

Full Programme

Day - 1: 15th October, Saturday (Morning)			
08:30	Registration – Lecture Hall Complex (LHC) Ground Floor		
09:15	Opening Remarks - LHC 108		
09:40	Plenary Session - I: Vehicular and Pedestrian Traffic Flow Dynamics at Different Resolutions and Travel Time Theory. PUSHKIN KACHROO (LHC 108)		
10:30	Tea/ Coffee Break (LHC 538 - 5 th Floor Foyer)		
11:00	Session I-A: Traffic Flow Theory (LHC 510)	Session II-A: Simulation and Driver Behaviour Modelling (LHC 526)	Session III-A: Granular Media (LHC 527)
	Estimating the average velocity in congested bottlenecks. <i>Christoph Gnendiger, Mohcine Chraïbi* and Antoine Tordeux.</i> (9633)	ANFIS based modelling of following behaviour of Motorized Two Wheelers in mixed traffic conditions. <i>Jaikishan Damani* and Perumal Vedagiri.</i> (3979)	Granular flow through tilted rectangular. <i>Vijendra Gupta*, Akash Jangale and Anurag Tripathi.</i> (3147)
	Controlling transition behaviours in a two-lane system with limited density information. <i>Yuming Dong*, Xiaolu Jia, Daichi Yanagisawa, Akihito Nagahama and Katsuhiko Nishinari.</i> (5697)	Machine Learning Approach to Predict Driver's Lateral Movement Decision under Heterogeneous Traffic Conditions. <i>Prashant Baviskar*, Shrinivas Arkatkar and Anshuman Sharma.</i> (4022)	Networks of RNA polymerase flow models for analysing intracellular transport. <i>Aditi Jain* and Arvind Kumar Gupta.</i> (1495)
	Identification of Leader follower pairs in mixed traffic. <i>Mihir Kulkarni, Ankit Chaudhari*, Karthik K Shrinivasan, Bhargava Rama Chilukuri, Ostap Okhrin and Martin Treiber.</i> (9892)	The Effect of Heavy Vehicles on the Performance of FASTag (ETC) Enabled Toll Plaza –A Microscopic Traffic Simulation Study. <i>Divyanshu Upadhyay and Abhisek Mudgal*.</i> (8042)	Effect of different contact force models on granular flows. <i>Satyabrata Patro*, Vijendra Gupta and Anurag Tripathi.</i> (7454)
	A Comprehensive Review of Car-Following Models: Heterogeneous Non-Lane-Based Traffic Viewpoint. <i>Surya H R*, Akhilesh Kumar Maurya and Shrinivas Arkatkar.</i> (2774)	Optimal Design of Battery, Charging Infrastructure Planning, and Charging Scheduling for Electric Bus Network. <i>Tanisha Pangtey*, Pranav Gairola and N. Nezamuddin.</i> (2494)	Dynamics of a translating and rotating intruder moving in a shape-heterogeneous mixture. <i>Bitang Tripura, A. Vamsikrishna Reddy and K. Anki Reddy*.</i> (997)
	Stochastic Optimal Velocity Model with Two Vehicle Control Methods. <i>Kayo Kinjo* and Akiyasu Tomoeda.</i> (3636)	Mean field games modelling for dynamic traffic assignment with information. <i>Megan Khoshyaran and Jean-Patrick Lebacque*.</i> (8443)	Kinematics of granular flow in a multi-outlet silo with symmetric and asymmetric openings. <i>Yashvardhan Singh Bhati* and Ashish Bhateja.</i> (7750)
	Properly accounting for the noise in empirical fundamental diagrams of road traffic. <i>Daniel Bramich*, Monica Menendez and Lukas Ambuhl.</i> (7402)	Synergy of Model-driven and Data-driven Approaches in a Dynamic Network Loading Problem. <i>Valentina Kurtc* and Andrey Prokhorov.</i> (8750)	Flow characteristics of granular particles at critical wedge angle. <i>Vamsi Krishna Reddy Anyam* and Kumaran Viswanathan.</i> (9866)
13:00	Lunch (LHC 538 - 5 th Floor Foyer)		
Day - 1: 15th October, Saturday (Afternoon)			

14:00	Session I-B: Evacuation (LHC 510)	Session II-B: CAVs and Other ITS Applications (LHC 526)	Session III-B: Crowd Dynamics (LHC 527)
	Invited Talk: Ashish Verma Topic: Understanding the Dynamics of a Spiritually Motivated Crowd in Kumbh Mela.	Invited Talk: Mallikarjuna C. Topic: The relevance of trajectory data accuracy under no-lane disciplined mixed traffic conditions.	Invited Talk: Anki Reddy K. Topic: Dynamics of wiggling objects in a granular medium.
