



THE SOCIETY FOR
MODELING & SIMULATION
INTERNATIONAL

ANNSIM

Annual Modeling and Simulation Conference 2022

JULY 18 - 20, 2022

Conrad Prebys Aztec Student Union, San Diego, CA, USA



Table of Contents

Organization Committee	4
Welcome Message	6-7
Keynote Information	8-9
General Information	11-14
Tutorials Information	15-16
San Diego State University Maps	17-20
Sessions at a Glance	22-23
SPECTS/CNS Agenda	26
MSCS Agenda	27
HPC Agenda	27
SimAUD Agenda	28,38-39
TMS Agenda	29
NaHOM Agenda	30-31 and 36-37
MSM Agenda	32 and 40
CPS Agenda	33
HSAA/AIS Agenda	35
ET-SCM Agenda	41
MSBSE Agenda	41
ANSS Agenda	41
M&S Poster & Demo Track	43
Things to do in San Diego	45-48
Sponsors	50-51

All Conference Papers will be available online at www.scs.org/scs-conference-proceedings-information/2022

Organization Committee

General Chair: Mamadou Kaba Traore

Vice-General Chair: Hamdi Kavak

Program Chair: Azam Khan

Proceedings Chairs: Cristina Ruiz Martin,
Maria Julia Blas, Niloufar Emami and
Roya Rezaee

Awards Chair: Xiaolin Hu

Publicity Chairs: Angelos Chronis and Yuanjun Laili

Tutorial Chairs: Simon Gorecki and Alberto Falcone

Logistics Chair: John Richardson

M&S Poster & Demo : Jalal Possik and Danielle Azar

Welcome

Welcome from the ANNSIM '22 Conference Chairs

Welcome to San Diego!

As the General Chair, and on behalf of the Organizing Committee, I am delighted and honored to welcome you to ANNSIM'22, the 2022 Annual Modeling and Simulation Conference. Hosted by The Society for Modeling and Simulation International (SCS), which celebrates its 70th anniversary this year, the Annual Modeling and Simulation Conference (ANNSIM) is the flagship conference of SCS to cover state-of-the-art developments in Modeling & Simulation (M&S). The various members of SCS have worked hard to make these three days very exciting and to ensure that ANNSIM continues to establish itself as one of the leading events in the M&S community.

With the post-COVID-19 period, ANNSIM'22 gives participants the opportunity to celebrate with SCS the reopening of the face-to-face conference in July 2022. Moreover, SCS has prioritized conference sites that minimize the impact on the environment to help build a sustainable future. San Diego State University will share how it is rising in the ranks of the most sustainable academic campuses to educate attendees, including how the use of energy M&S helps to inform advanced sustainable building design and construction.

ANNSIM'22 program includes a world-class selection of peer-reviewed original research papers, tutorials, poster presentations, and a keynote speech delivered by Prof. Michael Grieves, a world-renown expert in Digital Twin. Participants will also have the opportunity to enjoy several social events, taking advantage of the pre-Comic-Con events to be held in beautiful San Diego and surrounding areas.

ANNSIM'22 has technical co-sponsorships from both the Association of Computing Machinery (ACM) and the Institute of Electrical and Electronics Engineers (IEEE). ACM is the world's largest educational and scientific computing society, delivering resources that advance computing as a science and a profession. IEEE is the world's largest technical and professional organization dedicated to advancing technology for the benefit of humanity. SCS' co-sponsorship agreements with both ACM and IEEE allow the ANNSIM'22 proceedings papers to be archived in both the ACM Digital Library and the IEEE Xplore digital library.

Our sincere appreciation goes to the track chairs, whose invaluable efforts in their respective sections were key to the success of the overall conference. This year's tracks and chairs are: AI and Simulation (chaired by Joon-Seok Kim and Andreas Züfle), Annual Simulation Symposium (chaired by José Luis Risco Martín and Erika Frydenlund), Cyber Physical Systems (chaired by Claudio Gomes and Bentley Oakes), Emerging Topic – Supply Chain Modeling (chaired by Scott Rosen and Anastasia Anagnostou), High Performance Computing and Simulation (chaired by James Nutaro), Humans, Societies, and Artificial Agents (chaired by Andreas Tolk and Taylor Anderson), Modeling and Simulation based Systems Engineering (chaired by Andrea D'Ambrogio and Greg Zacharewicz), Modeling and Simulation for Smart Energy Systems (chaired by James Nutaro and

Welcome from the

ANNSIM'22 Conference Chairs

Ozgur Ozmen), Modeling and Simulation in Cyber Security (chaired by Sachin Shetty and Danda Rawat), Modeling and Simulation in Medicine (chaired by Jerzy W. Rozenblit, Michel Audette and Minsik Hong), Theory and Foundations for Modeling and Simulation (chaired by Hessam Sarjoughian and Joachim Denil), Symposium on Simulation for Architecture and Urban Design (chaired by Roya Rezaee and Niloufar Emami), Symposium on Performance Evaluation of Computer and Telecommunications Systems / Communications and Networking Simulation (chaired by Malamati Louta, George Karetsos, Abdolreza Abhari and Ala'a Al-Habashna), Tutorial Track (chaired by Simon Gorecki and Alberto Falcone), and M&S Demo & Poster Track (chaired by Jalal Posik and Danielle Azar).

This year, ANNSIM has thoroughly been deepened with the addition of the Symposium on Simulation for Architecture and Urban Design (SimAUD), and the Symposium on Performance Evaluation of Computer and Telecommunications Systems (SPECTS). SPECTS has merged with the Communications and Networking Simulation track to form the SPECTS/CNS track. ANNSIM'22 also co-hosts the North American High Order Methods Conference (NaHOMCon).

We extend our appreciation to the technical program committees and reviewers in all tracks for their thorough work and diligence during the rigorous peer review process, which made it possible to set up a program of selected and high-quality presentations. We also express our gratitude to the authors and tutorial and poster presenters for submitting their work to ANNSIM'22 from all over the world.

ANNSIM wouldn't be possible without the dedication and tireless effort of the members of the Organization Committee: Hamdi Kavak (Vice-General Chair), Azam Khan (Program Chair), Cristina Ruiz Martin (Proceedings Chair), Xiaolin Hu (Awards Chair), Angelos Chronis and Yuanjun Laili (Publicity Chairs), and John Richardson (Logistics Chair).

