

33rd International Conference

July 19-23, 2015 Cambridge, Massachusetts, USA

In this booklet you will find

a Welcome Letter from the Conference Organizers, recognition of the Conference Partners, Champion Sponsor, Conference Organizers, and Award Committees, a list of Thread Chair and Submission Reviewer Volunteers, an Acknowledgement of Sponsors, as well as contact information for all conference supporters, followed by a Sponsor Advertising Section.

Finally, there is information about the **permanent conference web page** which will be ready in the fall.

Welcome

Welcome to the 33rd International Conference of the System Dynamics Society. This year, the conference returns to the Cambridge-Boston area, just minutes away from Massachusetts Institute of Technology (MIT) where Jay Forrester conducted his groundbreaking work.

This year's program shows that the field of System Dynamics continues to thrive. Conference participants come from all over the world. Starting with the PhD Colloquium on Sunday, through plenary, parallel, and poster sessions Monday through Wednesday, and Thursday's workshops, you will have the opportunity to participate in conversations and presentations discussing System Dynamics work of leading academics and practitioners.

The main theme of the conference, **Reinventing Life on a Shrinking Earth**, highlights the challenges that humans face concerning resource availability and greater interconnectivity, challenges that can be met head-on with dynamic modeling. The program will consist of invited and contributed sessions and workshops demonstrating the state of the art in the theory and application of System Dynamics. The online schedule gives direct access to brief author bios, photos, and presentation slides. Furthermore, the Model Expo returns to the conference providing an extremely interactive hands-on experience with models presented at the conference. The program schedule will also include exhibits, model assistance workshops, panel discussions, special sessions, a student colloquium, and Society business meetings. Wednesday will serve as a Business Day where we expect local corporate representatives to join us and to bring along their clients for the day. Both Model Assistance and Publishing Assistance workshops are also available. Also, please make sure to visit the "Places and Spaces: Mapping Science Exhibit."

During the conference there will also be time for social and professional interaction in a relaxed and fascinating setting; an Informal Gathering on Sunday during registration, a Welcome Reception on Sunday hosted by the System Dynamics Groups of many universities, the "State of the Global Economy" Fireside Chat and light Buffet on Monday, and the Conference Banquet and Dance on Tuesday. Additionally, for those interested in knowing more about MIT, a guided tour will be available. Also, the Spouses' Lounge will offer a place for spouses, significant others, travel companions, and family members to meet, gather, and make plans to do fun things in Cambridge-Boston. This will be a great opportunity for them to make new friends and renew acquaintances; we welcome them to the conference!

This year, 28 Thread Chairs, supported by several hundred volunteer reviewers, screened and commented on around 350 submissions. In addition, several dozen volunteers worked many hours to ensure a successful conference; without their commitment our conference would be impossible. A very special thank you goes to all who helped.

In addition to all our sponsors, we are also very fortunate this year to have two conference partners, *PA Consulting Group* and the team of *Ventana Systems* and *Greenwood Strategic Advisors AG*. We sincerely appreciate the enthusiasm and support of all our sponsors.

We have confidence you will find the conference stimulating and rewarding. We ask that you bring to our attention anything that may help us to ensure the success of the current conference, as well as future ones. Thank you for attending!

On behalf of the conference committee, best wishes from,

Karim Chichakly, Khalid Saeed, Jack Homer, Hazhir Rahmandad, and Roberta Spencer

Conference Partners and Champion Sponsor

Partners: PA Consulting Group

Ventana Systems and Greenwood Strategic Advisors AG

Conference Organizers

Program Chairs: Karim Chichakly Khalid Saeed

isee systems Worcester Polytechnic Institute

Workshop Chairs: Jack B. Homer Hazhir Rahmandad

Homer Consulting Virginia Tech

Conference Manager: Roberta L. Spencer

System Dynamics Society

Award Committees

Dana Meadows Award

R. Joel Rahn, Chair Richard G. Dudley Thomas Fiddaman Florian Kapmeier

Cornell International Institute for Ventage Systems FSR Rusiness

Cornell International Institute for Ventana Systems ESB Business Food, Agriculture, and School/Reutlingen

Development University

Özge PalaKrystyna A. StaveJohn D. StermanKoç UniversityUniversity of Nevada Las VegasSystem Dynamics Group,

MIT Sloan School of Management

Jay Wright Forrester Award

Khalid Saeed, ChairJack HomerErling MoxnesWorcester Polytechnic InstituteHomer ConsultingUniversity of Bergen

