

Contents

Opening Speech at the University	V
Opening Speech in the Town Hall	VII
Preface	IX
Contents	XI
List of Participants	XV
Pedestrian Dynamics	
A Speed-Concentration Relation for Bi-Directional Crowd Movements with Strong Interaction	3
<i>S.A.H. AlGadhi, H.S. Mahmassani, and R. Herman</i>	
Simulation of Pedestrian Crowds in Normal and Evacuation Situations	21
<i>D. Helbing, I.J. Farkas, P. Molnár, and T. Vicsek</i>	
Modelling Pedestrians in Transfer Stations	59
<i>W. Daamen, P.H.L. Bovy, and S.P. Hoogendoorn</i>	
Cellular Automaton Approach to Pedestrian Dynamics – Theory	75
<i>A. Schadschneider</i>	
Cellular Automaton Approach to Pedestrian Dynamics – Applications	87
<i>C. Burstedde, A. Kirchner, K. Klauck, A. Schadschneider, and J. Zittartz</i>	
Space Syntax Based Agent Simulation	99
<i>A. Penn and A. Turner</i>	
Flow Capacities from Cellular Automata Modeling of Proportional Splits of Pedestrians by Direction	115
<i>V.J. Blue and J.L. Adler</i>	
Microscopic Pedestrian Wayfinding and Dynamics Modelling	123
<i>S.P. Hoogendoorn, P.H.L. Bovy, and W. Daamen</i>	
2-Dimensional Optimal Velocity Models for Granular Flow and Pedestrian Dynamics	155
<i>Y. Sugiyama, A. Nakayama, and K. Hasebe</i>	

Multi-Modal Traffic in TRANSIMS	161
<i>K. Nagel</i>	
A Multi-Agent Cellular Automata Model of Pedestrian Movement	173
<i>J. Dijkstra, J. Jessurun, and H. Timmermans</i>	
Laying the Foundations: The Use of Video Footage to Explore Pedestrian Dynamics in PEDFLOW	181
<i>A. Willis, R. Kukla, J. Kerridge, and J. Hine</i>	
Problems of Human Attention Decrease Detection	187
<i>T. Tichý</i>	
Microscopic Simulation of Pedestrian Crowd Motion	193
<i>A. Keßel, H. Klüpfel, J. Wahle, and M. Schreckenberg</i>	
Evacuation Simulation	
Simulating Evacuation and Circulation in Planes, Trains, Buildings and Ships Using the EXODUS Software	203
<i>E.R. Galea</i>	
Mathematical Modelling of Evacuation Problems: A State of the Art	227
<i>H.W. Hamacher and S.A. Tjandra</i>	
Earliest Arrival Flow Model with Time Dependent Capacity for Solving Evacuation Problems	267
<i>H.W. Hamacher and S.A. Tjandra</i>	
Life Saving Applications of Directional Sound	277
<i>D. Withington</i>	
Assessment and Analysis of Evacuation Processes on Passenger Ships by Microscopic Simulation	297
<i>T. Meyer-König, H. Klüpfel, and M. Schreckenberg</i>	
Simulating Evacuation Processes with ASERI	303
<i>V. Schneider and R. Könnecke</i>	
Models and Algorithms for Evacuation Analysis in Urban Road Transportation Systems	315
<i>F. Russo and A. Vitetta</i>	
Detection of Pollutant Sources in an Indoor Environmental Monitoring System	323
<i>S. Bandini, G. Frisoni, and S. Manzoni</i>	

The Precautions in Istanbul in Case of a Possible Earthquake	331
<i>R. Bozdogan and H.I. Polat</i>	

Ship Evacuation

An Overview of Present and Under-Development IMO's Requirements Concerning Evacuation from Ships	339
<i>M. Dogliani</i>	

EVAC and LBL The Mustering and Evacuation Computer Models Resulting from the BriteEuram Project MEPdesign	355
<i>K.H. Drager, H. Soma, and S. Orset</i>	

A Mesoscopic Model for Passenger Evacuation in a Virtual Ship-Sea Environment and Performance-Based Evaluation	369
<i>D. Vassalos, H. Kim, G. Christiansen, and J. Majumder</i>	

The U.S. Coast Guard Approach to Evacuation Analysis	393
<i>K.C. Kiefer</i>	

Modelling and Simulation of Ship Motions and Vessel Traffic Services in Relation to Safe Navigation in Narrow Waterways	409
<i>A.N. Ince</i>	

Optimisation of the Evacuation Plan of an Offshore Vessel	431
<i>M. Flier</i>	

Influence of Ship Listing and Ship Motion on Walking Speed	437
<i>W. Bles, S. Nooy, and L.C. Boer</i>	

Pedestrian and Evacuation Dynamics
Schreckenberg, M.; Sharma, S.D. (Eds.)
2002, XIX, 452 p. 175 illus., Hardcover
ISBN: 978-3-540-42690-5