

<b>5<sup>th</sup> INTERNATIONAL CONFERENCE ON PEDESTRIAN AND EVACUATION DYNAMICS</b>		
<b>March 8-10, 2010</b>		
<b>National Institute of Standards and Technology (NIST), Gaithersburg, MD USA</b>		
<b>Time</b>	<b>March 8, 2010 – Data Collection</b>	
<b>7 - 8</b>	<b>Registration</b>	
<b>8 – 8:50</b>	<b>Keynote: Five Grand Challenges in Pedestrian and Evacuation Dynamics, Jason Averill, National Institute of Standards and Technology</b>	
<b>8:50 – 9:00</b>	<b>BREAK</b>	
<b>9-10:40</b>	<b>Data Collection (Evacuation)</b> <b>Chaired by: Daniel Nilsson, Lund University</b>	<b>Data Collection (Pedestrian)</b> <b>Chaired by: Erica Kuligowski, NIST</b>
	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, Bryan Hoskins 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>
<b>10:40-11:00</b>	<b>BREAK</b>	
<b>11:00-12:40</b>	<b>Data Collection (Vulnerable Groups)</b> <b>Chaired by: Rita Fahy, National Fire Protection Assoc.</b>	<b>Theory for Models</b> <b>Chaired by: Norman Groner, John Jay College, CUNY</b>
	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 and Dave Boswell</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 Andréé and Sara Willander</i>
<b>12:40-13:40</b>	<b>LUNCH</b>	
<b>13:40 – 15:20</b>	<b>Data Collection (Transport)</b> <b>Chaired by: Richard Peacock, NIST</b>	<b>Data Collection Methods</b> <b>Chaired by: Jake Pauls, Jake Pauls Consulting Services</b>
	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>
<b>CONFERENCE DINNER – BUS TO WASHINGTON, DC</b>		

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<b>Time</b>	<b>March 9, 2010 – Modeling</b>	
<b>7 – 8:30</b>	<b>Registration</b>	
<b>8:30 – 8:40</b>	<b>Welcome Remarks</b>	
<b>8:40 – 10:20</b>	<b>Large-scale modeling</b> <b>Chaired by: Weiguo Song, U of Science and Technology of China</b>	<b>General Model Development (1)</b> <b>Chaired by: Ed Galea, University of Greenwich</b>
	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 Queuing 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>
<b>10:20-10:40</b>	<b>BREAK</b>	
<b>10:40-12:00</b>	<b>Transport modeling</b> <b>Chaired by: Kardi Teknomo, Ateneo de Manila University</b>	<b>General Model Development (2)</b> <b>Chaired by: Armin Seyfried, Forschungszentrum Jülich</b>
	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>
<b>12:00-13:00</b>	<b>LUNCH</b>	
<b>13:00 – 14:40</b>	<b>POSTER SESSION</b>	
<b>14:40 – 16:20</b>	<b>Model Calibration/Validation (1)</b> <b>Chaired by: Steve Gwynne, Hughes Associates, Inc.</b>	<b>Modeling Methods (Spatial)</b> <b>Chaired by: Pete Thompson, IES Ltd.</b>
	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>
<b>16:20 – 16:40</b>	<b>BREAK</b>	

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	<b>Model Calibration/Validation (2)</b> <b>Chaired by: Christian Rogsch</b>	<b>Modeling Methods (General)</b> <b>Chaired by: Ai Sekizawa, University of Tokyo</b>
<b>16:40 – 18:20</b>	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>
	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 Sandwich Approach for Evacuation Time Bounds <i>Horst W. Hamacher, Stephanie Heller, Wolfram Klein, Gerta Köstet, and Stefan Ruzika</i>
	Calculating and Verifying the Staircase-Length for Evacuation Analysis <i>Hyun-Seung Hwang, Jun-ho Choi and Won-Hwa Hong</i>	A Knowledge-Based Approach to Crowd Classification <i>Stefania Bandini, Lorenza Manenti, Sara Manzoni and Fabio Sartori</i>
		Towards realistic modeling of crowd compressibility <i>Jarosław Wąs, Wojciech Myśliwiec, Robert Lubaś</i>

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<b>Time</b>	<b>March 10, 2010 – Application</b>	
<b>7 – 8</b>	<b>Registration</b>	
<b>8 – 8:50</b>	<b>Keynote Presentations: In Memory of Dr. Guylène Proulx, Led by Rita Fahy, National Fire Protection Association</b>	
<b>8:50 – 9:00</b>	<b>BREAK</b>	
<b>9-10:40</b>	<b>Vertical Egress, Chaired by: Peter Johnson, ARUP PTY LTD</b>	
	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>	
<b>10:40-11:00</b>	<b>BREAK</b>	
<b>11:00-12:40</b>	<b>Real Events</b> <b>Chaired by: Winnie Daamen, Delft University of Technology</b>	<b>Regulation/Engineering Guidance</b> <b>Chaired by: Jason Averill, NIST</b>
	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>
	<b>12:40-13:40</b>	<b>LUNCH</b>
<b>13:40 – 15:40</b>	<b>Ensuring Quality Control in the Development and Application of Egress Models</b> <b><u>Moderator:</u> Peter Thompson, Integrated Environmental Solutions, Ltd.</b> <b><u>Panelists:</u></b> <b>Winnie Daamen, Delft University of Technology (pedestrian model development and data collection)</b> <b>Steve Gwynne, Hughes Associates, Inc. (egress model use - consulting)</b> <b>Chris Jelenewicz, Society of Fire Protection Engineers (fire protection engineering licensing)</b> <b>Daniel Nilsson, Lund University (egress data collection)</b> <b>Richard Peacock, National Institute of Standards and Technology (fire model validation)</b>	
<b>15:40-16:00</b>	<b>CONCLUDING REMARKS</b>	

**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 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*

Integration of Human Evacuation Route Optimization Model and Fire Prevention and Control System  
*ZHANG Peihong, PAN Gang, LI Gang and CHEN Baozhi*