John D. Sterman
System Dynamics Group,
MIT Sloan School of Management

Kim Thompson
Kid Risk Inc

System Dynamics Applications Award

J. Bradley Morrison, Acting Chair Jack Homer Mark Paich

Brandeis International Business School Homer Consulting PricewaterhouseCoopers

Kim D. Warren
Strategy Dynamics Ltd

Eric F. Wolstenholme
Symmetric Partnership Limited
Universität Stuttgart

Community Service Awards

David F. Andersen, Chair Robert Eberlein Andrew Ford

University at Albany isee systems Washington State University

Peter Milling Roberta L. Spencer
Mannheim University System Dynamics Society

Thread Chairs

Stephen Alessi

University of Iowa

Elise T. Axelrad

Human Resources Research Organization

John A. Barton

Business Strategy Dynamics

Michael Bean

Forio

Laura J. Black

Montana State University

Stephen H. Conrad

Sandia National Laboratories

Warren W. Farr

Refrigeration Sales Corporation

Thomas Fiddaman

Ventana Systems

Andreas Größler

Radboud University Nijmegen

Mark Heffernan

Advisian

Hyunjung Kim

California State University Chico

Birgit Kopainsky

University of Bergen

David W. Lounsbury

Albert Einstein College of Medicine

Ignacio J. Martínez-Moyano

Argonne National Laboratory

J. Bradley Morrison

Brandeis International Business School Camilo Olaya

Universidad de los Andes

Özge Pala

Koç University

Oleg V. Pavlov

Worcester Polytechnic Institute

Steve Peterson

Lexidyne LLC

Erik Pruyt

Delft University of Technology

Etiënne A. J. A. Rouwette

Radboud University Nijmegen

Mohamed Mostafa Saleh

Cairo University

Krystyna A. Stave

University of Nevada Las Vegas

Yutaka Takahashi

Senshu University School of

Commerce

Nuno Videira

New University of Lisbon/CENSE

David Wheat

University of Bergen

Gönenç Yücel

Bogaziçi University

Nicole Zimmermann

University College London

Submission Reviewers

Munaf S. Aamir

Sandia National Laboratories

Emmanuel D. Adamides

University of Patras

Ezekiel Adelere Adeniran

University of Lagos

Ashish Agarwal

Indira Gandhi National Open University

Eduardo Aguinaga

Tecnológico de Monterrey

Salman Ahmad

Universiti Malaysia Pahang

Hadi Akbarzadeh Khorshidi

Monash University

Bahadir K. Akcam

Western New England University

Olasunkanmi Oriola Akinyemi

Olabisi Onabanjo University

Amin Al Yaquob
Doshisha University

Fadhl Mohammed Al-Akwaa

University of Science & Technology

Mahmood Alborzi

Islamic Azad University

Robert B. Allen

Pedro Dagoberto Almaguer Prado

Beemprendedor

Paulo Roberto Vieira Almeida

Universidade Federal do Tocantins

Richard Althouse

David Erway Group

Kristjan Ambroz

Continental Reifen Deutschland GMBH

Yalda Amini

Sharif University of Technology

Lascelles Anderson

University of Illinois at Chicago

John P. Ansah

Duke NUS Graduate Medical School

Seema Arif

University of Management & Technology

Carlos A. Ariza

Stefano Armenia

Engineering Ingegneria Informatica SpA

Holger Arndt

Universitat Erlangen Namberg

Steven P. Arquitt

Kumar Ashish

Nokia Networks

Tehseen Aslam

University of Skövde

Alberto Stanislao Atzori University of Sassari

Samuel Austin

US Geological Survey

Elise T. Axelrad

Human Resources Research Organization

Ahmad Taher Azar

Benha University

Gizem N. Bacaksizlar

UNC Charlotte

George A. Backus

Sandia National Laboratories

Bent Erik Krasnapolsky Bakken

DNV GL Strategic Research &

Innovation

Yaman Barlas Bogaziçi University

Pawel Bartoszczuk

Warsaw School of Economics

Michele Battle-Fisher

Wright State University

Steffen Baver

Duke NUS Graduate Medical School

Thread Chairs and Submission Reviewers

Nor Erne Nazira Bazin Universiti Teknologi Malaysia

Allyson Beall King Washington State University

Yvonne Beck Aalen University

Todd BenDor

University of North Carolina

Asmeret Bier Naugle Sandia National Laboratories

D. Bijulal

College of Engineering Trivandrum

Sumant Kumar Bishwas DMS IIT Delhi

Enzo Bivona

University of Palermo

Laura J. Black

Montana State University

Inge L. Bleijenbergh Radboud University Nijmegen

Joachim Block

Universität der Bundeswehr München

Peter K. Bradl

Univ of Applied Sciences Wuerzburg

Malcolm Brady

Dublin City University Business School

Chris Browne

Australian National University

Fernando Buendia

EGADE Business School

Newton Paulo Bueno Federal University of Viçosa

Renmin University of China