	Study of emergency exit choice behaviour at metro stations in fire evacuation. <i>Tarapada Mandal*, Ramachandra Rao K and Geetam Tiwari. (6557)</i>	Analysing the operational performance of mixed traffic comprising autonomous and human-driven vehicles at varying penetration rates on Indian urban arterials. <i>K N Krishnan* and K Ramachandra Rao. (5513)</i>	A Real-Time Neural Network-based System for Pushing Detection in Crowded Event Entrances. <i>Ahmed Alia*, Mohmmmed Maree and Mohcine Chraibi. (9793)</i>
	Experiments on pedestrian evacuation with multiple gates. <i>Karol Bacik*, Bogdan Bacik and Tim Rogers. (9532)</i>	Traffic Dynamics Under Exclusive Connected Automated Vehicle Lanes. <i>Saraswathi Kudari and Bhargava Chilukuri*. (9286)</i>	Understanding the difference in social group behaviour of a spiritually motivated crowd and a general. <i>Gayathri Harihara Subramanian, Ankit Rai and Ashish Verma*. (3535)</i>
	Mass evacuation planning based on mean field games theory. <i>Negin Alisoltani, Mostafa Ameli*, Megan Khoshyaran and Jean-Patrick Lebacque. (3602)</i>	A human factors based modeling framework to mimic bus driver behavior. <i>Anshuman Sharma*, Abdul Rawoof Pinjari, Rajesh Sundaresan and Sangram Nirmale. (4001)</i>	Collective traffic of agents with memory. <i>Danny Raj Masila* and Arvind Nayak. (469)</i>
	An emergency evacuation model for avoiding high nuclide concentration areas in nuclear accident. <i>Zhonghao Zhan*, Weiguo Song, Jun Zhang and Chuanli Huang. (2415)</i>	Estimation of Travel Time Reliability Using Wi-Fi Detections. <i>Vikram Singh*, Ninad Gore and Shriniwas Arkatkar. (7905)</i>	Mean-field games description of obstacle avoidance by a dense crowd - A comparison between models. <i>Matteo Butano*, Thibault Bonnemain, Théophile Bonnet, Iñaki Echeverria-Huarte, Antoine Seguin, Alexandre Nicolas, Cécile Appert-Rolland and Denis Ullmo. (3988)</i>
		Oscillation growth in mixed traffic flow of human driven vehicles and automated vehicles: Experimental study and simulation. <i>Shi-Teng Zheng*, Rui Jiang, H.M. Zhang, Junfang Tian, Ruidong Yan, Bin Jia and Ziyao Gao. (684)</i>	Towards sound-based crowd management: Investigating sonification for pedestrian steering. <i>Toros Senan, Bart Hengeveld and Alessandro Corbetta*. (8794)</i>
16:00	Tea/ Coffee and Posters (LHC 538 - 5 th Floor Foyer)		

Day - 1: 15th October, Saturday (Evening)

16:30	Poster Session I (Offline) - (LHC 538 - 5th Floor Foyer)		
	<p>Analysis of traffic jerk effect in a new lattice model with density dependent passing. <i>Muskan Verma* Sapna Sharma.</i> (4768)</p>	<p>Fuzzy Logic based Automation of the Extraction of Surrogate Safety Measures and the Creation of Severity Classification using Video Data. <i>Pushkin Kachroo, Anamika Yadav*, Ankit Kathuria and Shaurya Agarwal.</i> (6276)</p>	<p>Modelling Impact of Lateral Behaviour of Successive Vehicles on Traffic Safety for Regular and Work-Zone Roads. <i>Omkar Bidkar*, Shriniwas Arkatkar, Gaurang Joshi and Said Easa.</i> (3606)</p>
	<p>Modelling of filtering choice of Motorized Two Wheelers in mixed traffic conditions. <i>Jaikishan Damani* and Perumal Vedagiri.</i> (4215)</p>	<p>Some Features of Uncontrolled Merges in Heterogeneous Traffic Conditions. <i>Kiran Roy and Bhargava Chilukuri*.</i> (9718)</p>	<p>The role of asymmetric coupling in a two-lane simple exclusion process with dynamic disorder. <i>Shaweta Garg* and Isha Dhiman.</i> (1238)</p>
