being a socially responsible enterprise that is respectful of our client's values.

*This information does not constitute an offer to sell or a solicitation of an offer to buy securities. Please see our ADV Part II for important disclosures.*

**Jantz Morgan LLC, 470 Atlantic Avenue 4<sup>th</sup> Floor, Boston, MA 02210**  
**[info@jantzmorgan.com](mailto:info@jantzmorgan.com) 617.273.8018 [www.jantzmorgan.com](http://www.jantzmorgan.com)**



Congratulations to the System Dynamics Society on another successful conference. Millennium Institute (MI) is proud to be a sponsor of the conference.

MI is a nonprofit development research and service organization with headquarters in Washington, DC. We provide consulting services on development issues to governments, national planning institutions, international organizations, and multinational companies. Our expertise in system dynamics modeling complements vast field experience in macro analysis of economic, social, and environmental issues. We work with partners to develop dynamic macroeconomic models that support comprehensive and integrated scenario analysis of global, regional, and national development issues such as broad-based economic growth, poverty reduction, climate change, and peace-building in post conflict regions. We are the primary pioneer of system dynamics modeling and integrated analysis for long-term national planning for sustainability, and our expertise remains unmatched.

For more information about MI, visit our website at [www.millennium-institute.org](http://www.millennium-institute.org).



It was a pleasure to connect with so many of you at this year's conference! The talks and sessions were as ever stimulating and we all learned something new and came away better for it.

For those we did not get to speak with, here is an update on our system dynamics work. Our strategy and modeling experts work with major organizations to help solve their most important challenges. We combine world-class analysis expertise with in-depth industry knowledge to develop practical and enduring solutions.

- Corporate strategy and market analysis -- Analyzing company and market behavior under a range of scenarios to identify actions and strategies that transform performance.
- Government policy, planning and assessment -- Addressing complex government challenges for issues such as counterinsurgency, regional stability, economic development, healthcare, and energy security.
- Prioritizing major investments -- Identifying 'high leverage' strategies and actions to achieve objectives and providing a basis for rigorous review and reprioritization of investments.
- Strategic management and performance improvement on major projects -- Analyzing strategic risks and finding leverage points to improve performance on large, complex programs, and project portfolios.
- Negotiation support and dispute resolution -- Using dynamic analysis to help quantify and explain issues in dispute, working with stakeholders to help reach equitable solutions in negotiations, mediations, and formal disputes including serving as expert witnesses.

#### **Our System Dynamics Work is Growing**

We are interested in sharp, well-rounded, analytical people committed to making a difference by solving complex problems in close cooperation with clients and colleagues. While we are hiring a range of capability across PA, we have a special interest in candidates with strong system dynamics expertise for our Boston and Washington offices. To learn more about our team please contact Sharon Els at [sharon.els@paconsulting.com](mailto:sharon.els@paconsulting.com) or (617) 225-2700. We look forward to seeing you in Switzerland if not before!



As this year's conference co-host, thanks to all of you who made this year's conference a great success. We hope you found our user's group meeting and exhibitor demonstration useful in your modeling work.

For those of you who attended the Studio workshop session, please feel free to send your follow-up questions to [solutions@powersimsolutions.com](mailto:solutions@powersimsolutions.com).

We enjoyed connecting with so many of you, and we look forward to working with you in the future. For more information about our SD-based simulation tools and modeling services, visit us at [www.powersimsolutions.com](http://www.powersimsolutions.com). We hope to see you next year at St. Gallen!



# Springer

the language of science

System dynamics can be applied to anything! At least that could be the impression after a fascinating conference in Washington, DC. It united different fields of science under one common denominator: system dynamics. The Society is doing a great job in coordinating a very active community and Springer as a publisher of system dynamics is proud to support this development.

Thanks to everyone who showed interest in our work and stopped by our stand. For those of you who did not see us in person, meet you next year in St. Gallen/Switzerland.

Last but not least: If you have ideas on publications on/with/for system dynamics please contact Michael: Michael.Bursik@springer.com.

## transentis

consulting



transentis is a small management consultancy specializing in business transformation. We help companies to explore business ideas, to design business models and organizations that fully leverage information technology, and to realize these designs in practice.

We help manage the complexity of the transformation process using business prototyping techniques. These allow clients to explore their business in depth and test design and realization options before putting them into practice - we frequently use system dynamics in our consulting engagements, but (depending on the situation) also employ other modeling languages such as UML and BPMN and simulation approaches such as agent based modeling.

Our managing director, Dr. Oliver Grasl, will be presenting an SD-related webinar in the near future:

\* Webinar "Business Model Validation" on 20.10.2011

Please check our English language website at [www.transentis.com](http://www.transentis.com) to keep up to date with our webinar schedule. We look forward to sponsoring the next System Dynamics Conference and seeing you in St. Gallen.



# WPI

The use of system dynamics modeling and forecasting is important to the economic and environmental future of the world. **Worcester Polytechnic Institute – WPI** – is proud to be one of the foremost providers of system dynamics education. Worcester Polytechnic Institute is proud to be a sponsor of the System Dynamics Society and its annual conference. This year's conference in Washington D.C. was a quality event that provided all of us with a rich experience.