Melike Hazal Can

Northeastern University

John Stephen Carroll MIT

Robert Y. Cavana

Victoria University of Wellington

Miguel Gaston Cedillo-Campos

Mexican Institute of Transportation

Francesco Ceresia University of Palermo

Bipin Chadha Coensys Inc

Ricardo Matos Chaim

University of Brasilia

Nishesh Chalise

Washington University in St Louis

Mei-Chih Chen

National Chiayi University

Vee Kuan Chew

SDM Keio University

Nam Hee Choi

Korea National University of Transport

Mario Chong

Universidad del Pacifico

Anna Chroni

Jianxun Chu

Univ of Science & Technology of China

Alexandru Bogdan Ciochina

5 Point Solutions

Timothy Clancy IBM

Martin Cloutier

University of Quebec at Montreal

David Collste

European Master in System **Dynamics**

Alfredo J. Colombano

Iclaves

Gianluca Colombo University of Lugano

Beth A. Conlon

Albert Einstein College of Medicine

Francesca Costanza

University of Palermo

Matthew A. Cronin

George Mason University

Sun Yat-sen University

Brian C. Dangerfield

University of Bristol

Dillip Kumar Das

Central University of Technology

Michael L. Deaton

James Madison University

Majid Dehghan

Sharif University

Hamid Reza Dehnar Saidy

New Towns Civil Professional Holding

Raul del Moral Simanek

Universidad Autónoma Baja California

Guven Demirel

Max Planck Institute

David Dickason

Bureau of Naval Personnel

Ralf Dillerup

Heilbronn University

Richard G. Dudley

Josko Dvornik

University of Split

Robert L. Eberlein

isee systems

Mert Edali

Yildiz Technical University

Sibel Eker

Delft University of Technology

Ezzat El Halabi

Australian National University

Heba Galal El-Haddad

Alexandria University

Arun Abraham Elias

Victoria University of Wellington

Ghada Elkady

Plymouth University

John Elter

Sustainable Systems, LLC

Philip C. Emmi

University of Utah

James Enos

United States Military Academy

Nicolas Escalante

InSilicoLab.co

Martiin Eskinasi

PBL Netherlands Environ Assessment Age

Gholamreza Eslamifar

Sharif University of Technology

Joern W. Ewaldt

Baker Tilly Roelfs Unternehmensberatun

Maurizio Faccio

University of Padua

Oluwabunmi Abosede Falebita Jindal Global Business School

Saeideh Fallah-Fini

California State and Polytechnic Univ

Pascaux Smala Fanokoa

Management Consulting Research

Warren W. Farr

Refrigeration Sales Corporation

Rachel Ferencik

Georgia Health Policy Center

Amarildo Fernandes

Federal University of Rio de Janeiro

Lars Finskud

Vanguard Strategy

Diana Fisher

Portland State University

Michael Fletcher

Department of Defense

Rogerio Fonseca Santovito

Universidade de São Paulo

David N. Ford

Texas A&M University

Tom Lum Forest

Prometheal Systems

Jay Forrest

Scott Fortmann-Roe

Google

Luis Gustavo F. França Federal University of Viçosa

Douglas Franco UCLA West Center University

Flavio Franco

ESTRA Energy Tech Strategies

Jan Frick

University of Stavanger

Meg Fryling Siena College

Margaret Ann Fulenwider

Helmes & Co LLC

Tetsuma Furihata

Takachiho University

Justus A. Gallati Lucerne University of Applied

Sciences

Bolivariana

Luciano Gallón Universidad Pontificia

Pascal J. Gambardella

Emerging Perspectives

Rafael M. García Rodriguez Universidad de La Coruna

Shayne Gary

University of New South Wales

Carmine Garzia

University of Lugano

Nabaraj Gautam

Hankuk University of Foreign Studies

Nicholas C. Georgantzas

Fordham University Business Schools

Navid Ghaffarzadegan

Virginia Tech

Nasim GhanbarTehrani

Tarbiat Modares University

Diana P. Giraldo

Universidad Pontificia Bolivariana

Larry Gottschamer

University of South Florida

William R. Grace

Stefan Grösser

Bern University of Applied Sciences

Burak Güneralp

Texas A&M University

John W. Gunkler

Excelsior Group

Savas Hadjipavlou

Farshid Haghighi

University of Toronto

Ali Haji Gholam Saryazdi

Tarbiat Modares University

Stefan Hallberg

Templog

UngKvu Han

Warwick Business School

Oliver Handel

Technische Universität München

Roland Maximilian Happach

University of Stuttgart

Tim Haslett

Linchpin

Bill Hawkins

Pelican Consulting International

Peter Heffron

Oslo International School

Magdy Helal

American University of The Middle East

Petri Helo

University of Vaasa

Catalina Henao

Urbanex

Gregory Hennessy

Claremont Graduate University

Milton Mauricio Herrera

Ramírez