	<p>A novel variable-goal approach to account for human intelligence in pedestrian dynamics. <i>Kanika Jain*, Indranil Saha Dalal, Anurag Tripathi, Satyendra Pandey, Amulya Kale and Ishan Prashant.</i> (6201)</p>	<p>Analysis of grid network with three-ring and three-bin model. <i>Namrata Gupta*, Gopal Patil and Hai Vu.</i> (5945)</p>	<p>Modified version of open TASEP with dynamic defects. <i>Nikhil Bhatia* and Arvind Kumar Gupta.</i> (7469)</p>
	<p>A Machine Learning Based Approach to Determine Dynamic Speed. <i>Amar Deep Pandey*, Brind Kumar, Manoranjan Parida, Ashish Kumar Chouksey and Rahul Mishra.</i> (6540)</p>	<p>Determining The Influence Area of Different Vehicle Types in Disordered Traffic Conditions. <i>Shahana A* and Vedagiri Perumal.</i> (6026)</p>	<p>Assessment of traffic congestion using a resilience-based approach. <i>Arunabha Banerjee and Sai Chand*.</i> (4868)</p>
	<p>An investigation of traffic speed distributions for uninterrupted flow at blackspot locations in a mixed traffic environment. <i>Debashis Ray Sarkar*, Parveen Kumar, K Ramachandra Rao, Niladri Chatterjee and Sourabh Bikas Paul.</i> (7261)</p>	<p>Interplay between finite resources and a local dynamic defect in a no conserving exclusion process. <i>Bipasha Pal* and Arvind Kumar Gupta.</i> (2152)</p>	<p>Rural group dynamics in mass religious gathering: A case study of Kumbh Mela – 2016, India. <i>Gayathri Harihara Subramanian, Ankit Rai and Ashish Verma*.</i> (3964)</p>
	<p>Approaches for Modelling Travel Time Uncertainty. <i>Shubham Parashar, Ninad Gore, Shriniwas Arkatkar* and Said Easa.</i> (7205)</p>	<p>Optimal Control of Oversaturated Intersections Revisited. <i>Vinayak Bhosle and Bhargava Chilukuri*.</i> (5807)</p>	<p>Limited Visual Range in the Social Force Model: Effects on Macroscopic and Microscopic Dynamics. <i>Ander García*, Daríel Hernández-Delfín, Dae-Jin Lee and Marco Ellero.</i> (1247)</p>
17:30	Group Picture (LHC Entry - Ground Floor)		

Day - 2: 16th October, Sunday (Morning)			
09:15	Plenary Session - Title: Travel Behaviour and Demand Modelling in the Era of Deep Learning: Past, Present and Future. Speaker: PRATEEK BANSAL (LHC 108)		
10:00	Plenary Session – Title: Mpemba effect in driven granular gases. Speaker: RAJESH R. (LHC 108)		
10:30	Tea/ Coffee Break (LHC 538 - 5 th Floor Foyer)		
11:00	Session I-C: Traffic Flow Theory and Technologies (LHC 510)	Session II-C: Pedestrian Modelling (LHC 526)	Session III-C: Crowd Dynamics (LHC 527)
	Field Validation of Nonlocal Velocity based Macroscopic Traffic Model. <i>Pushkin Kachroo*</i> , <i>Shaurya Agarwal and Animesh Biswas.</i> (8636)	Application of the Variable goal approach for two situations with multiple moving pedestrians - lane formation and bottlenecks. <i>Kanika Jain*</i> , <i>Indranil Saha Dalal, Anurag Tripathi and Satyendra Pandey.</i> (5091)	A review of entropy-based studies on crowd behaviour and risk analysis. <i>Kiran Naik*</i> , <i>Gayathri Harihara Subramanian and Ashish Verma.</i> (3359)
