



České vysoké učení technické v Praze
Fakulta jaderná a fyzikálně inženýrská
Břehová 7, 115 19 Praha 1
tel.: 224 358 286, fax: 222 317 680
e-mail: monika.zabranska@jfifi.cvut.cz



Studium v doktorském studijním programu
Doctoral Programme

Publikační list
Lit of publications

Jméno, příjmení, titul žadatele:

Given name, surname, academic degree of student:

Ing. Marek Bukáček

Významné články:

P. Hrabák, M. Bukáček and M. Krbálek, Cellular Model of Room Evacuation Based on Occupancy and Movement Prediction, Comparison with Experimental Study, *Journal of Cellular Automata* 8, 383-395, 2013

M. Bukáček, P. Hrabák and M. Krbálek, Experimental Study of Phase Transition in Pedestrian Flow, *Transportation Research Procedia* 2, 105 - 113, 2014

M. Bukáček and P. Hrabák, Boundary Induced Phase Transition in Cellular Automata Models of Pedestrian Flow, *Journal of Cellular Automata* 11/4, 327 - 338, 2016

P. Hrabák and M. Bukáček, Influence of Agents Heterogeneity in Cellular Model of Evacuation, *Journal of Computer Science* 2017(21), 486-493, 2017

M. Bukáček, P. Hrabák and M. Krbálek, Microscopic Travel Time Analysis of Bottleneck Experiments, *Transportmetrica A* 14(5-6), 375-391, 2018

M. Krbálek, P. Hrabák and M. Bukáček, Pedestrian Headways Reflection of Territorial Social Forces, *Physica A* 490 (1), 38-49, 2018

M. Bukáček, P. Hrabák, M. Krbálek, Microscopic Travel Time Analysis of Bottleneck Experiments, *Transportmetrica A* 14 (5-6), 375-391, 2018

H. Najmanová, L. Kuklík, V. Pešková, M. Bukáček, P. Hrabák, D. Vašata Fire Safety of Passenger Trains: Experimental and Sensitivity Study of Evacuation from a Double-deck Train Unit, *Safety Science*, in revision process

Konferenční články (zahraniční):

P. Hrabák, M. Bukáček and M. Krbálek, Cellular Model of Room Evacuation Based on Occupancy and Movement Prediction, *Lecture Notes in Computer Science* 7495, 709 - 718, 2012

M. Bukáček, P. Hrabák and M. Krbálek, Cellular Model of Pedestrian Dynamics with Adaptive Time Span, *Lecture Notes in Computer Science* 8385, 669 - 678, 2014

- M. Bukáček, P. Hrabák and M. Krbálek, Experimental Analysis of Two-Dimensional Pedestrian Flow in front of the Bottleneck, In: Traffic and Granular Flow '13, 93 - 101, Springer, 2014
- M. Bukáček and P. Hrabák, Case Study of Phase Transition in Cellular Models of Pedestrian Flow, Lecture Notes in Computer Science 8751, 508 - 517, 2014
- P. Hrabák, M. Bukáček and M. Krbálek, Individual Microscopic Results Of Bottleneck Experiments, In: Traffic and Granular Flow '15, 105-112, 2016
- M. Bukáček and P. Hrabák, Conflict Solution According to Aggressiveness of Agents in Floor-Field-Based Model, Lecture Notes in Computer Science 9574, 507 - 516, 2016
- P. Hrabák, J. Porzicky, M. Bukáček at all, Advanced CA Crowd Models of Multiple Consecutive Bottlenecks, Lecture Notes in Computer Science 9863, 396 - 404, 2016
- J. Porzicky, P. Hrabák, M. Bukáček at all, Data Driven Method of Pedestrian Flow Estimation for Evacuation Scenario using Queuing Model, In: EG-ICE 2016 proceedings, accepted
- M. Bukáček, H. Najmanová and P. Hrabák, The Effects of Synchronization of Pedestrian Flow through Multiple Bottlenecks - Train Egress Study, In: Pedestrian and Evacuation Dynamics 2016, 105-112, 2016
- H. Najmanová, P. Hejtmánek, M. Bukáček, Fire Safety of Passenger Trains: Experimental Analysis of Evacuation from CityElefant Double-deck Unit, In: International Conference of Fire Safety 2016, 294-301, 2016
- M. Bukáček, J. Vacková, Evaluation of Pedestrian Density Distribution with Respect to the Velocity Response, In: Traffic and Granular Flow '17, 235-243, 2019
- P. Hrabák, M. Bukáček, P. Kielar, A. Borrmann, Pedestrian Flow through Complex Infrastructure, Experiments and Mass-Transport Processes, In: Traffic and Granular Flow '17, 159-166, 2019
- P. Kielar, P. Hrabák, M. Bukáček, A. Borrmann, Using Raspberry Pi for Measuring Pedestrian Visiting Patterns via WiFi-Signals in Uncontrolled Field Studies, In: Traffic and Granular Flow '17, 245-253, 2019
- J. Vacková, M. Bukáček, Follower-Leader Concept in Microscopic Analysis of Pedestrian Movement in a Crowd, Collective Dynamics 5, 496-498, 2020
- J. Vacková, M. Bukáček, The Microscopic Analysis of Velocity-Density Paradigm, In: Aplimat 2019, 1210-1222, 2020
- M. Bukáček, J. Vacková, Statistical Analysis of Old Kingdom of Egypt In: Aplimat 2019, 120-133, 2020
- M. Bukáček, V. Pešková, H. Najmanová, Double-Deck Rail Car Egress Experiment: Microscopic Analysis of Pedestrian Time Headways, In: Springer Proceedings in Physics: TGF 2019, 449-455, 2020
- J. Vacková, M. Bukáček, Social and Physical Pedestrian Sizes and their Impact on the Decision-Based Modeling, In: FEMTC 2020, virtual, 1-11, 2020

Konferenční články (interní):

- M. Oharek, M. Bukáček, Analysis of the Ancient Egyptian Society with Utilization of Decision Tree, In: SPMS 2019, 93-106, 2019
- B. Paterek, M. Bukáček, Clustering in Egyptian Ancient Society Analysis, In: SPMS 2019, 107-114, 2019
- J. Vacková, M. Bukáček, Ruling Principles for Decision-Based Pedestrian Model, In: SPMS 2019, 141-154, 2019
- M. Bukáček, V. Pešková, H. Najmanová, Ruling Principles for Decision-Based Pedestrian Model, In: SPMS 2019, 141-154, 2019

- J. Vacková, M. Bukáček, Follower-Leader Concept in Microscopic Analysis of Pedestrian Movement in a Crowd, In: SPMS 2018, 115-123, 2018
- M. Bukáček, J. Vacková, Evaluation of pedestrian density distribution with respect to the velocity response, In: SPMS 2017, 11-18, 2017
- P. Hrabák, M. Bukáček, Mass Transport Processes and Bottleneck Flow, In: SPMS 2017, 37-40, 2017
- H. Najmanová, P. Hejtmánek, M. Bukáček, Požární bezpečnost osobních kolejových vozidel: Analýza evakuace osob z dvoupodlažní jednotky CityElefant, In: Požární ochrana 2016, 294-301, 2016
- M. Kotrba, M. Bukáček, Individual Approach to Evaluate Density and Flow in Egress Experiment, In: SPMS 2015, pp. 97-105, 2015
- M. Bukáček, Analysis of individual pedestrian behavior in front of the bottleneck, In. SPMS 2015, 33-36, 2015
- M. Bukáček, Pedestrians' Movement: Experimental Approach to Egress Studies, In. SPMS 2013, 1-10, 2013