Universidad Piloto de Colombia

Gary B. Hirsch

Creator of Learning Environments

Paul Holmström

Bioss Sweden AB

Jack B. Homer

Homer Consulting

Ghangir Hossain

The University of Memphis

Seved Hossein Hosseini

Islamic Azad University South Tehran

Jamal Hosseini Ezzabadi

IUST

Santiago Hovos

National University

Universität der Bundeswehr München

Lizhen Huang

Fuzhou University/NTNU

Tomas Hubik

Charles University in Prague

Juan M. Huerta

Juan M Huerta Inc

Margarita Hurtado Hernández

Universidad Panamericana

Lihlian Hwang

Ming Chuan University

C. Sherry Immediato

Heaven & Earth Incorporated

Tutik Inayati

Tokyo University of Science

Tetsuhiro Ishizaka

Nihon University

Jacob J. Jacobson

MindsEye Computing LLC

Justin Jagger

Michigan State University

Mohammad S. Jalali

Virginia Tech

Yasaman Jalili Texas A&M University

Balaji Janamanchi

Texas A&M International

University

Sina Jangali Kasmaei

Sharif University of Technology

Deborah L. Jarvie

Monash University/Univ of Lethbridge

Omer Jirdeh

Office of Mental Health

Paul E. Johnson

University of Minnesota

Al Jones

NIST

Andrew P. Jones

Climate Interactive

Charles A. Jones

Climate Interactive

Vasanth Vasudeva Pandubettu Kamath

TA Pai Management Institute

Florian Kapmeier

ESB Business School/Reutlingen Univ

Özge Karanfil

MIT

Evangelos Katsamakas

Fordham University

Rossen Kazakov

World Business Web Association

James Kehoe Compliance and Risks

Bruce Keith

United States Military Academy

David Keith

MIT

Andjelka Kelic

Sandia National Laboratories

Andreas Kemper

European Business School

Naeem U. Khan

Department of Immigration and

Border P

Miral Khodeir

Cairo University

Dong-Hwan Kim

Chung Ang University

Gi Soo Kim

Chungbuk National University

Miroljub Kljajić

University of Maribor

Mirjana Kljajić Borstnar

University of Maribor

Davorin Kofjac

University of Maribor

Ulli H. König

RWE Deutschland AG

Siva Muthuprakash Kottakarar Murugan

Indian Institute of Technology

Bombay

Saroj Koul Jindal Global Business School

Jill A. Kuhlberg Washington University in St

Louis

Thomas Kuhn

armasuisse W+T

Veasna Kum

Zaman University

Martin H. Kunc Chester S. Labedz

Central Connecticut State University

Peter Lacey Whole Systems Partnership

Ernesto Alonso Lagarda Leyva

Instituto Tecnologico de Sonora

Sharon Lansing New York State Div of Crim

Instice

Ted J. Lawrence

New York State Energy

Research and Dev

Rene LeClaire Los Alamos National Laboratory

Man-Hyung Lee Chungbuk National University

Myoung Ho Lee Han-Kuk University of Foreign

Studies

Tsuey-Ping Lee National Chung-Cheng

University

Carlos A. Legna La Laguna University

Rudi A. F. Lepomme

Gartner Ilya Levin

Tel Aviv University

Anson Kin Tat Li

University of Auckland Lan Hai Li

Xinjiang Inst of Ecology &

Geography

Thread Chairs and Submission Reviewers

Shyh-Jane Li

Commerce Development Research Inst

Bradd Libby

DNV GL Strategic Research & Innovation

Chien-Liang Lin

National Kaohsiung First University

Keith Thomas Linard

Ankie System Dynamics

Ralf Lippold

HTxA - High Tech x Agency

Jianguo Liu

National Grid Corp

Jing-jiang Liu

Zhejiang University

Manuel Liz

La Laguna University

Eduvn R. Lopez

Universidad Distrital Francisco José

Luis E. López

INCAE Business School

David W. Lounsbury

Albert Einstein College of Medicine

Luis F. Luna-Reyes

University at Albany

Yufeng Luo

Hohai University

Kathleen Lusk Brooke

Center for the Study of Success

Natalia N. Lychkina

National Research University Higher Sc

John Lyneis

Kambiz Maani

Massey University New Zealand

Rajneesh Mahajan

Apeejay School of Management

Morteza Mahmoudzadeh

Mohammad Majdalawi

Arab Organization for Agricultural Dev

Saku J. Mäkinen

Tampere University of Technology

Leonard A. Malczynski

Sandia National Laboratories

Abhijit Mandal

Cass Business School

Martin E. Maren

Milica Marinkovic

University of Bergen

Ignacio J. Martínez-Moyano

Argonne National Laboratory

George Matthew

The Open University

Georgia Mavrommati

Dartmouth College

Marion McGregor

Canadian Memorial Chiropractic College

Stephen B. McIntosh

Applied Enterprise Systems (AES) Ltd

Douglas McKelvie

The Symmetric Partnership

Michael L. McManus

Boston Children's Hospital

Arif Mehmood

Department of Transport

Balagopal G. Menon