Our final thanks go to SCS officers, Oletha Darensburg and Carmen Ramirez, for the smooth running of conference coordination activities. Our profound gratitude finally goes to Andrea D'Ambrogio, Vice President for SCS Conferences, for his exceptional support in shaping various aspects of ANNSIM'22 over the organization process.

We hope you enjoy ANNSIM'22, and we look forward to your participation in future SCS events.

Mamadou Kaba Traore
General Chair
University of Bordeaux
France

Hamdi Kavak
Vice-General Chair
George Mason University
USA

Azam Khan
Program Chair
Trax.co
Canada

Keynote

Keynote Information

Digital Twins: Utilizing M&S to Drive 21st Century Transformation

Author: Dr. Michael Grieves

Location: Conrad Prebys Aztec Student Union Theatre

Day | Time: July 18, 2022 | 9:00 a.m.-10:00 a.m.

Abstract: Digital Twins are driving 21st-century transformation by moving work from the physical world into virtual world. This transformation replaces atom-based wasted physical resources of time, energy, and material with bit-based information. Modeling and Simulation (M&S) is a prime technological enabler of Digital Twins. Dr. Grieves will discuss the integral role M&S plays in today's Digital Twins for both products and processes, the role M&S will play in the future, and issues and technologies that will need to be considered and addressed.

Short Biography: Dr. Michael Grieves is an internationally renowned expert on Digital Twins, a concept that he originated, and organizational digital transformation. His focus is on product development, engineering, systems engineering, and complex systems, manufacturing, especially additive manufacturing, and operational sustainment. Dr. Grieves has written the seminal books on Product Lifecycle Management and the seminal papers and chapters on Digital Twins. He has consulted and/or done research at some of the top global organizations, including NASA, Boeing, Unilever, Newport News Shipbuilding, and General Motors.

In addition to his academic credentials, Dr. Grieves has over five decades of extensive executive and deep technical experience in both global and entrepreneurial technology and manufacturing companies. He has been a senior executive at both Fortune 1000 companies and entrepreneurial organizations during his career. He founded and took public a national systems integration company and subsequently served as its audit and compensation committee chair. Dr. Grieves has substantial board experience, including serving on the boards of public companies in the United States, China, and Japan.

Dr. Grieves earned his B.S. Computer Engineering from Michigan State University, an MBA from Oakland University, and his doctorate from Case Western Reserve University.



the

This Page Intentionally Left Blank

General Information

General Information

Registration

Your registration for SCS's 2022 Annual Modeling and Simulation Conference (ANNSIM'22) includes morning and afternoon breaks each day, the Monday evening reception and access to all sessions, tutorials and offsite events (unless otherwise noted).

- **Registration Hours (Templo Mayor, Second Floor)**

- ◇ **Sunday**, July 17, 2022 5:00 p.m.—7:00 p.m. *
- ◇ **Monday**, July 18, 2022 8:00 a.m.—5:00 p.m.
- ◇ **Tuesday**, July 19, 2022 8:00 a.m.—5:00 p.m.
- ◇ **Wednesday**, July 20, 2022 8:00 a.m.—2:00 p.m.

Please note that the Registration Desk will be closed for lunch Mon-Wed from 12:00 p.m.—1:30 p.m.

- **Breakfast (Templo Mayor, Second Floor)**

- ◇ **Monday**, July 18, 2022 8:00 a.m. —8:30 a.m.
- ◇ **Tuesday** July 19, 2022 8:00 a.m.—8:30 a.m. (Coffee Only)

- **Coffee Breaks (Templo Mayor, Second Floor)**

- ◇ **Monday**, July 18, 2022 10:00 a.m.—10:30 a.m. | 3:00 pm.—3:30 p.m.
- ◇ **Tuesday**, July 19, 2022 10:00 a.m.—10:30 a.m. | 3:00 pm.—3:30 p.m.
- ◇ **Wednesday**, July 20, 2022 8:30 a.m.—9:30 a.m.

- **Plenary Session and Keynotes (Conrad Prebys Aztec Student Union Theatre, Floor 2)**

- ◇ **Monday** 9:00 a.m.—10:00 a.m.—SCS Keynote: Dr. Michael Grieves
- ◇ (See Keynote page 12 for more information on the speakers)

*Badge Pickup only will be located at San Diego Marriott Mission Valley, 8757 Rio San Diego Dr., San Diego, CA 92108

General Information

Conference Meetings & Events

- **Sunday:** SCS Board Meeting (9:00 a.m.); San Diego Marriott Mission Valley
 8757 Rio San Diego Dr., San Diego, CA 92108
 Room: Balboa 1
 *SCS Board Members

 Evening Meet & Greet (6:00 p.m.); San Diego Marriott Mission
 Valley Hotel
 8757 Rio San Diego Dr., San Diego, CA 92108
 *All conference attendees invited. Arrived attendees can
 mingle with served Hors d'Oeuvres
- **Monday:** Plenary Session and Keynote Address; (8:30 a.m.—10:00 a.m.)

 Strategy Day 1 (12:30 p.m.—1:30 p.m.); Legacy Suite
 Light Lunch Provided
 *All conference attendees invited

 Welcome Reception (5:00 p.m.—7:00 p.m.); Conrad Prebys Aztec
 Student Union, Third Floor Terrace
 6075 Aztec Cir Dr., San Diego, CA 92182
 Buffet Mexican Fiesta
 *All conference attendees invited
- **Tuesday** Strategy Day 2 (12:30 p.m.—1:30 p.m.); Legacy Suite
 Light Lunch Provided
 *All conference attendees invited

 Simulation Editorial Meeting (5:00 p.m.) Templo Mayor
 *By invitation only

 Closing Mixer (5:15 p.m.—6:00 p.m.); Eureka
 5140 College Ave Suite 111, San Diego, CA 92115
 *All conference attendees invited
- **Wednesday** Poster/Demo Session and Tutorials (12:00 p.m.—2:00 p.m.)
 Atzlan

General Information

Best Paper Award

The Overall Best Paper Awards for ANNSIM'22 will be presented at Monday's Plenary Session.

Posters

The posters will be on display throughout the week to be viewed.

Demo Session

The purpose of the M&S Demo Session is to engage students in simulation development, implementing M&S theories in the simulation application. The simulation environment can be as simple as a desktop M&S application or remote M&S interface on a tablet device, to as complicated as M&S tool running on a distributed platform. The demo will include execution of at least a single simulation scenario on desktop or mobile platform and displaying the results of the simulation. Use of open-source tools and libraries can be incorporated into the system, however, the use of commercial simulation tools is not allowed in the demo. Allotted time for each demo is 15mins with 5mins of Q&A.