Welcome to the over 200 first time attendees. Many of you stopped by the WPI exhibit table to find out more about our system dynamics education. It was great to meet you, and we hope you have the opportunity to invest in furthering your understanding and expertise of system dynamics.

WPI offers online graduate level courses in system dynamics. Students can enroll in a single course, a five course graduate certificate, and a ten course Master of Science degree. The university also offers an interdisciplinary PhD in system dynamics. Courses begin in September, January, and May.

**For additional information, please contact:**

Jody Reis – [jleggett@wpi.edu](mailto:jleggett@wpi.edu), 508-831-4163

Pam Shelley – [pshelley@wpi.edu](mailto:pshelley@wpi.edu), 508-831-6738

## OTHER CONFERENCE NEWS

A link to the brief, online **Post-conference Survey** is available on the conference website for a limited time. We encourage you to complete the survey and share your comments.

The anticipated publication date of the **web proceedings** is the end of September. Once it has been published to our website, we will provide, via e-mail, a link to the web proceedings and its ISBN. In addition, there will be a downloadable version of the web proceedings.

Soon we will post photographs from the conference on the web; an e-mail message will be sent to let you know when they are available. If you have photos you would like to share, please send them to add to the website collection. (If there is a photograph of you on the web that you would prefer us to remove, please let us know at [conference@systemdynamics.org](mailto:conference@systemdynamics.org).)

Information regarding the **2012 St. Gallen, Switzerland Conference** will soon be on the Society website.

## SPONSORS, EXHIBITORS, HOSTS, & FRIENDS

### **Amber Blocks Ltd.**

New York, New York, USA

### **Analytic Services Inc./ASysT**

Arlington, Virginia, USA  
anser.org

### **AnyLogic North America**

Hampton, New Jersey, USA  
www.anylogic.com

### **The Boeing Company**

Chicago, Illinois, USA  
www.boeing.com

### **Booz Allen Hamilton**

McLean, Virginia, USA  
www.boozallen.com

### **Evans & Peck Pty Ltd**

Chatswood, New South Wales,  
Australia  
www.evanspeck.com

### **Food Should Taste Good®**

Needham Heights, Massachusetts,  
USA  
www.foodshouldtastegood.com

### **Forio Online Simulations**

San Francisco, California, USA  
www.forio.com

### **GoldSim Technology Group**

Issaquah, Washington, USA  
www.goldsim.com

### **Health Services and Systems**

**Research, Duke-NUS Graduate  
Medical School**  
Singapore  
www.duke-nus.edu.sg/  
web/index.php

### **Honest Weight Food Co-op**

Albany, New York, USA  
www.hwfc.com

### **Idaho National Laboratory**

Idaho Falls, Idaho, USA  
www.inl.gov

### **International Society for the Systems Sciences**

Pocklington, York, United  
Kingdom  
www.iss.org/world

### **isee systems**

Lebanon, New Hampshire, USA  
www.iseesystems.com

### **Jantz Morgan LLC**

Boston, Massachusetts, USA  
www.jantzmorgan.com

### **William Killingsworth**

Cambridge, Massachusetts, USA  
www.businessexpertpress.com/  
books/design-analysis-and-  
optimization-supply-chains-  
system-dynamics-approach

### **Lane Press of Albany**

Albany, New York, USA  
www.lanepressofalbany.com

### **The Manufacturing Game®/Ledet Enterprises, Inc.**

Houston, Texas, USA  
www.manufacturinggame.com

### **Millennium Institute**

Arlington, Virginia, USA  
www.millennium-institute.org

### **MITRE Corporation**

McLean, Virginia, USA  
www.mitre.org

### **Office of Behavioral and Social Sciences Research, National Institutes of Health**

Bethesda, Maryland, USA  
obsr.od.nih.gov

### **PA Consulting Group**

Arlington, Virginia, USA and over  
20 other offices worldwide  
www.paconsulting.com

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

Waltham, Massachusetts, USA  
www.pegasuscom.com

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

Herndon, Virginia, USA  
www.powersimsolutions.com

### **Prognoz Corporation**

Global Locations  
www.prognoz.com

### **Ratcliff Architects**

Emeryville, California, USA  
www.ratcliffarch.com

### **Sandia National Laboratories**

Albuquerque, New Mexico, USA  
www.sandia.gov

### **SoL, The Society for**

**Organizational Learning**  
Cambridge, Massachusetts, USA  
www.solonline.org

### **Springer**

Heidelberg, Germany  
www.springer.com

### **Synapse Energy Economics, Inc.**

Cambridge, Massachusetts, USA  
www.synapse-energy.com

### **transentis management**

**consulting GmbH & Co. KG**  
Wiesbaden, Germany  
www.transentis.com.

### **Ventana Systems, Inc.**

Harvard, Massachusetts, USA  
www.vensim.com

### **Wiley-Blackwell**

Hoboken, New Jersey, USA  
www.wiley.com

### **Worcester Polytechnic Institute (WPI)**

Worcester, Massachusetts, USA  
www.online.wpi.edu

## **System Dynamics Society**

Milne 300 - Rockefeller College  
University at Albany, State University of New York  
135 Western Avenue  
Albany, New York 12222 USA  
Phone: +1 518 442 3865, Fax: +1 518 442 3398  
E-mail: office@systemdynamics.org  
**www.systemdynamics.org**