Division of Production and Industrial

Stefania Migliavacca

Eni Corporate University

Luis Javier Miguel

University of Valladolid

Birute Mikulskiene

Stanislava Mildeova

University of Economics in Prague

Mykolas Romeris University

Michelle Miller

University of Wisconsin Madison

Peter M. Milling

Mannheim University

Nobuaki Minato

Ritsumeikan University

Jonathan D. Moizer

Plymouth University

Edoardo Mollona

Università degli Studi di Bologna

William M. Montante

Marsh USA Inc

Tae Hoon Moon

Chung Ang University

Andrew P. Moore

Carnegie Mellon University

M. Hashem Moosavi Haghighi

Ministry of Agriculture

Marciano Morozowski WeSee - System Dynamics

Vision

J. Bradley Morrison

Brandeis International Business School

Allen Moulton

MIT

Matthias Otto Müller

Greenwood Strategic Advisors AG

Frank K. Murdock

Plymouth Engineered Shapes

Josephine Kaviti Musango

Stellenbosch University

Rodnev S. Myers

US Navy Personnel Command

Robert T. Nachtrieb

Lutron Electronics

Sergey Naumov MIT

Carlos Raul Navarro Gonzalez

Jose Luis Neri Torres

Universidad de Colima

Nobuo Nishi

National Inst of Health & Nutrition

Giuseppe Noce

Shabnam Nourinejhad

Isfahan University of Technology

William J. Nuttall

The Open University

Camila Ochoa

University of Lausanne

Stephen Olu Ogunlana

Heriot-Watt University

Michael G. Oladokun University of Uyo

Camilo Olava

Universidad de los Andes

Nisa Önsel

Bogaziçi University

Gerard O'Reilly

LGS Innovations/Bell Labs

Nordin B. Othman

Zetta Consultants Sdn Bhd

Onur Özgün

Northeastern University

Ozgur Ozkan

Astrazeneca Pharmaceuticals

David W. Packer

Systems Thinking Collaborative

Erika K. Palmer

University of Bergen

George Papachristos

Delft University of Technology George Nathaniel

Papageorgiou

European University Cyprus

Vassilis Papakonstantinou Eugenides Foundation

Theresa Pardo

University at Albany

Roberto Pasqualino

Anglia Ruskin University

Leonard Peacefull

University of Akron **Corey Peck**

Lexidyne LLC

Mirjana Pejic-Bach University of Zagreb

Janecke Pemmer PricewaterhouseCoopers

Tomy Perdana

Padjadjaran University

Francisco J. Perez Santander GROUP - Igs

Gloria Pérez Salazar

Tecnológico de Monterrey

Steve Peterson Lexidyne LLC

David G. Pfeiffer

Harrison College

Kawika Pierson Willamette University

Angele Pieters Tilburg University

Seçkin Polat

Istanbul Technical University

Nella M. Porter

Washington University in St Louis

P. Jeffrey Potash

CIESD

Saeed Pourmasoumi

Langarudi Worcester Polytechnic Institute

Richard J. Pro

UPMC Health Plan

Liang Qi

Second Military Medical University

Ying Qian

Shanghai University

Hassan Qudrat-Ullah

York University

Muhammad Azeem Qureshi

Oslo and Akershus University College

Luis Rabelo

University of Central Florida

Jaziar Radianti

University of Agder

Mohammadhussein Rafieisakhaei

Texas A&M University

Hazhir Rahmandad

Virginia Tech

Krishnan Raman

Boris Ramos

Weijia Ran

University at Albany

Jorgen Randers

Norwegian Business School BI

David Rees

Synergia Ltd

Rebecca Reese

Fielding Graduate University

Juan C. Rego

Jose Luis Revah

SHL

Eliot Rich

University at Albany

John M. Richardson

National University of Singapore

Robert Rieg

Aalen University

James L. Ritchie-Dunham

Institute for Strategic Clarity

Mark Rivers

ClearWater Research and Management Pty

Donald Robadue

Coastal Resources Center

Leno Rocha

Instituto Tecnológico de Aeronáutica

Ilir Rodiqi

University of Pristina

Lewlyn L. R. Rodrigues

Manipal University

Jose Carlos Rodríguez

Economic and Business Research Instit

Ricardo A. Rodríguez-Ulloa

Instituto Andino de Sistemas

Eduard Romanenko

University of Bergen/Univ of Palermo

Zuzana Rosenberg

Technische Universität München

Jay K. Rosengard

Harvard University

Etiënne A. J. A. Rouwette Radboud University Nijmegen

Rahul K. Rov

Indian Institute of Management

Raja Divakar Kakollu Roy

Andhra University

Sampsa Ruutu

VTT Tech Research Centre of Finland

Alexander V. Ryzhenkov

Novosibirsk State Univ/IEIE SB RAS

Ricardo Saavedra Marroquin

Federal University of Bahia

Nasim S. Sabounchi

Binghamton University

Abdolrahim Salavitabar

Mahab Ghodss Consulting Engineers

Mohamed Mostafa Saleh

Cairo University

Lakshminarayanan Samavedham

National University of Singapore

Erico Resende Santos

Mondosim