Wi-Fi

EDUROAM Users:

If you have an EDUROAM account, you will be able to have access to EDUROAM WIFI through the university.

If you do not have an EDUROAM account, here is the university WIFI Information:

Visitor Access

Username: AMSC@gmail.com

Password: 60042

Baggage

On Wednesday, July 20, 2022, in the room Templo Mayor, you are welcomed to leave your luggage before heading out to the airport/road.

Personal Belongings

SCS and SDSU is not responsible for any items left in the breakout rooms. We recommend that you make sure to take your things before the end of each day.

COVID-19

In an effort to reduce COVID-19 exposure, you are welcomed to wear a mask and follow COVID-19 safety guidelines on the campus. SCS will provide masks and hand sanitizer that attendees are welcome to use. However, SCS is not responsible for the spread or contraction of COVID-19 during and after the ANNSIM'22 event.

Tutorials Information

Session Chairs: Simon Gorecki and Alberto Falcone

Tuesday

Using Simulation to finalize Certification of Unmanned Autonomous Systems over Multi Domain Virtual Testing Environment

Date: Tuesday, July 19, 2022, 10:30 a.m.—12:00 p.m.

Presenters: Agostino Bruzzone, Roberto Cianci and Antonio Giovannetti

Location: Legacy Suite, Third Floor

Introductory Tutorial on Agent-based Modeling and Simulation: ABM Design for the Coming Zombie Apocalypse

Date: Tuesday, July 19, 2022, 1:30 p.m.—3:00 p.m.

Presenter: Chick Macal

Location: Legacy Suite, Third Floor

Defining CELL-DEVS Models with CD++ Online Simulation Environment

Date: Tuesday, July 19, 2022, 3:30 p.m.—5:00 p.m.

Presenters: Gabriel Wainer and Cristina Ruiz Martin

Location: Legacy Suite, Third Floor

Tutorials Information

Session Chairs: Simon Gorecki and Alberto Falcone

Wednesday

Building a Distributed Agent-based Model with Repast4Py

Date: Wednesday, July 20, 2022, 9:00 a.m.—12:00 p.m.

Presenters: Nicholson Collier and Jonathan Ozik

Location: Atzlan, Second Floor

Applications of Deep Learning in Modeling of Dynamical Systems

Date: Wednesday, July 20, 2022, 9:00 a.m.—12:00 p.m.

Presenter: Christian Legaard

Location: Atzlan, Second Floor

An Introduction to Equation-based Object-Oriented Modelling and Simulation with Modelica

Date: Wednesday, July 20, 2022, 9:00 a.m.—12:00 p.m.

Presenter: Hans Vangheluwe

Location: Metzli, Second Floor

Complex simulation specification: Do your simulations meet their needs?

Date: Wednesday, July 20, 2022, 9:00 a.m.—12:00 p.m.

Presenter: Henri Sohier

Location: Metzli, Second Floor

Maps

First Floor



Second Floor



Third Floor



Agenda at a Glance

ANNSIM'22 Ses

		ANSS	SPECTS/CNS	HPC	MSM
Monday 18-July-22					
8:30 a.m.—10:00 a.m.	SCS Plenary				
10:00 a.m.—10:30 a.m.	Break				
10:30 a.m.—12:00 p.m.	Session Block I				
Lunch					
1:30 p.m.—3:00 p.m.	Session Block II				
3:00 p.m.—3:30 p.m.	Break				
3:30 p.m.—5:00 p.m.	Session Block III				
Tuesday 19-July-22					
8:30a.m.—10:00 a.m.	Session Block IV				
10:00a.m.—10:30 a.m.	Break				
10:30a.m.—12:00 p.m.	Session Block V				
Lunch					
1:30 p.m.—3:00 p.m.	Session Block VI				
3:00 p.m.—3:30 p.m.	Break				
3:30 p.m.—5:00 p.m.	Session Block VII				

* All Conference Papers will be available online at

essions at a Glance

[illegible]

www.scs.org/scs-conference-proceedings-information/2022

Daily Agendas

Monday

Annual Modeling and Simulation Conference 2022

Agenda

Monday July 18, 2022

25th Communications and Network Simulation (CNS)

25th Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)

Session I 10:30 a.m.—12:00 p.m. Room: Metzli

Distributed Resource Allocation In 5g Networks With Multi-Agent Reinforcement Learning by Jon Menard, Ala'a Al-Habashna, Gabriel Wainer and Gary Boudreau

Boolean Logical Operator Driven Selective Data Filtering For Large Datasets by Glenn Davidson and Shikharesh Majumdar

Video Analytic Data Reduction Model for Fog Computing by Abdolreza Abhari and Dipak Pudasaini

Session II 1:30 p.m.—3:00 p.m. Room: Metzli

Controller Area Network Discrete-Event System Specification for Independent Node Testing by Maaz Jamal, Joseph Boi-Ukeme and Gabriel Wainer

(Zoom) Software-Defined Optical Local Area Network Architecture and Priority Traffic Performance Analysis by Peristera Baziana

Enabling Collaborative Modeling Through a Web Library of DEVS Models by H. Qassoud, B. Staudin, Gabriel Wainer and Cristina Ruiz Martin

Session III 3:30 p.m.—5:00 p.m. Room: Metzli

An IoT Based Smart Monitoring System Detecting Patient Fall by Hassan Rajaei

Incremental Text Clustering Algorithm for Cloud-Based Data Management in Scientific Research Papers by Mahfuja Nilufar and Abdolreza Abhari

Annual Modeling and Simulation Conference 2022

Agenda

Monday July 18, 2022

29th High Performance Computing (HPC)

Session I 10:30 a.m.—12:00 p.m. Room: Matayuum

The Effects of Numerical Precision in Scientific Applications by Raul Murillo, Alberto Antonio Del Barrio Garcia and Guillermo Botella

(Zoom) Model and Evaluation of a Superconducting-Logic Based Hybrid CPU-Accelerator System by Meenatchi Jagasivamani, Christine Fong, Kenneth Goodnow and Robert Voigt

Modeling & Simulation in Cyber Security (MSCS)

Session I 10:30 a.m.—12:00 p.m. Room: Visionary

(Zoom) Analysis Of The Impact Of Cyber Attack On Semiconductor Manufacturing Energy Quantification by Busra Ezici, Paulo Costa and Jie Xu

Adversarial Machine Learning Using Convolutional Neural Network With Imagenet by Utsab Khakurel and Danda Rawat