	Longitudinal driving performance evaluation using machine learning techniques – A semi-supervised approach <i>Jahnvi Yarlagadda*</i> , <i>Anuraag Chandra Shukla and Digvijay S. Pawar.</i> (5075)	The dynamics of pedestrian boarding: high-statistics analysis at a real-life train platform. <i>Caspar A.S. Pouw*</i> , <i>Rabia I. Kodapanakkal, Gunter Bombaerts, Alessandro Corbetta, Andrej Dameski, Antal Haans, Jaap Ham, Andreas Spahn and Federico Toschi.</i> (5479)	Characterising mesoscopic dynamics of Vicsek model of collective motion. <i>Vivek Jadhav*</i> , <i>Arshed Nabeel, Danny Raj M and Vishweshha Guttal.</i> (5178)
	Travel path tracking using smartphone inertial sensors: an experimental study on an academic campus road network. <i>Anna V. A. Bharat Kumar*</i> , <i>Chunchu Mallikarjuna and Tamarapalli Venkatesh.</i> (2962)	Pedestrian fundamental diagrams and continuity equation. <i>Armin Seyfried*</i> , <i>Juliane Adrian, Ann Katrin Boomers and Sarah Paetzke.</i> (8612)	Performance of Crowd Management Interventions on High-Density Pedestrian Crowds. <i>Ahmed Syed*</i> , <i>Alessandro Corbetta, Sumesh P Thampi and Mahesh V Panchagnula.</i> (1465)
	When are you really stopped in traffic? <i>Alexandra Gavriilidou, Yufei Yuan and Winnie Daamen*</i> . (6929)	Extending Bayesian spatio-temporal models for mapping urban pedestrian traffic to account for barriers. <i>Mounia Zaouche* and Nikolai Bode.</i> (8570)	On the influence of group social interaction on intrusive behaviours. <i>Adrien Gregorj*</i> , <i>Zeynep Yücel, Francesco Zanlungo and Takayuki Kanda.</i> (5563)
	A jam-absorption driving system based on moving jam propagation speed estimation with camera sensors. <i>Siyu Li*</i> , <i>Ryosuke Nishi, Daichi Yanagisawa and Katsuhiro Nishinari.</i> (6152)	Emergence of counter clockwise vortex motion in pedestrian systems - The importance of physical boundaries. <i>Iñaki Echeverría-Huarte*</i> , <i>Alexandre Nicolas, Raúl Cruz-Hidalgo, Ángel Garcimartín and Iker Zuriguel.</i> (8185)	Interruption in pedestrian events: Investigating boredom and impatience in crowds. <i>Ezel Üsten* and Anna Sieben.</i> (2507)
	Analysis of Distraction Pattern at Diverging and Merging Section of Toll Plaza. <i>Dhruv Kothari, Rajesh Chouhan* and Ashish Dhamaniya.</i> (7160)	Tight but flexible pairing: modeling adult-child pairs in pedestrian flows from an 'energy'-based perspective. <i>Chuan-Zhi Xie*</i> , <i>Iñaki Echeverría-Huarte and Alexandre Nicolas.</i> (7121)	Transient dynamics in pedestrian exit choice: following or avoiding the crowd. <i>Yunhe Tong* and Nikolai Bode.</i> (3112)
13:00	Lunch (LHC 538 - 5 th Floor Foyer)		

Day - 2: 16th October, Sunday (Afternoon)

14:00	Session I-D: Simulation and ITS Applications (LHC 510)	Session II-D: Pedestrian Modelling (LHC 526)	Session III-D: Safety (LHC 527)
	The intelligent particle model - a fully two-dimensional microscopic traffic flow model. <i>Martin Treiber and Ankit Chaudhari*</i> . (3136)	Rheology of pedestrian flow through a bottleneck. <i>Dariel Hernández-Delfin*</i> , <i>Ander García</i> , <i>Dae-Jin Lee</i> and <i>Marco Ellero</i> . (4048)	Invited Talk: Akihito Nagahama Topic: Possibilities for Research on Heterogeneous Traffic —From the viewpoint of a Japanese Researcher.