Joaquim Rocha dos Santos

Universidade de São Paulo

Stephen Sapol

United States Military Academy

Jose Mari Sarriegi

Tecnun - University of Navarra

Alark Saxena

Yale University

Ali Kerem Saysel

Bogaziçi University

Martin F. G. Schaffernicht

Universidad de Talca

Lukas Klaus Schoenenberger

Duke-NUS Graduate Medical

School

Michael Schwandt

Markus Schwaninger

University of St Gallen

Sylvia Schweiger

University of Linz Austria

Habib Sedehi

University of Rome

Claudio Seitz

Robert Bosch GmbH

Daniel Alberto Sepulveda **Estay**

DTU Technical Unversity of Denmark

Mohammad Shamsuddoha

Curtin University

Man-Hua Sheng

Taiwan Textile Research Institute

Timothy J. Shimeall

Carnegie Mellon University

William Siemer

Cornell University

Lukas Beladi Sihombing

University of Indonesia

Martin Simon

Andrej Skraba

University of Maribor

Valerijs Skribans

Riga Technical University

Jill H. Slinger

Delft University of Technology

Merica Sliškovic

University of Split

Casev Smith

Leading Edge Expertise LLC

Chris Soderquist

Pontifex Consulting

Alireza Soloukdar Central Tehran Brnch Islamic

Azad Univ

Amaia Sopelana

TECNALIA Research & Innovation

M. Dolores Soto-Torres

Universidad de Valladolid

J. Michael Spector

University of North Texas

Yeoryios A. Stamboulis University of Thessaly

Peter Stasinopoulos

Australian National University

Krystyna A. Stave

University of Nevada Las Vegas

Paul L. Stepanovich

Southern Connecticut State University

John Sterman

MIT

Hendrik Stouten

Institute for Management Research

Jeroen Struben

McGill University

Lees N. Stuntz

Creative Learning Exchange

Athor Subroto

Universitas Indonesia

Toru Suetake

Japan Futures Research Center

Marek Susta

Proverbs Corporation

Aziiz Sutrisno

European Master in System

Dynamics

Harald Sverdrup University of Iceland

Fabian Szulanski

Amir T. Tajrishi

ITRA

TSI Group

Yutaka Takahashi Senshu University School of

Commerce **Burcu Tan**

Tulane University

Muhammad Tasrif

Bandung Institute of Technology Ivan William Taylor

Policy Dynamics Inc

Timothy R. B. Taylor University of Kentucky

Pard Teekasap Thai-Nichi Institute of

Technology

Sirasak Tepjit King Mongkut's Univ of Technology

Seyyed Amin Terouhid University of Florida

Wil A. Thissen Delft University of Technology

Victor Thombs

Decision Dynamics

Thread Chairs and Submission Reviewers

James P. Thompson

Fang Tian

University of Southern California

Warren W. Tignor

Flavio Tonelli

University of Genoa

Jeff W. Trailer

California State University Chico

Denis Trček

University of Ljubljana

Anton Trijssenaar

Theo Tryfonas University of Bristol

Ya-tsai Tseng

Tunghai University

Ufuk Turen

Turkish Military Academy

Ben Turner

New Mexico State University

Silvia Astrid Ulli-Beer

Imrana A. Umar **Powersim Solutions**

Nigel Unwin

University of the West Indies

Lalit Upadhayay ITM University

Mauricio Uriona Maldonado

Federal University of Santa Catarina

Cornelia van Daalen

Delft University of Technology

Theo van Mullekom

Margarita Vázquez

La Laguna University

Gerald Fermin Velasquez

Ingmar Vierhaus

Zuse Institute Berlin

Roberto E. Villaseñor

ITESM Campus Toluca

Klaus Ole Vogstad

WindFarmDesigns, DominuSoft

John J. Voyer

University of Southern Maine

Khaled Wahba

Cairo University / Maastricht School

Wayne Wakeland

Portland State University

Keming Wang

Counties Manukau District Health Board

Wei Yang Wang

National Kaohsiung Univ of Applied Sci

Wei-Tsong Wang

National Cheng Kung University

Lalit Narendra Wankhade

SGGS Institute of Engineering and Tech

Kim D. Warren

Strategy Dynamics Ltd

J. Chris White

ViaSim Solutions

Elin Whitney-Smith

Netalyst Inc

Sanith Wijesinghe

MITRE Corporation

Ines Winz

University of Auckland

Ellen Wolfe

Resero Consulting

Bernd Wurth

Strathclyde Business School

Kaoru Yamaguchi

Japan Futures Research Center

Takayuki Yamashita

Shizuoka University

Miles Min-Huei Yang University of Wollongong **Michael Yearworth**

University of Bristol

Joseph Yoon

Institute for International

Commerce

Gönenç Yücel Bogaziçi University

Dewi Yuliani

Mining and Energy Office of West Java

Erich K. O. Zahn

University of Stuttgart

Raafat Zaini

Worcester Polytechnic Institute

Felipe Zapata

Universidad Pontificia

Bolivariana

Aminah Zawedde

Makerere University, SCIT

Judy Zhao