LUUNU - Blockchain, MISP, Model Cards And Federated Learning Enabled Cyber Threat Intelligence Sharing Platform by Eranga Bandara, Sachin Shetty, Ravi Mukkamala, Abdul Rahaman and Xueping Liang

Annual Modeling and Simulation Conference 2022

Agenda

Monday July 18, 2022

Simulation of Architectural and Urban Design (SimAUD)

Session I 10:30 a.m.—12:00 p.m. Room: Park Blvd

Urban Modeling & Building Detection

Exploring Spatial Patterns In Sustainable Integrated Districts: A Methodology For Early-Phase Urban Network Analysis by Anjanaa Devi Srikanth, Chirag Hablani, Srilalitha Gopalakrishnan and Thomas Schroepfer

Capturing Façade Diversity In Urban Settings Using An Automated Window To Wall Ratio Detection Workflow by Nada Tarkhan, Samuel Letellier-Duchesne and Christoph Reinhart

Building Envelope Object Detection Using Yolo Models by Norhan Bayomi, Mohammed ElKholy, John E. Fernandez, Senem Velipasalar and Tarek Rakha

Shading Design For Outdoor Learning In Warm And Hot Climates Using Evolutionary Computation: A Case Study In Houston TX. by Mili Kyropoulou

Session II 1:30 p.m.—3:00 p.m. Room: Park Blvd

(Day) Lighting & Energy Exploration

Determining Critical Points To Control Electric Lighting To Meet Circadian Lighting Requirements And Minimize Energy Use by Belal Abboushi and Sarah Safranek

Dynamic Subset Sensitivity Analysis For Design Exploration by Laura Hinkle, Gregory Pavlak, Leland Curtis and Nathan Brown

Impact Assessment Of Energy Conservation Measures On Building Energy Consumption, Carbon Emission, And Adaptation Cost Using Future Weather Data by Zahra Zolfaghari, Twisha Raja, Patricia Kusumadjaja, Daniel Salinas, Udiksha Nagaraj Kapini and Patrick Pease

Sketch To Build: An Intuitive Design Platform For Sustainable Housing Complexes by Zhong Ming Peter Zhang and Taro Narahara

Session III 3:30 p.m.—5:00 p.m. Room: Park Blvd

Building Envelope

Optimization-Based Design Exploration Of The Mutual Influence Between Building Massing And Façade Design by Xuehan Liu, Likai Wang and Guohua Ji

A Stochastic Approach To Simulate And Optimize The Coating Uniformity Of Rotational Molding For Microalgae Facades by Chengde Wu, Garrett Herbst, Arturo Lujan and Kyoung Hee Kim

Predicting Cooling Energy Demands Of Adaptive Facades Using Artificial Neural Network by Ammar Alammam and Wassim Jabi

Automatically Generating Surface Wind Pressure In High-Rise Buildings Through Deep Learning by Lin Sun, Shuqi Cao, Likai Wang and Guohua Ji

Annual Modeling and Simulation Conference 2022

Agenda

Monday July 18, 2022

15th Theory and Foundations of Modeling & Simulation (TMS)

Session I 1:30 p.m.—3:00 p.m. Room: Matayuum

A Quantized State Integrator With Second Order Errors Over Monotonic Segments by James Nutaro and Rasika Mahawattege

Model And Execution Scalable Traits For Interaction (Nexus) Modeling Of Water And Energy Systems by Mostafa Fard and Hessam Sarjoughian

Multi-Paradigm Modelling For Model Based Systems Engineering: Extending The FTG+PM by Randy Paredis, Joeri Exelmans and Hans Vangheluwe

Session II 3:30 p.m.—5:00 p.m. Room: Matayuum

Data Assimilation For Simulation-Based Real-Time Prediction/Analysis by Xiaolin Hu

ESS: EMF-Based Simulation Specification, A Domain-Specific Language For Model Validation Experiments by Joost Mertens and Joachim Denil

Geographical Sevid Covid-19 Model With Travel Restrictions by Cristina Ruiz Martin, Nirmal Patel and Gabriel Wainer

Annual Modeling and Simulation Conference 2022

Monday July 18, 2022

2nd North American High Order Methods Conference (NAHoMCon)

Session I 8:45 a.m.—10:15 a.m.

Room: Pride Suite

Provably Stable Schemes

Connections Between the Robustness of Entropy Stable DG Methods and the Entropy Projection by Jesse Chan

Optimally Stable High-Order Discontinuous Galerkin Schemes For Multidimensional Linear Hyperbolic Systems by James Rossmanith

A Positivity Preserving Strategy for Entropy Stable Discontinuous Galerkin Discretizations of the Compressible Euler and Navier-Stokes Equations by Yimin Lin

The Active Flux Method: Is Superconvergence Possible? by Jennifer Ryan

Stable Discretizations of Spectrally Convergent Radiation Boundary Conditions by Thomas Hagstrom

Session II 10:30 a.m.—12:00 p.m.

Room: Pride Suite

Efficient, Three-dimensional Methods

High-Order Multiresolution Grid Adaptation on 3D Block-Structured Grids Using Wavelets by Wim van Rees

MOLE: Mimetic Operators Library Enhanced by Johnny Corbino

Matrix-Free Nonconforming High-Order Discontinuous Galerkin Methods on GPU Architectures with MFEM by Yohann Dudouit

Mimetic Relaxation Runge Kutta Methods by Jose Castillo

Stability Criteria Of The Advection Equation Using High Order Mimetic Runge Kutta Methods by Anand Srinivasan

Scalable Interpolation on GPUs for Thermal Fluids Applications by Neil Lindquist

Session III 1:30 p.m.—3:15 p.m.

