

5th INTERNATIONAL CONFERENCE ON PEDESTRIAN AND EVACUATION DYNAMICS		
March 8-10, 2010		
National Institute of Standards and Technology, Gaithersburg, MD USA		
Time	March 8, 2010 – Data Collection	
7 - 8	Registration	
8 – 8:50	Keynote: Five Grand Challenges in Pedestrian and Evacuation Dynamics, Jason Averill, National Institute of Standards and Technology	
8:50 – 9:00	BREAK	
9-10:40	Data Collection (Evacuation) Chaired by: Daniel Nilsson	Data Collection (Pedestrian) Chaired by: Erica Kuligowski
	Emergency door capacity: influence of population composition and stress level <i>Winnie Daamen and Serge Hoogendoorn</i>	New Data for Human Performance in Planar Corridors <i>Andreas Winkens, Wolfram Klingsch, and Armin Seyfried</i>
	Overall and Local Movement Speeds During Fire Drill Evacuations in Buildings Up to 31 Stories <i>Richard Peacock and Erica Kuligowski</i>	Influence of Geometry Parameters on Pedestrian Flow through Bottleneck <i>Tobias Rupperecht, Wolfram Klingsch, and Armin Seyfried</i>
	Predicting a Probability of Evacuation Congestion Occurrence relating to Elapsed Time and Vertical Section in a High-rise Building <i>Jun-ho Choi, Hyun-seung Hwang, and Won-hwa Hong</i>	Real-time video analysis of pedestrians to support agent simulation of people behavior <i>Olaf Junker, Verena Strauss, Ralph Majer, and Norbert Link</i>
	*Employing Human Egress Data <i>Steven Gwynne</i>	Free walking speeds on stairs: Effects of stair gradients and obesity of pedestrians <i>Taku Fujiyama and Nick Tyler</i>
10:40-11:00	BREAK	
11:00-12:40	Data Collection (Vulnerable Groups) Chaired by: Rita Fahy	Theory for Models Chaired by: Norman Groner
	Travel Along Stairs by Individuals with Disabilities: A Summary of Devices Used During Routine Travel and Travel During Emergencies <i>Glenn Hedman</i>	Pre-Warning Staff Delay: A Forgotten Component in ASET/RSET Calculations? <i>Steven Gwynne, Dave Purser, Dave Boswell and Erica Kuligowski</i>
	The evacuate training problems of earthquake in China <i>ChunXia Lu</i>	Fundamental Diagrams for Pedestrian Networks <i>Serge Hoogendoorn, Mario Campanella and Winnie Daamen</i>
	An Experimental Evaluation of Movement Devices used to assist People with Reduced Mobility in High-Rise Building Evacuations. <i>Ton Adams and Edwin Galea</i>	Modeling of Human Behavior in Crowds Using a Cognitive Feedback Approach <i>Yiannis Papelis, Lisa Bair, S. Manepalli, Poornima Madhavan, Rani Kady and E. Weisel</i>
	Evacuation dynamics of children –Walking speeds, flows through doors in day-care centres <i>Aldis Rún Lárusdóttir and Anne Simone Dederichs</i>	How do People with Disabilities Consider Fire Safety and Evacuation Possibilities in Historical Buildings? <i>Staffan Bengtson, Lena Kecklund, Elena Siré, Kristin Andrée and Sara Willander</i>
12:40-13:40	LUNCH	
13:40 – 15:20	Data Collection (Transport) Chaired by: Richard Peacock	Data Collection Methods Chaired by: Jake Pauls
	Evacuation analysis of 1000+ seat Blended Wing Body aircraft configurations: Computer Simulations and Large-Scale Evacuation Experiment <i>Edwin Galea, Lazaros Filippidis, Zhaozhi Wang, Peter Lawrence, and John Ewer</i>	Extended Range Telepresence for Evacuation Training in Pedestrian Simulations <i>Antonia Pérez Arias, Uwe D. Hanebeck, Peter Ehrhardt, Stefan Hengst, Tobias Kretz and Peter Vortisch</i>
	Collection of Evacuation Data for Large Passenger Vessels at Sea <i>Edwin Galea, Robert Brown, Lazaros Filippidis and Steven Deere</i>	Proof of Concept: Use of Eye Tracking to Record How People Use Exit Signage <i>Robert Till and Jason Babcock</i>
	Experimental Research on Investigation of Metro Passenger Evacuation Behaviors in case of Emergency <i>He Li, Zhong Maohua, Shi Congling, Shi Jiehong, Chen Haicheng and Xu Qiaoxiang</i>	Measurement techniques for unannounced evacuation experiments <i>Daniel Nilsson and Håkan Frantzich</i>
	Modelling Random Taste Variations on Level Changes in Passenger Route Choice in a Public Transport Station <i>Irmgard Zeiler, Christian Rudloff and Dietmar Bauer</i>	Automation of Pedestrian Tracking in a Crowded Situation <i>Saman Saadat and Kardi Teknomo</i>
CONFERENCE DINNER – BUS TO WASHINGTON, DC		