	A graphical tool for planning and real-time operation of freight trains. <i>Abhishek Raj*</i> , <i>Sethu Vinayagam Udhayasekar</i> and <i>Bhargava Rama Chilukuri</i> . (6927)	A psychological approach to understanding microscopic and macroscopic structures during the train boarding process. <i>Rabia I. Kodapanakkal*</i> , <i>Caspar A.S. Pouw</i> , <i>Gunter Bombaerts</i> , <i>Alessandro Corbetta</i> , <i>Andrej Dameski</i> , <i>Antal Haans</i> , <i>Jaap Ham</i> , <i>Andreas Spahn</i> and <i>Federico Toschi</i> . (9063)	Safety Surrogate Measure using Extreme Value Theory and Machine Learning. <i>Pushkin Kachroo</i> , <i>Anamika Yadav*</i> , <i>Ankit Kathuria</i> and <i>Shaurya Agarwal</i> . (8304)
	Prototype models for predicting vehicle types generated in heterogeneous traffic simulation. <i>Akihito Nagahama*</i> , <i>Takahiro Wada</i> , <i>Keiki Takadama</i> , <i>Daichi Yanagisawa</i> , <i>Katsuhiko Nishinari</i> and <i>Kenji Tanaka</i> . (7682)	Experiments on the influence of obstacles on waiting pedestrians at railway platforms. <i>Mira Küpper*</i> and <i>Armin Seyfried</i> . (3477)	The Impact of Vehicular Heterogeneity on the Rear-end Crash Risk in Mixed Traffic: An Extreme Value Approach. <i>Ashutosh Kumar*</i> and <i>Abhisek Mudgal</i> . (2574)
	Calibration of Longitudinal Dynamics of Vehicles under Disordered Traffic. <i>Madhuri Kashyap*</i> , <i>Gowri Asaithambi</i> , <i>Martin Treiber</i> and <i>Venkatesan Kanagaraj</i> . (7141)	Risk Perception and Evasion Characteristics of Pedestrians in a Side-Walk Space: An Empirical Investigation of Pedestrian Interaction Zones. <i>Suvin P. Venthuruthiyil*</i> and <i>Digvijay Pawar</i> . (3276)	Effect of steering on the sideswipe crash Risk of PTWs on Multilane Rural Highways for the CAVs. <i>Pranab Kar*</i> , <i>Mallikarjuna Chunchu</i> and <i>Samalla Shivasai</i> . (8099)
	Sensor Data Analysis by means of Clustering. <i>Valentina Kurtc*</i> and <i>Andrey Prokhorov</i> . (8848)	Density dependence of stripe formation in a cross-flow. <i>Francesco Zanlungo*</i> , <i>Claudio Feliciani</i> , <i>Hisashi Murakami</i> , <i>Zeynep Yuçel</i> , <i>Xiaolu Jia</i> , <i>Katsuhiko Nishinari</i> and <i>Takayuki Kanda</i> . (6246)	Assessment of changes in pedestrians' risky behaviour while being distracted <i>Kudurupaka Vamshi Krishna*</i> and <i>Pushpa Choudhary</i> . (284)
	Physiological arousal and walking: a methodological approach to the use of electro dermal activity and heart rate variability sensors in pedestrian dynamics. <i>Mira Beermann*</i> and <i>Anna Sieben</i> . (2128)	Two types of bottlenecks in leisure facilities: bottlenecks caused by attractiveness and structural problem - A case study in a large-scale aquarium <i>Riho Kawaguchi*</i> , <i>Claudio Feliciani</i> , <i>Daichi Yanagisawa</i> , <i>Shigeto Nozaki</i> , <i>Yukari Abe</i> , <i>Makiko Mita</i> and <i>Katsuhiko Nishinari</i> . (3997)	Game Theoretic Approach to Model Pedestrian and Vehicle Interaction Behaviour at Urban Midblock Section <i>Rajesh Chouhan</i> , <i>Mitali Swargiary*</i> and <i>Ashish Dhamaniya</i> . (2289)