Room: Pride Suite

High-Order and Transport

Asymptotic-Preserving IMEX-DG Methods for Linear Kinetic Transport Equation by Fengyan Li

Spectral Elements for Coupled PNP-NS Equations by Yimin Lin

Annual Modeling and Simulation Conference 2022

Monday July 18, 2022

2nd North American High Order Methods Conference (NAHoMCon)

On Interface Fluxes for an Explicit, Semi-Lagrangian Method Solution of Transport Equations by Gustaaf Jacobs

Quantifying COVID-19 Transmission Risk Indoors Using GPU Accelerated Spectrally Accurate Simulations of Aerosol Transport by Som Dutta

Modal Discontinuous Galerkin Scheme for Three-Dimensional Electron Boltzmann Transport Equation Under Far-from-Equilibrium Conditions by Satyvir Singh

Session IV 3:30 p.m.—5:00 p.m. Room: Pride Suite

High Order Horizons

Empirical Bayesian Inference Using a Support Informed Prior by Ann Gelb

Optimal Sampling for Frame Approximations by Rodrigo Platte

Construction of High-Dimensional Quadrature Rules using Improved Node Elimination Algorithm by Arkadijs Slobodkins

Data-Driven Joint Inversions for PDE Models by Lu Zhang

Adaptive Multiresolution Ultra-Weak Discontinuous Galerkin Methods for Dispersive Wave Equations by Yuan Liu

Novel Numerical Approximation for the Caputo Derivative and its Applications by Nikhil Srivastava

Discussion

Annual Modeling and Simulation Conference 2022

Agenda

Monday July 18, 2022

Modeling and Simulation in Medicine (MSM)

Session I 10:30 a.m.—12:00 p.m. Room: Atzlan

Cardiovascular Applications

Time- And Frequency-Based Independent Evaluation Of Qrst Cancellation Techniques For Single-Lead Electrocardiograms During Atrial Fibrillation by Nicholas F. Price, Omer Berenfeld, Vijay Devabhaktuni and Makarand Deo

Interactive Simulation Model Of A Cross-Scale Cardiovascular System by Sarah Hofmann, Andreas Müller and Sebastian von Mammen

Modeling Cardiac Cell Biophysics Using Long-Short Memory Networks by Bruna Silveira Goncalves and Makarand Deo

Session II 1:30 p.m.—3:00 p.m. Room: Atzlan

Physiology Simulation

Implementation Of A Dynamic And Extensible Mechanical Ventilator Model For Real-Time Physiological Simulation by Jeffrey Bruce Webb, Aaron Bray, Justina Gerard, Stefan Frembgen, Harald Scheirich, Joseph VanPelt and Rachel Clipp

Integrative Physiology-Coupled Pilot-Centered Flight Simulation by Shawn Harrison, Anna Bulysheva, Rachel Clipp, Jeff Webb, Marsha Mitchum, Brett Newman and Michel Audette

Session III 3:30 p.m.—5:00 p.m. Room: Atzlan

MSM Panel Discussion: Convergence between Medical Simulation and Neural Networks

Annual Modeling and Simulation Conference 2022

Agenda

Monday July 18, 2022

Cyber Physical Systems (CPS)

Session I 1:30 p.m.—3:00 p.m. Room: Visionary

A New Modeling Framework For Cyber-Physical And Human Systems by Milad Poursoltan, Nathalie Pinede, Bruno Vallespir and Mamadou Traoré

A Digital Twin Based Approach For Ensuring Business Continuity Plan And Safe Return To Workplace by Souvik Barat, Dushyanthi Mulpuru, Abhishek Yadav, Anwesha Basu, Vinay Kulkarni, Savitha Samudrala, Avinash Bhide, Prabha Thomas, Keerthi Krishna, Arun Yadav and Abhijit Mazumder

(Zoom) Integration Of The MAPE-K Loop In Digital Twins by Hao Feng, Cláudio Gomes, Santiago Gil, Peter Høgh Mikkelsen, Daniella Tola, Michael Sandberg and Peter Gorm Larsen

Session II 3:30 p.m.—5:00 p.m. Room: Visionary

Knowledge Structures Over Simulation Units by Eduard Kamburjan and Einar Broch Johnsen

The Modular Design Evaluation Model: Support For Decision-Making In Cyber-Physical Systems Design by Marina Rantanen Modeer

Tuesday

Annual Modeling and Simulation Conference 2022

Agenda

Tuesday July 19, 2022

Humans, Societies and Artificial Agents / AI and Simulation (HSAA/AIS)

Session IV 8:30 a.m.—10:00 a.m. Room: Metzli

Applied HSAA/AIS

Encoding Protest Duration in an Agent-Based Model as Characteristic Phase Transitions by Brian Goode and Bianica Pires

Toward A Movement Paradigm For Artificial Human Agents by Thomas Clemen, Nima Ahmady-Moghaddam, Daniel Glake, Ulfia Annette Lenfers, Florian J. Ocker, Daniel Osterholz and Jonathan Ströbele

Using Generative Adversarial Networks to Assist Synthetic Population Creation for Simulations by Srihan Kotnana, David Han, Taylor Anderson, Andreas Züfle and Hamdi Kavak

Session V 10:30 a.m.—12:00 p.m. Room: Metzli

Policy Support by HSAA/AIS

(Zoom) Expert Panel Discussion: How Can We Provide Better Simulation-Based Policy Support? by Andreas Tolk, Thomas Clemen, Nigel Gilbert and Charles Macal
Moderator: Taylor Anderson

Session VI 1:30 p.m.—3:00 p.m. Room: Metzli

Combing Simulation with AI/ML

Taxonomy, Tools, And A Framework For Combining Simulation Models With Ai/ML Models by Vijay Gehlot, Peter Rokowski, Elliot B. Sloane and Nilmini Wickramasinghe

(Zoom) DEVS Model Construction As A Reinforcement Learning Problem by Istvan David and Eugene Syriani

Composing Modeling And Simulation With Machine Learning In Julia by Chris Rackauckas, Ranjan Anantharaman, Alan Edelman, Shashi Gowda, Maja Gwozdz, Anand Jain, Chris Laughman, Yingbo Ma, Francesco Martinuzzi, Avik Pal, Utkarsh Rajput, Elliot Saba, Viral B. Shah

Annual Modeling and Simulation Conference 2022

Agenda

Tuesday July 19, 2022

2nd North American High Order Methods Conference (NAHoMCon)

Session V 8:45 a.m.—10:15 a.m. Room: Pride Suite

Fast Solvers and High Order Methods

Low-Order Tools for High-Order Finite Elements by Will Pazner

A Performance Portable Implementation of SIMD Vector Intrinsics on High-Order, Entropy-Stable Spectral Collocation Schemes for Compressible Turbulent Flow by Jerry Watkins

Sparse Global Spectral Methods for Curvilinear Domains with Dedalus by Keaton Burns

Fully Implicit Time Integration: Fast Iterative Solvers and Implicit-Explicit Schemes by Ben Southworth

A Fast Direct Solver for Surface PDEs by Daniel Fortunato

Session VI 10:30 a.m.—12:00 p.m. Room: Pride Suite

Shock Capturing and Filtering

High-Order Implicit Shock Tracking by Matthew Zahr

A Filtering Framework for Finite Volume/Element Schemes by Julia Docampo

High-Order Approximation of Deterministic Initial Conditions for Distributional, Partial Differential Equations by Daniel Dominguez-Vazquez