Time	March 9, 2010 – Modeling	
7 – 8:30	Registration	
8:30 – 8:40	*Welcome Remarks	
8:40 – 10:20	Large-scale modeling Chaired by: Weiguo Song	General Model Development (1) Chaired by: Ed Galea
	Runtime Optimization of Force Based Models within the Hermes Project <i>A. Seyfried, M. Chraibi, U. Kemloh, J. Mehlich and A. Schadschneider</i>	Risk minimizing evacuation strategies under uncertainty <i>Gregor Lämmel, Hubert Klüpfel and Kai Nagel</i>
	A Dynamic Simulation on Crowd Congestion in Large-Scale Terminal Station Complex in an Official Announcement Advisory Information <i>Qing-Lin Cui, Manabu Ichikawa, Toshiyuki Kaneda and Hiroshi Deguchi</i>	Methods for Improving Efficiency of Queueing Systems <i>Daichi Yanagisawa, Yushi Suma, Yuki Tanaka, Akiyasu Tomoeda, Kazumichi Ohtsuka and Katsuhiro Nishinari</i>
	Evacuation Assistance for a Sports Arena Using a Macroscopic Network Model <i>Andreas Schomborg, Klaus Nökel and Armin Seyfried</i>	*A Stochastic Evacuation Model for Fire Life Safety Assessment in Transportation System <i>Kai Kang</i>
	Validation of the Potential-based Evacuation Model of City Residents in Post-earthquake Fire <i>Tomoaki Nishino, Shin-ich Tsuburaya, Keisuke Himoto and Takeyoshi Tanaka</i>	Cellular Automata Evacuation Model Considering Information Transfer in Building with Obstacles <i>Kongjin Zhu, Lizhong Yang and Shaobo Liu</i>
10:20-10:40	BREAK	
10:40-12:00	Transport modeling Chaired by: Hubert Klupfel	General Model Development (2) Chaired by: Armin Seyfried
	Assistance of Evacuation Planning with High-Speed Network Model-based Pedestrian Simulator <i>Tomohisa Yamashita, Shunsuke Soeda and Itsuki Noda</i>	Quickest Cluster Flow Problems* <i>Horst W. Hamacher, Kathrin Leiner and Stefan Ruzika</i>
	An Evacuation Model for High Speed Trains <i>Jorge Capote, Daniel Alvear, Orlando Abreu, Mariano Lázaro, and Arturo Cuesta</i>	Virtual Reality Simulation of Architectural Clues' Effects on Human Behavior and Decision Making in Fire Emergency Evacuation <i>Shaden Abu-Safieh</i>
Comparison of a Grid-based and Continuous Space Pedestrian Model: Analysis of Normal Operations and Evacuation at a Train Station <i>Christian Castle and Nicholas Waterson</i>	A multi-grid model for evacuation coupling with the effects of fire products <i>Zhiming Fang, Weiguo Song and Hao Wu</i>	
12:00-13:00	LUNCH	
13:00 – 14:40	POSTER SESSION (posters listed on pages 6-8 of PED schedule)	
14:40 – 16:20	Model Calibration/Validation (1) Chaired by: Steve Gwynne	Modeling Methods (Spatial) Chaired by: Pete Thompson
	Towards Automatic and Robust Adjustment of Human Behavioral Parameters in a Pedestrian Stream Model to Measured Data. <i>Maria Davidich and Gerta Koester</i>	Implementing A Hybrid Space Discretisation within an Agent Based Evacuation Model <i>Nitish Chooramun, Peter Lawrence and Edwin Galea</i>
	Comparing pedestrian movement simulation models for a crossing area based on real world data <i>Dietmar Bauer</i>	Bidirectional coupling of macroscopic and microscopic approaches for pedestrian behavior prediction <i>Angelika Kneidl, Markus Thiemann, André Borrmann, Stefan Ruzika, Horst W. Hamacher, Gerta Köster, Ernst Rank*</i>
	Towards a Calibration of the Floor Field Cellular Automaton <i>Andreas Schadschneider, Christian Eilhardt, Stefan Nowak and Robinson Will</i>	Emergency Evacuation Modeling: A Novel Approach to Layout Designs and Evacuation Procedures <i>Rani Kady and Andreas Tolk</i>
	To See Behind the Curtain – A Methodical Approach to Identify Calculation Methods of Closed-Source Evacuation Software Tools <i>Christian Rogsch and Wolfram Klingsch</i>	The use of fine – coarse network model for simulating building evacuation with information system <i>Marcin Cisek and Michal Kapalka</i>
16:20 – 16:40	BREAK	