16:00	Tea/ Coffee Break (LHC 538 - 5 th Floor Foyer)		

Day - 2: 16th October, Sunday (Evening)

16:30	Poster Session II (Online) - (LHC 512, 526 and 527)		
	<p>Dynamics of weaving in mixed traffic conditions. <i>Vivek R Das*</i>, <i>Shazad Asma and Sagar C.P.</i> (7672)</p>	<p>Pedestrian kernel density estimates: the individual approach. <i>Jana Vacková*</i> and <i>Marek Bukáček.</i> (6074)</p>	<p>Modelling The Influence Of Amber Light Dilemma Zone On Driver Behaviour Under Mixed Traffic Conditions. <i>Abhijith K R*</i> and <i>K Krishnamurthy.</i> (1763)</p>
	<p>Lay theories of mass panic: Why changing terms is not enough. <i>Helena Lügering*</i>, <i>Dilek Tepeli and Anna Sieben.</i> (1556)</p>	<p>Delay Modelling at Signalized Intersection Under Mixed Traffic Conditions. <i>Akash T P*</i> and <i>K Krishnamurthy.</i> (9019)</p>	<p>Reusable software structures for coupling an agent-based locomotion model and a disease transmission model. <i>Simon Rahn*</i> and <i>Gerta Köster.</i> (9402)</p>
	<p>Truck-Based Road Safety Study. <i>Neeraja Medapati*</i>, <i>Dr.Mukund Dangeti and Srinivasarao Gandupalli.</i> (8280)</p>	<p>Data-Driven Prediction for Red-Light-Running at a T-Junction. <i>Sainan Zhang*</i>, <i>Jun Zhang, Weiguo Song and Longnan Yang.</i> (7677)</p>	<p>Experimental study of bidirectional pedestrian flow in a corridor with height constraints. <i>Dongdong Shi*</i>, <i>Juan Chen, Jian Ma and Jun Chen.</i> (3717)</p>
	<p>Sound Guidance on Evacuation under Limited Visibility: an Experimental Study. <i>Tao Li*</i>, <i>Zhanbo Sun, Zhijian Fu, Lin Luo and Xudong Zhou.</i> (5881)</p>	<p>On the capability of random utility maximisation theory-based driver behaviour models of heterogeneous disordered traffic to reproduce the fundamental macroscopic properties of traffic flow. <i>Sangram Nirmale*</i>, <i>Abdul Pinjari and Anshuman Sharma.</i> (6783)</p>	<p>Methods of density estimation for pedestrians moving without a spatial boundary. <i>Pratik Mullick*</i>, <i>Cécile Appert-Rolland, William H. Warren and Julien Pettré.</i> (2730)</p>
	<p>A Non-linear Pedestrian Tracker Using Velocity-adaptive Particle Filter With Trajectory Analysis. <i>Xin Yuan*</i>, <i>Weiguo Song and Yang Cao.</i> (7442)</p>	<p>Individual movement strategies in response to an external force. <i>Sina Feldmann*</i> and <i>Juliane Adrian.</i> (256)</p>	<p>Two Dimensional Following Behaviour Analysis of Powered Two Wheelers using copula approach. <i>Rushikesh Amrutsamanvar*</i> and <i>Leliitha Vanajakshi.</i> (4763)</p>
17:30	TGF International Scientific Committee Meeting - Invitation Only (Committee Room, Civil Engineering Department)		
19:30	Conference Gala Dinner, Silver Oak Lawn, India Habitat Centre		

Day - 3: 17th October, Monday (Morning)			
09:30	Plenary Session - Pedestrian dynamics: what changed during the pandemic? Speaker: WINNIE DAAMEN (Seminar Hall, Main Building)		
10:15	Closing Remarks (Seminar Hall, Main Building)		