A Comparison of Multiwavelets and Machine Learning Troubled Cell Detection in Modal Discontinuous Galerkin Methods by Soraya Terrab

Shock Capturing and Limiting in the Active Flux Method by Yifan Bai

LSIAC-MRA: Enhanced Multi-Resolution Analysis via Line SIAC Post-Processors by Matthew Picklo

Session VII 1:30 p.m.—3:15 p.m. Room: Pride Suite

Hyperbolics

"Hybridized Discontinuous Galerkin Methods for Magnetohydrodynamics: with Analysis, Preconditioning, and Deep Learning" by Tan-Bhui Than

Annual Modeling and Simulation Conference 2022

Agenda

Tuesday July 19, 2022

2nd North American High Order Methods Conference (NAHoMCon)

DGSEM Approximation of a Well-Posed Overset Grid Formulation for Hyperbolic Systems by David Kopriva

A High-Order 3D Immersed Interface Method for Smooth Nonconvex Geometries by James Gabbard

The Hermite-Taylor Correction Function Method for Maxwell's Equations by Yann-Meing Law

A Three-Dimensional Modal Discontinuous Galerkin Method for the Simulation of Compressible Multicomponent Flows by Satyvir Singh

Session VIII 3:30 p.m.—5:00 p.m. Room: Pride Suite

Applications

A High Accuracy/Resolution Spectral Element/Fourier-Galerkin Method for the Simulation of Shoaling Non-Linear Internal Waves and Turbulence in Long Domains with Variable Bathymetry by Peter Diamessis

Numerical Methods on Solving Sea Ice Dynamics Model Based on a Viscous-Plastic Formulation by Tongtong Li

Aspects of the Spectral-Element-Based Simulation of a Model Internal Swash Zone by Pierre Lloret
Spectral Element Meshing for Packed Beds with Contacting Spheres by Yu-Hsiang Lan

Quantifying the Effect of OWF Monopile on Vortex Induced-mixing in a Stably Stratified Environment using High-fidelity Turbulence Simulations by Holland Kartchner

Direct Numerical Simulation of Rotating Bodies in Stable-stratification using Moving Nonconforming Schwarz-Spectral Element Method by Anton Kadomtsev

High-Order Large Eddy Simulation and Low-Order Unsteady Reynolds Averaged Navier-Stokes Simulations of a Ducted Wind Turbine by Drew Safford

Annual Modeling and Simulation Conference 2022

Agenda

Tuesday July 19, 2022

Simulation of Architectural and Urban Design (SimAUD)

Session IV 8:30 a.m.—10:00 a.m. Room: Park Blvd

Urban Microclimate and Comfort

Infomorphism: Urban Planning For Renewable Energy Integration Via Simulated Energy Exchange Networks by Fengqi Li, Kristen R. Schell and Alexandros Tsamis

How The Urban Microclimate And Outdoor Thermal Comfort Can Affect Intra-City Mobility Patterns: Evidence From New York City by Yang Yang, Desai Wang and Timur Dogan

An Urban Feasibility Study Into Balancing Upfront Embodied Carbon Emissions Through Integrated Green Areas As Carbon Offsets by Emily Ruth Newmarch, Michael Donn, Simon Twose Twose, Fiona Short and David Dowdell

Session V 10:30 a.m.—12:00 p.m. Room: Park Blvd

Simulation Tools & Workflows

An Optimization Framework And Tool For Context-Sensitive Solar-Driven Design Using Generative Cellular Automata (SDCA) by Seth Luitjohan, Mehdi Ashayeri and Narjes Abbasabadi

A Novel Multi-Criteria Workflow Based On Reverse Solar Envelopes For The Design Of Residential Clusters by Abel Sepúlveda and Francesco De Luca

Software Architecture For BIM To DEVS Integration by Mitali Amritbhai Patel, Vinu Subashini Rajus and Gabriel Wainer

Session VI 1:30 p.m.—3:00 p.m. Room: Park Blvd

Ventilation & Impact of Covid

Measuring Design Sensitivity: An Evaluation Of Assessment Methods And Metrics For Natural Ventilation Studies by Nada Tarkhan, Sarah Mokhtar

A Simulation-Based Approach To Mitigate Disease Transmission Risk From Aerosol Particles In Buildings by Hooman Parhizkar, Siobhan Rockcastle, Mark Fretz and Kevin G. Van Den Wymelenberg

Annual Modeling and Simulation Conference 2022

Agenda

Tuesday July 19, 2022

Simulation of Architectural and Urban Design (SimAUD)

(Zoom) The Influence Of COVID Related Restrictions On The Energy Consumption Of The Building: The Ventilation Rate Effect by Roshanak Ashrafi, Mona Azarbayjani, Hamed Tabkhi and Mohammadamin Sheikhshahrokhdehkordi

Session VII 3:30 p.m.—5:00 p.m. Room: Park Blvd

Mixed Realities & Robots

Integrating Immersive Virtual Environment User Studies Into Architectural Design Practice by Grayson D. Bailey, Olaf Kammler, René Weiser, Sven Schneider and Ekaterina Fuchkina

Server-Based Mixed-Reality System For Multiple Devices To Visualize A Large Architectural Model And Simulations by Ryoma Tsujimoto, Tomohiro Fukuda and Nobuyoshi Yabuki

Deep Sandscapes: Design Tool For Robotic Sand-Shaping With Gan-Based Heightmap Predictions by Ko Tsuruta, Simon Joris Griffioen, Ryan Luke Johns and Jesús Medina Ibáñez

[SimAUD 2022 Closing Session \(5:00 p.m.—6:00 p.m.\)](#)

Annual Modeling and Simulation Conference 2022

Agenda

Tuesday July 19, 2022

Modeling and Simulation in Medicine (MSM)

Session IV 8:30 a.m.—10:00 a.m. Room: Atzlan

Deep & Machine Learning

Synthesizing Burn Wound Images For Deep Learning Applications by Bernhard Schenkenfelder, Sophie Kaltenleithner, Bertram Sabrowsky-Hirsch, Christoph Klug, David B. Lumenta and Josef Scharinger

Fall Detection Using Self-Supervised Pre-Training Model by Haben Girmay Yhdego, Christopher Paoletti and Michel Audette