16:40 – 18:20	Model Calibration/Validation (2) Chaired by: Christian Rogsch	Modeling Methods (General) Chaired by: Ai Sekizawa
	Analyzing Stop-and-Go Waves by Experiment and Modeling <i>Andrea Portz and Armin Seyfried</i>	Simulation of Pedestrian Flow outside a Single-exit Room in Mean-field Approximation Model <i>Jun Zhang and Weiguo Song</i>
		A Sandwich Approach for Evacuation Time Bounds <i>Horst W. Hamacher, Stephanie Heller, Wolfram Klein, Gerta Köstet, and Stefan Ruzika</i>
	Experimental Study of Crowd Flow Passing through Simple-shaped Room and Validation for an Evacuation Simulator <i>Tomonori Sano, Yoshiyuki Yoshida, Naohiro Takeichi, Takeshi Kimura, and Yoshikazu Minegishi</i>	A Knowledge-Based Approach to Crowd Classification <i>Stefania Bandini, Lorenza Manenti, Sara Manzoni and Fabio Sartori</i>
Calculating and Verifying the Staircase-Length for Evacuation Analysis <i>Hyun-Seung Hwang, Jun-ho Choi and Won-Hwa Hong</i>	Towards realistic modeling of crowd compressibility <i>Jarosław Wąs, Wojciech Myśliwiec, Robert Lubaś</i>	

Time	March 10, 2010 – Application	
7 – 8	Registration	
8 – 8:50	Keynote Presentations: In Memory of Dr. Guylène Proulx, <i>Led by Rita Fahy, National Fire Protection Association</i>	
8:50 – 9:00	BREAK	
9-10:40	Vertical Egress, Chaired by: Peter Johnson, Arup	
	Addressing the Needs of People using Elevators for Emergency Evacuation <i>Richard Bukowski</i>	
	Stairs or Lifts? – A study of Human Factors associated with Lift/Elevator usage during Evacuations using an online Survey <i>Michael Kinsey, Edwin Galea and Peter Lawrence</i>	
	Elevator Evacuation Algorithms <i>Marja-Liisa Siikonen and Janne S. Sorsa</i>	
	Experiments for the Feasibility Study of the Evacuation by Moving Escalator in Public Space <i>Emi Okamoto, Yuji Hasemi, Shuji Moriyama and Naoko Okada</i>	
10:40-11:00	BREAK	
11:00-12:40	Real Events Chaired by: Winnie Daamen	Regulation/Engineering Guidance Chaired by: Jason Averill
	Assessing Crowd Dynamics And Spectator Safety in Seated Areas at a Football Stadium <i>Zachary Au, Jenny Gilroy, and R.A. Haslam</i>	Accessibility and Evacuation Planning – Similarities and Differences <i>Judith Bendel and Hubert Klüpfel</i>
	Stay Or Go? Human Behavior In Major Evacuations <i>Peter Johnson, Claire Johnson and Carolyn Sutherland</i>	Micro-Simulation Modeling of Persons with Reduced Mobility: Is the London Framework Applicable in North America and Does it Affect Modeling Output? <i>Daniel Fisher and Andrew Jenkins</i>
	Analysis of Occupant Behavior during a High-rise Office Building Fire <i>Erica Kuligowski and Bryan Hoskins</i>	Prospects for the Design of Cognitive Systems that Manage the Movement of Large Crowds <i>Norman Groner, Elise Miller-Hooks and Lei Feng</i>
	The Lame Horse Night-Club Fire: Disaster Timing* <i>I.P. Belosokhov, D.A. Samoshin, B.B. Serkov, V.V. Kholshchikov</i>	Risk Management at Major Events - Study of Behavioural Aspects and Implementation into the ASERI Microscopic Evacuation Model <i>Rainer Könnecke and Volker Schneider</i>
12:40-13:40	LUNCH	
13:40 – 15:40	*Ensuring Quality Control in the Development and Application of Egress Models Moderator: <i>Peter Thompson, Integrated Environmental Solutions, Ltd.</i> Panelists: <i>Michael Ferreira, Hughes Associates, Inc. (egress model use - consulting)</i> <i>Chris Jelenewicz, Society of Fire Protection Engineers (fire protection engineering licensing)</i> <i>Erica Kuligowski, National Institute of Standards and Technology (egress model use - research)</i> <i>Daniel Nilsson, Lund University (egress data collection)</i> <i>Richard Peacock, National Institute of Standards and Technology (fire model validation)</i> (Additional participants TBD)	
15:40-16:00	CONCLUDING REMARKS	

*refers to changes made since the last version of the schedule was provided online

POSTER SESSION

Presented on March 9, 2010, 13:00 to 14:40

Crowd Management based on Scientific Research to Prevent Crowd Panic & Disasters
Salim Al Bosta

