

# ANNSIM'21 Agenda

Tuesday - July 20, 2021

## ANSS (11:15-12:45)

### Real world applications

*Chairs: José L. Risco-Martín & Erika Frydenlund*

EXPLORING A DIGITAL SHADOW DESIGN WORKFLOW BY MEANS OF A LINE FOLLOWING ROBOT USE-CASE  
Randy Paredis and Hans Vangheluwe

A MODELING AND SIMULATION PLATFORM FOR SPACE-BASED COMPARTMENTAL MODELING OF PANDEMIC SPREAD  
Román Cárdenas, Alonso Inostrosa-Psijas and Gabriel Wainer

DEVS-BASED SIMULATION FOR SEARCH AND RESCUE MISSIONS INVOLVING MULTIPLE UAVS  
Juan Bordón Ruiz, José L. Risco-Martín, Eva Besada Portas and Jose López Orozco

USE OF SHAPLEY ADDITIVE EXPLANATIONS IN INTERPRETING AGENT-BASED SIMULATIONS OF MILITARY OPERATIONAL SCENARIOS  
Lynne Serre, Maude Amyot-Bourgeois and Brittany Astles

MODELING AND SIMULATING PRESCRIBED FIRE IGNITION TECHNIQUES  
Xiaolin Hu and Mu Ge

## ET-APM (11:15-12:45)

*Chairs: Andreas Tolk & Jiangzhuo Chen*

OPPORTUNITIES AND CHALLENGES IN DEVELOPING COVID-19 SIMULATION MODELS: LESSONS FROM SIX FUNDED PROJECTS  
Philippe Giabbanelli, Jennifer Badham, Brian Castellani, Hamdi Kavak, Vijay Mago, Ashkan Negahban and Samarth Swarup

TOWARDS A VERIFICATION AND VALIDATION FRAMEWORK FOR COVID-19 FORECAST MODELS  
Hamdi Kavak and Maura Lapoff

STUDYING THE SPREAD OF DISEASES USING GEOGRAPHICAL DATA AND IRREGULAR TOPOLOGIES WITH CELL-DEVS  
Román Cárdenas, Cristina Ruiz Martin, Gabriel Wainer, Peter Dobias and Mark Rempel

DATA-DRIVEN SIMULATION OF CONTAGIONS IN PUBLIC VENUES  
Stefano Guarino, Davide Torre, Massimo Bernaschi, Alessandro Celestini, Marco Cianfriglia, Enrico Mastrostefano and Lena Zastrow

MODELING PANDEMIC RESPONSE FOR POPULATIONS EQUIPPED WITH CONTACT-CHAIN CAPABLE WEARABLE DEVICES  
Joshua Fryer and Paulo Garcia

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**ANSS (13:15-14:45)**

**Methods and Tools**

*Chairs: Erika Frydenlund & José L. Risco-Martín*

METAMORPHIC TESTING FOR HYBRID SIMULATION VALIDATION

Mohammed Farhan, Caroline Krejci, Megan Olsen and M S Raunak

ARE WE MODELING THE EVIDENCE OR OUR OWN BIASES? A COMPARISON OF CONCEPTUAL MODELS CREATED FROM REPORTS

Alexander Freund and Philippe Giabbanelli

MASSIVE GENERATION OF DATA WITH RANDOM VARIATES

Peter Maurer

SEARCHING FOR LARGE-ORDER MULTIPLE RECURSIVE GENERATORS Kenneth Pasiah, Lih-Yuan Deng, Dale Bowman and Ching-Chi Yang

SIMULATION OF DISSEMINATION STRATEGIES ON TEMPORAL NETWORKS

Luca Serena, Stefano Ferretti, Gabriele D'angelo and Mirko Zichichi

**HSA A (13:15-14:45)**

*Chairs: Philippe J. Giabbanelli & Andrew Crooks*

GENERATION OF REUSABLE SYNTHETIC POPULATION AND SOCIAL NETWORKS FOR AGENT-BASED MODELING

Na Jiang, Andrew Crooks, Hamdi Kavak and William Kennedy

SCALING UP THE SNAP-ED TOOLKIT INTERVENTION TO IMPROVE FRUIT AND VEGETABLE CONSUMPTION ACROSS COUNTIES IN GEORGIA: AN AGENT BASED MODEL

Donglan Zhang, Janani Thapa, Gang Li, Heejung Son, Zhuo Chen, Lan Mu, Yan Li, Jiuxiu Liu, Jose Pagan and Philippe J. Giabbanelli

WHY HONOR CULTURE? LESSONS LEARNED FROM AN AGENT-BASED SIMULATION MODEL

Kashif Zia, Alois Ferscha, Muhammad Shafi and Philippe Giabbanelli

MULTI-ATTRIBUTE QUERIES FOR STOCHASTIC MULTI AGENT SYSTEMS OVER SHORT TIME HORIZONS

Yenda Ramesh and M V Panduranga Rao

Panel on AGENT BASED MODELING

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## **POSTER & DEMO (15:00-16:30)**

*Chair: Mohammad F. Obeid & Salim Chemlal*

AN AGENT-BASED MODEL OF TARGET2 AND THE EUROPEAN MONETARY SYSTEM

Don Berndt and David Boogers

DATA REQUIREMENTS FOR AUTOMATED SIMULATION MODELLING OF PRODUCTION SYSTEMS WITH VARYING RESOURCE BEHAVIOUR

Giovanni Lugaresi, Jonas Friederich, Sanja Lazarova-Molnar and Andrea Matta

FAST SIMULATION OF DEVS MODELS USING THE SIMGRID FRAMEWORK

Elías Del Pozo Puñal and Félix García Carballeira

ADAPTIVE CAMERA MOTION GENERATION FOR PROCEDURAL GUIDANCE AND UNDERSTANDING IN VIRTUAL ENVIRONMENTS

Shan Liu and Yuzhong Shen