East China Normal University

Agnieszka Ziomek

Poznan University of Economics

Roy G. Zúñiga

INCAE Business School

Many thanks to every volunteer for their time and energy. Our apologies if we inadvertently omitted anyone from any list. If you are interested in volunteering for future conferences, please contact the System Dynamics Society at office@systemdynamics.org; include your name, contact information and area of interest.

Acknowledgement of Sponsors

Partners



And



Sponsor of Conference Banquet



Sponsor of Refreshment Breaks

Champion Sponsor



Sponsor of Thursday Workshops

Supporting Sponsors























System Dynamics Program, Social Science and Policy Studies Department



Exhibitor Level Sponsors

















COOPER HUMAN SYSTEMS







Friends























Welcome Reception Hosts

System Dynamics Groups at Frankfurt School of Finance & Management; Massachusetts Institute of Technology; Social System Design Lab, The Brown School, Washington University in St. Louis; University of St. Gallen; University at Albany; University of Bergen; and Worcester Polytechnic Institute (WPI).

Many organizations and individuals contributed to this conference. We wholeheartedly thank our sponsors and encourage you to thank their representatives during the conference.

Please also see contact information for all conference supporters on the following page.

Our Sincere Thanks To All Our Sponsors

Partners, Sponsors, Exhibitors, and Friends

AnyLogic North America

Illinois, USA anylogic.com

Argonne National Laboratory

Illinois, USA anl.gov

Bobo's Oat Bars

Colorado, USA bobosoatbars.com

Allen L. Boorstein

New York, USA

BumbleBar, Inc.

Washington, USA bumblebar.com

Cooper Human Systems

New Hampshire, USA

Crispy Green

New Jersey, USA crispygreen.com

Crunchmaster

Illinois, USA crunchmaster.com

Forio

California, USA forio.com

Frankfurt School of Finance & Management

Frankfurt, Germany frankfurt-school.de

Georgia Health Policy Center, Georgia State University

Georgia, USA ghpc.gsu.edu

Health Warrior

Virginia, USA healthwarrior.com

Hyatt Regency Cambridge

Massachusetts USA cambridge.hyatt.com/en/hotel/ourhotel.html

Idaho National Laboratory

Idaho, USA inl.gov

International Society for the Systems Sciences

York, United Kingdom isss.org/world

isee systems

New Hampshire, USA iseesystems.com

Jantz Management LLC

Massachusetts, USA jantzmgmt.com

Lane Press of Albany

New York, USA lanepressofalbany.com

Lundberg Family Farms

California, USA lundberg.com

Mary's Gone Crackers

California, USA marysgonecrackers.com

MITRE Corporation

Virginia, USA mitre.org

Natural Balance Foods

California, USA naturalbalancefoods.com/nakd/

Nature's Bakery

Nevada, USA naturesbakery.com

PA Consulting Group

US, UK, and offices worldwide paconsulting.com

RawRev

New York, USA rawrev.com

SACU

Texas, USA sacu.com

Sandia National Laboratories

New Mexico, USA sandia.gov

Social System Design Lab, The Brown School, Washington University in St. Louis

Missouri, USA

brownschool.wustl.edu/Faculty/Research Centers/SocialSystemDesignLab/Pages /systemsdynamics.aspx

Strategy Dynamics Ltd

Princes Risborough, United Kingdom strategydynamics.com/isdc

System Dynamics Group, MIT

Massachusetts, USA mitsloan.mit.edu/group/system-dynamics

System Dynamics Group, University at Albany

New York, USA albany.edu/cpr

/projects_systems_dynamics.shtml

System Dynamics Group, University of Bergen

Bergen, Norway uib.no/rg/dynamics

System Dynamics Program, Social Science and Policy Studies Department, WPI

Massachusetts, USA wpi.edu/academics/ssps /gradprograms.html

transentis management consulting GmbH & Co. KG

Berlin, Germany transentis.com

University of St. Gallen

St. Gallen, Switzerland unisg.ch/en

Ventana Systems and Greenwood Strategic Advisors AG

Worldwide locations ventanasystems.com and greenwoodag.com

ViaSim Solutions

Texas, USA viasimsolutions.com

Whole Systems Partnership North Yorkshire, United Kingdom

North Yorkshire, United Kingdom thewholesystem.co.uk

Wiley

New Jersey, USA wiley.com

Worcester Polytechnic Institute (WPI)

Massachusetts, USA bit.ly/wpi-sds

50 YEARS OF IMPROVING PERFORMANCE, REDUCING COSTS AND GENERATING NEW REVENUES.

We helped a major automobile manufacturer to achieve faster, cheaper, better product development.