Multi-Modality Breast MRI Segmentation Using NN-Unet For Preoperative Planning Of Robotic Surgery Navigation by Motaz Alqaoud, John Plemmons, Eric Feliberti, Krishnanand Kaipa, Siqin Dong, Gabor Fichtinger, Yiming Xiao and Michel Audette

Session V 10:30 a.m.—12:00 p.m. Room: Atzlan

Computer-Assisted Medicine (surg-plan, telemed, devices)

Extensive Simulation Of Human-Robot Interaction For Critical Care Telemedicine by Inki Kim, Anthony Nepomuceno, Jon Michel, Shandra Jamison and Kesh Kesavadas

Simulation-Based Framework To Develop A Control System For Functional Electrical Stimulation by Minsik Hong, Brady A. Hasse, Andrew J. Fuglevand and Jerzy Rozenblit

Context-Aware Security Modes For Medical Devices by Michael Riegler, Jerzy Rozenblit and Johannes Sametinger

Fully Automated Conversion Of Glioma Clinical Mri Scans Into A 3d Virtual Reality Model For Pre-surgical Planning by Robert Nick Tucker, Bradley P. Sutton, Chase Duncan, Colin Lu, Sanmi Koyejo, Andrew J. Tsung, Jane Maksimovic, Tate Ralph, Sister M. Pieta and Matthew T. Bramlet

Annual Modeling and Simulation Conference 2022

Agenda

Tuesday July 19, 2022

54th Annual Simulation Symposium (ANSS)

Session VI

1:30 p.m.—3:00 p.m.

Room: Atzlan

(Zoom) Simulation of Dissemination Strategies on Temporal Networks by Luca Serena, Stefano Ferretti, Mirko Zichichi and Gabriele D'Angelo

Automated Model Discovery For Steering Behavior Simulation by H.H. Le and X. Hu

Automated Generation Of Patient Population For Discrete-Event Simulation Using Process Mining by J. Le Lay, V. Augusto, J. Neveu and B. Dalmás

Emerging Topic—Supply Chain Modeling (ET-SCM)

Session VII

3:30 p.m.—5:00 p.m.

Room: Atzlan

A Simulation Framework For Studying Foreign Reliance On Regional Supply Chains At The Industry Level by Scott Rosen, Andrew E. Hong, Lauren A. Rayson, William S. Bland and Jennifer A. Richkus

Supply Chain Simulation As A Service To Increase Adaptation Capability In Manufacturing by Tamas Kiss, Gabor Terstyanszky, Resmi Arjun, Saskia Sardesai, Michael Dominik Goertz and Matthias Wangenheim

Modeling & Simulation Based Systems Engineering (MSBSE)

Session VII

3:30 p.m.—5:00 p.m.

Room: Metzli

A MSaaS Platform for Business Process Modeling & Simulation by Paolo Bocciarelli, Andrea D' Ambrogio and Matteo Maria Cialel

Validation Of EPSIM - An Embedded Platform Simulator For Control-Embedded Co-Design by Ken Vanherpen, Davy Maes, Yon Vanommeslaeghe and Paul De Meulenaere

Wednesday

Annual Modeling and Simulation Conference 2022

Agenda

Wednesday July 20, 2022

Student M&S Demo Session/Poster

12:00 p.m.—2:00 p.m.

Room: Atzlan

M&S Demo

Graph-Based Simulation of Emergency Services Communications Systems by Jardi Martinez Jordan, Victoria Salvatore, Barbara Endicott-Popovsky, Vivek Gandhi, Christopher O’Keefe, M. Scott Sotbeer and Michael David Stiber

A Digital Twin Platform for District Energy Simulation and Evaluation by Martin Alejandro Mosteiro Romero, Pradeep Alva, Adrian Chong, Clayton Miller and Rudi Stouffs

(Zoom) Virtual Patient Modeling in Substance Use: A Virtual Opioid User Tool. by Georgiy Bobashev and Sandy Preiss

SIMUTEC: An Agent-based Platform of Decision Support for Urban Climate Policy Development by Seghir Zerguini, Simon Gorecki and Nathalie Gaussier

Controller Area Network Discrete-Event System Specification for Independent Node Testing by Maaz Jamal, Joseph Boi-Ukeme and Gabriel Wainer

Artificial Neural Network Application to Predict Thermal Comfort Areas in an Urban Area by Nasim Eslamirad, Abel Sepúlveda, Francesco De Luca and Kimmo Sakari Lylykangas

Data Driven Fault Detection in Buildings by Joseph Boi-Ukeme, Chhavi Sujeebun and Gabriel Wainer

Software Architecture for Integrating DEVS Simulation into BIM by Mitali Amritbhai Patel, Vinu Subashini Rajus and Gabriel Wainer

San Diego

Things to Do in San Diego

SeaWorld

500 Sea World Drive, San Diego, CA 92109

Phone: 619-226-4732 <https://seaworldparks.com/en/seaworld-sandiego/>

Though you can often spot plenty of wildlife in the San Diego Bay, none put on quite as good a show as the performers at SeaWorld. Here you'll spot a range of animals, including killer whales, turtles, California sea otters and even parrots. As for the rides, recent travelers said you can't miss the Manta roller coaster, but caution against the Journey to Atlantis ride if you don't want to get wet. For something a little more low-key, head to any one of the park's animal exhibits, like the shark underwater viewing tunnel or the penguin habitat, which features nearly 300 penguins.

San Diego Birch Aquarium

2300 Expedition Way, La Jolla, CA 92037

Phone: 858-534-3474 <https://aquarium.ucsd.edu/>

Birch Aquarium at Scripps invites visitors to watch animal feedings. If you've ever wanted to see a hungry shark get its meal or lobsters crawl out from under their rocks to get food, Birch Aquarium San Diego lets you check out the action during your visit. San Diego Birch Aquarium makes sure that you're happy and full while you're here. Splash! Cafe serves sandwiches, snacks, and hot and cold beverages. If you want to remember your visit to Birch Aquarium at Scripps with a souvenir, stop by Aquarium Book & Gift Shop to browse the merchandise.

Seaport Village

849 West Harbor Dr., San Diego, CA 92101

Phone: 619-530-0704 <http://www.seaportvillage.com/>

Seaport Village San Diego might look like a regular shopping center when it's closed and no one is there, but when the sun is out and it's time to play, this place is a traveler's delight. Seaport Village San Diego is full of great entertainment, attractions, shopping and dining that - combined with an excellent San Diego Harbor view.