10:30	Tea/ Coffee Break (LHC 538 - 5 th Floor Foyer)		
11:00	Session I-E: Pedestrian Modelling (LHC 212)	Session II-E: Crowd Dynamics (LHC 213)	Session III-E: (IRD Conference Room, 7 th Floor, Main Building)
	Wheelchair and phone use during single file pedestrian movement. <i>Paul Geoerg, Ann Kathrin Boomers, Maxine Berthiaume, Max Kinateder and Maik Boltes*</i> . (7474)	Physics-driven trajectory restitching for high-fidelity real-life crowd tracking. <i>Caspar A.S. Pouw*, Alessandro Gabbana, Luuk F.J. Schuurmans, Federico Toschi and Alessandro Corbetta</i> . (7912)	Non-Poissonian cellular automaton models for vehicular traffic. <i>Daichi Yanagisawa*, Takahiro Ezaki, Akiyasu Tomoeda and Katsuhiko Nishinari</i> . (7891)
	Pedestrian behaviour underlying the different shapes of the fundamental diagram. <i>Xiaolu Jia*, Claudio Feliciani, Sakurako Tanida, Daichi Yanagisawa and Katsuhiko Nishinari</i> . (2044)	Modelling pedestrian collective dynamics with port-Hamiltonian systems. <i>Sylvain Lassarre, Jean-Patrick Lebacque, Antoine Tordeux* and Claudia Totzeck</i> . (8022)	Particle method for macroscopic model of coupled pedestrian and vehicular traffic flow. <i>A Parveena Shamim*, Sudarshan Tiwari, Axel Klar and S Sundar</i> . (6439)
	Shoulder rotation measurement in camera and 3D motion capturing data. <i>Ann Katrin Boomers* and Maik Boltes</i> . (2726)	"Nudging" crowds: When it works, when it doesn't and why. <i>Claudio Feliciani*, Sakurako Tanida, Masahiro Furukawa, Hisashi Murakami, Xiaolu Jia, Dražen Brščić and Katsuhiko Nishinari</i> . (1467)	Connected and autonomous vehicle's behaviour in heterogeneous disordered traffic in metropolitan cities. <i>Suresh Chavhan and Aditya Verma*</i> . (8676)
	Revisiting the theoretical basis of agent-based models for pedestrian dynamics. <i>Alexandre Nicolas* and Iñaki Echeverría-Huarte</i> . (1511)	Practical validation analysis for pedestrian route-choice module in a crowd simulator for confined indoor spaces during COVID-19 pandemic. <i>Yufei Yuan*, Martijn Sparnaaij, Winnie Daamen and Dorine Duives</i> . (5155)	Collective motion of motor proteins along dynamic microtubule. <i>Atul Kumar Verma*</i> . (3746)
	Estimation of pedestrian's intention using in-vehicle video. <i>Yuto Oyama* and Toshiya Takami</i> . (6426)	Experimental study on the movement characteristics of individual pedestrians walking through dense crowds. <i>Jinghui Wang*, Wei Lv and Yajuan Jiang</i> . (8660)	Experimental study of forced silo discharge. <i>María Victoria Ferreyra*, Luis A. Pugnaroni and Diego Maza</i> . (1794)
	Differences in pedestrian trajectory predictions for high- and low-density situations. <i>Raphael Korbmacher*, Huu-Tu Dang, Antoine Tordeux, Benoit Gaudou and Nicolas Verstaavel</i> . (9128)	How do retail stores affect pedestrian walking speed? <i>Danrui Li*</i> . (8896)	Estimation of missing vehicle's trajectory data using machine learning algorithms. <i>Ishant Bonde* and Akhilesh Kumar Maurya</i> . (1442)
13:00	Lunch (LHC 538 - 5 th Floor Foyer)		
14:00	Farewell		