We worked to reduce the total ownership costs of the US Navy's most expensive military platforms.

We helped Hughes-Raytheon win a \$50 million bonus by delivering a \$1 billion defence development program six months ahead of schedule.

To find out more about how PA can help your organization address complex strategic challenges, please visit:

www.paconsulting.com/SystemDynamics





Partnering to Innovate

Systems are getting larger and more complex while the ability to understand and manage them has hardly grown at all. Together with our many friends and colleagues in the dynamic simulation community, Ventana and Greenwood are investing to transform models from interesting inventions to powerful market-creating innovations that drive deep and broad change.

We help customers manage complex dynamic environments. We focus on important problems, including: metropolitan sustainability – energy, economic, environmental, and social; insurance reforms and sustainability of health-care systems; large-scale project and change efforts; and energy markets and related capital projects. We are also developing the next generation of software tools to support these efforts.

Come See What's New

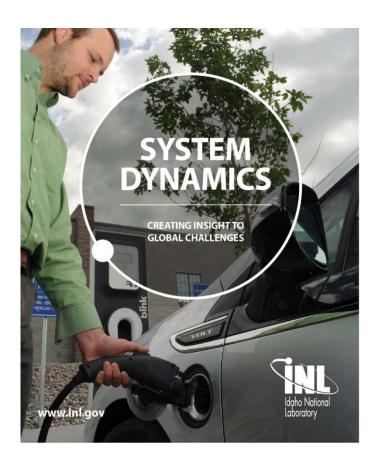
This summer, we will be announcing new tools for building better models of complex systems. Key benefits are:

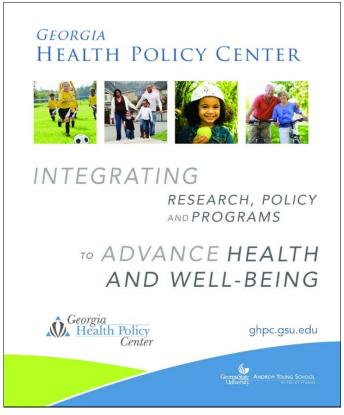
- Hierarchy and object orientation
- Dynamic creation and deletion of model components and relationships
- Support for team collaboration, model federation and submodels
- Advanced graphics and a new, clean look
- A pure declarative language (no programming)

Vensim continues to improve as well, with upgrades to random number generation, Monte Carlo sampling, MCMC and stochastic optimization.

Please stop by and visit us at the Ventana/Greenwood table during the conference. Or, come to the Vensim user's group meeting and our Thursday workshops on Vensim and building entity-based system dynamics models.







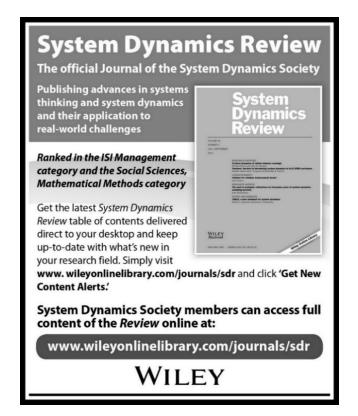




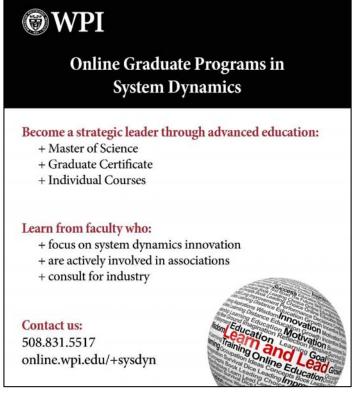
System Dynamics Group



Proud Sponsor of the
33rd International
Conference of the
System Dynamics Society







COMING SOON

After the conference, the full proceedings, including complete papers, will be available. In the fall, check the permanent conference web page to find all conference related items, such as those listed below.

From the conference website menu, choose <u>Past Conferences</u>, then choose <u>2015 Cambridge</u>, <u>MA USA</u>.

Permanent Conference Web Page



33rd International Conference of the System Dynamics Society

July 19 - July 23, 2015 Cambridge, Massachusetts USA

Program Chairs: Karim Chichakly, Khalid SaeedWorkshop Chairs: Jack B. Homer, Hazhir RahmandadConference Manager: Roberta L. Spencer

Conference Partners: PA Consulting Group

Ventana Systems and Greenwood Strategic Advisors

Champion Sponsor: SACL

Proceedings

- Full Web Proceedings
- Bound, Printed Full Proceedings
- Sessions by Thread
- PhD Colloquium

Related Links

- Awards
- Photos
- Sponsor Notes
- Sponsor Lists and Links
- Chapter/SIG E-posters

Other Links

- Past Conferences
- Current Conference