USS Midway Museum

910 North Harbor Dr., San Diego, CA 92101

Phone: 619-544-9600 <http://www.midway.org/>

The USS Midway is one of America's longest serving aircraft carriers. The museum offers an up close look at life on the floating city with tours of various areas such as the post office, sleeping quarters, engine room and even the ship's jail. The San Diego USS Midway Museum is home to 25 restored aircrafts ranging from the World War II TBM Avenger to the Operation Desert Storm A-6 Intruder. Various other aircrafts that were flown during the Korean War and Vietnam War are on display as well.

Things to Do in San Diego

San Diego Comic Con

111 W Harbor Dr, San Diego, CA 92101

Phone: 619-525-5000 <https://www.comic-con.org/>

The San Diego Comic Convention (Comic-Con International) is a California Nonprofit Public Benefit Corporation organized for charitable purposes and dedicated to creating the general public's awareness of and appreciation for comics and related popular art forms, including participation in and support of public presentations, conventions, exhibits, museums and other public outreach activities which celebrate the historic and ongoing contribution of comics to art and culture.

Balboa Park

1549 El Prado, San Diego, CA 92101

Phone: 619-239-0512 <http://www.balboapark.org/>

Located in the heart of downtown San Diego (about 2 miles north of the city center), Balboa Park is a great place for a stroll, a bike ride or a picnic. Wander around the park's many gardens (don't miss the beautiful Inez Grant Parker Memorial Rose Garden) while admiring the intricate Spanish-Renaissance architecture. Take in a show at the Old Globe Theatre or the Marie Hitchcock Puppet Theater or enjoy the arts at the Casa de Balboa — which houses three separate art museums — and the Spanish Village Art Center.

Gaslamp Quarter

<http://www.gaslamp.org/>

The Gaslamp Quarter's 16 blocks are peppered with Victorian-style buildings that now house a variety of shops, art galleries and trendy restaurants, not to mention some of the city's most popular nightlife venues. The best place to start your tour of the Gaslamp Quarter is the Horton Plaza outdoor shopping center. From there, you can explore the neighborhood's side streets or hop on an Old Town Trolley Tour. If you're not a night owl, the neighborhood's many patios and rooftop lounges are a great way to experience the Gaslamp Quarter's prime location.

San Diego Zoo

2920 Zoo Drive, San Diego, CA 92101

Phone: 619-231-1515 <https://sandiegozoowildlifealliance.org/>

The San Diego Zoo is a great place to go in San Diego for a lot of reasons. Not only is it a huge park with almost inexhaustible exciting animal exhibits to see, but it is also fun for all ages. Cage-less just means that the animals are kept inside their exhibits by moats and enjoy humane surroundings that replicate their natural habitats as closely as possible. The San Diego Zoo also features some of the largest free flight aviaries in the world, so if you like bird song and gorgeous foliage, the San Diego Zoo is the place to be!

Restaurants in San Diego

Tommy Bahama Marlin Bar & Store

7007 Friars Rd, San Diego, CA 92108-1148

Phone: +1 619-541-6296

<https://www.tommybahama.com/restaurants-and-marlin-bars/locations/san-diego>

They're making their mark in SoCal with their Marlin Bar, located at Fashion Valley. In their first-ever restaurant location in San Diego, let your free spirit fly in the outdoor-dining patio, complete with an outside bar. When the occasion calls for happy-hour aperitifs and appetizers, go where you can kick back, raise a glass, and bask in the sunshine.

Panda Express

5500 Campanile Dr Unit 116, San Diego, CA 92182-0001

Phone: +1 619-594-7707

<https://www.pandaexpress.com/>

Panda Restaurant Group, the world leader in Asian dining experiences and parent company of Panda Inn, Panda Express and Hibachi-San, is dedicated to becoming a world leader in people development. Whether through sharing good food with guests or providing opportunities for professional and personal growth with associates, all are embraced in a genuine family environment that is uniquely Panda.

The Habit Burger Grill

6075 Aztec Cir Dr. San Diego, CA 92182

Phone: +1 619-582-1364

<https://www.habitburger.com/>

Inspired by this coastal town's laid-back vibrancy and passion for culinary exploration, a simple idea formed: THE LOVE OF THE CRAFT. This means always chargrilling burgers over an open flame. It means using only the best ingredients one can find. And bringing everything together through genuine, world-class hospitality. In the end, it all comes from that first idea.

Restaurants in San Diego

Shake Smart

6075 Aztec Cir Dr. San Diego, CA 92182

Phone: +1 858-461-8313

<https://shakesmart.com/>

Started by two college students who found it difficult to find healthy options while living the college on-the-go lifestyle their vision was to make healthy eating more accessible and to have a balance of nutrients focusing specifically on protein the solution being healthy should fit your lifestyle. made for on-the-go.

Aztec Market

6075 Aztec Cir Dr. San Diego, CA 92182

Phone: +1 619-594-3559

eatatsdsu.com

SDSU Dining's mission is to be the preferred dining choice for everyone in the campus community, by always exceeding customer expectations. We are committed to providing the SDSU community of students, parents, faculty and staff with great food and great service, which in turn makes for a great dining experience for our customers. Hours for Aztec Market are 7am-1pm.

Starbucks

6075 Aztec Cir Dr. San Diego, CA 92182

Phone: +1 619-594-3551

<https://www.starbucks.com/>

It takes many hands to craft the perfect cup of coffee – from the farmers who tend to the red-ripe coffee cherries, to the master roasters who coax the best from every bean, and to the barista who serves it with care. We are committed to the highest standards of quality and service, embracing our heritage while innovating to create new experiences to savor.

Lazy Dog Restaurant & Bar

1202 Camino Del Rio N, San Diego, CA 92108

Phone: +1 619-481-6191

<https://lazydogrestaurants.com/>

Relaxed, lodge-chic chain serving global comfort fare, including stir-fries, pot roast & pastas.

ANNSIM'22 Sponsors

2022 ANNSIM Technical Sponsors



ANNSIM'22

Thanks to the above Technical Sponsors

2022 ANNSIM Sponsors



ANNSIM'22

Thanks to the above Sponsors



Looking for tips on how to get published or be a peer reviewer?

During the 2022 Annual Modeling And Simulation Conference,
attend SAGE's sessions on:

How to Get Published

Monday, 18th July 12:30-13:30

Legacy Suite room, Conrad Prebys Aztec Student Union Building

How to Be a Peer Reviewer

Tuesday, 19th July 12:30-13:30

Legacy Suite room, Conrad Prebys Aztec Student Union Building

Explore our resources at
sagepub.com/resources-journal-authors-and-editors