The Effect of Stair Width on Occupant Speed and Flow Rate for Egress of High Rise Buildings
Alyson Blair and James Milke

Using Stereo Recordings to Extract Pedestrian Trajectories Automatically in Space
Maik Boltes, Armin Seyfried, Bernhard Steffen and Andreas Schadschneider

Simulation of Pedestrians Crossing a Street (poster only, no proceedings paper)
Cornelia Bönisch and Tobias Kretz

A methodology to calibrate pedestrian walker models using multiple-objectives
Mario Campanella, Serge Hoogendoorn and Winnie Daamen

Influence of doorway width on emergency door capacity
Winnie Daamen and Serge Hoogendoorn

An Example of Complex Pedestrian Route Choice
Florian Gräßle and Tobias Kretz

Sensor-assisted support tools for live evacuation
Sam Grindrod, Stephen Welch, and Jeremy Fraser-Mitchell

Mutual Information for the Detection of Crush
Peter Harding, Martyn Amos and Steven Gwynne

Evacuation Planning Tool (EPT) for Emergency, Event and Space Planning
Mark Harmon and Jenish Joseph

Counterflow Model for FDS+Evac Simulations
Simo Heliövaara and Timo Korhonen

A Study on Evacuation Simulation after Earthquake in Consumer Facilities
Akihiko Hokugo, Ai Sekizawa, Shuji Kakegawa, Hiroaki Notake and Takuyuki Kaneko

Introducing Emotion Modelling to Agent-based Pedestrian Circulation Simulation
Claudia Hollmann, Peter Lawrence and Edwin Galea

A study of density of the person in a classroom for Building Evacuation Safety Regulations in Korea
Youn Ho-Ju, Hwang Yen-Kyung and Kwon Young-Jin

Experiments on Egress of Persons with Mobile Disability in Train Car
Jong Hoon Kim, Woon Hyung Kim, Sam Kew Roh, Duck Hee Lee, Woo Sung Jung, and Yen-Kyung Hwang

On time scaling and validation of a stochastic CA pedestrian dynamics model
Ekaterina Kirik, Tat'yana Yurgel'yan and Dmitriy Krouglov

FDS+Evac: Modelling pedestrian movement in crowds
Timo Korhonen and Simo Heliövaara

Computation Speed of the F.A.S.T. Model (poster only, no proceedings paper)

Tobias Kretz

Behavior and Perception-based Pedestrian Evacuation Simulation

Tobias Kretz, Georg Mayer and A. Mühlberger

Analysis of Occupant Decision-Making in the World Trade Center Disaster

Erica Kuligowski

Analysis of bottleneck motion using Voronoi diagrams

Jack Liddle, Armin Seyfried and Bernhard Steffen

Human Guiding, Turning the Theory into Practice

J. Lindström, L. Barna, P. Stevn, and R. Eggleton

Modeling Evacuation in Selected Types of Buildings and an Analysis of the Achieved Results

Martin Lopusniak

Experimental investigation on the pair interaction between pedestrians

Jian Ma, Weiguo Song, Siuming Lo, Guangxuan Liao, and K.K. Yuen

Emergency situations in nightclubs: a discussion on how to improve the fire safety strategies through the use of evacuation modeling analysis

Rodrigo Machado, Frank Murphy, and Mark Anderson

Efficiently Using Micro-Simulation to Inform Facility Design – A Case Study in Managing Complexity

Erin Morrow

Next Generation Paradigms in Pedestrian Modeling

Daniel Peterson

Next Steps for Agent-Based Simulations of Mass Egress

Doug Samuelson

Experimental Study of Pedestrian Flow in the Channel through Bottleneck

Weiguo Song, Jun Zhang and Armin Seyfried

Occupant Way-finding in Multi-Storey Buildings

Janne S. Sorsa, Marja-Liisa Siikonen

Improved Methods for Checking Forces Based Models of Pedestrian Dynamics

Bernhard Steffen, Maik Boltes and Armin Seyfried

Pathfinder: An Agent-based Egress Simulator

Charles Thornton, Richard O'Konski, Brian Hardeman, and D. Swenson

Sonic Speed on Pedestrian Dynamics: Relation between Sonic Speed and Density

Akiyasu Tomoeda, Daichi Yanagisawa and Katsuhiro Nishinari

Sensitivity Visualization of Circulation under Congestion and Blockage

Gabriel Wurzer, Matthias Ausserer, Harry Hinneberg, Christa Illera and Andrea Rosic

Simulation for evacuation process outside a hall with obstacles

Yu Xue, San-jun Kan and Yan-fang Wei

Integration of Human Evacuation Route Optimization Model and Fire Prevention and Control System

ZHANG Peihong, PAN Gang, LI Gang and CHEN Baozhi