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MOVICI • MOYCOT 2018

ABRIL 18 - 20 | MEDELLÍN, COLOMBIA | WWW.MOVICI.CO

movici
movilidad urbana en ciudades inteligentes

MOYCOT
Modelamiento y Control del Tráfico

CON EL APOYO DE:

IET The Institution of Engineering and Technology Communities

Konrad Adenauer Stiftung

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DLR Deutsches Zentrum für Luft- und Raumfahrt German Aerospace Center

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UNIVERSIDAD NACIONAL DE COLOMBIA

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Supporting institutions

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IET Communities

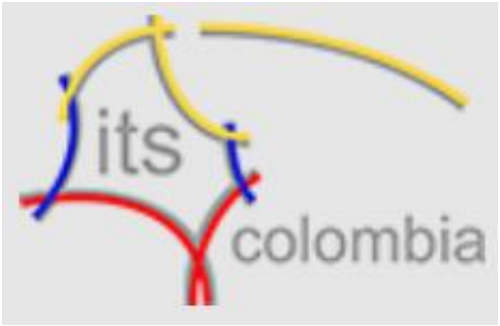
The Institution of Engineering and Technology

18 Universities

5 Public Institutions

10 Enterprises

3 NGOs



Nationalities

- Colombia
- Germany
- Chile
- Belgium
- Ecuador
- Peru
- Mexico
- Cayman Islands
- France

Number of submissions

- Total submissions: 55
- Selected submissions: 39
- Scientific commitee: 32

Session types:

- Keynote sessions: 3
- Special sessions: 6
- Regular sessions: 7

Keynote 1: Prof. Dirk Heinrichs
DLR Institute for Transport Research-Germany

Evolution, Revolution, Transformation: How digitalization and automation are about to change mobility in cities worldwide

Keynote 2: Wouter Florizoone
Vlaams Brabant Province-Belgium

Bottom-up sustainable mobility: how to achieve solutions in the complex quadruple helix

Keynote 3: Prof. Sergio Velastin

U. Carlos III and Queen Mary University- Spain-UK

The potential of video analysis to improve urban traffic

Special sessions

- Optimization Models for City Logistics- Martin D. Arango and Julián Zapata –UNAL CEIPA
- Technologies and developments in electric mobility systems- Ricardo Mejía and EAFIT
- Meteorology, Traffic and Urban Air Quality- César Pérez and José F. Jiménez- UNAL

Program at-a-glance

Tuesday 17th: Technical visits

Metro de Medellín

Tuesday 17th: Technical visits

Comuna 13 escalators

Wednesday 18th

Date	Wednesday april 18th, 2018					
	Room Inntempo			Room Innova		
Hour	Session	Description	Speaker	Session	Description	Speaker
08:30 - 10:00	Registration					
10:00 - 10:45	Opening of the event in charge of projects MOVICI and MOYCOT					
10:45 - 12:00	Session 1: Governance - part I (3 presentations) Chair: Prof. Dirk Heinrichs (DLR)	1. Presentation in charge of Area Metropolitana del Valle de Aburrá.	Eng. Claudia Díaz Díaz			
		2. How the Forms of Urban Sustainable Mobility Allow to Understand Bicitaxismo in the Public Space of Bogotá?	Michelle Rodriguez			
		3. Technological Management for Imposing Traffic Subpoenas in the Streets of Bogota D.C. Using Mobile Devices	Augusto Velasquez Mendez			
12:00 - 13:30	Social lunch with DLR					
13:30 - 14:15	Keynote - Evolution, Revolution, Transformation: How digitalization and automation are about to change mobility in cities worldwide, Dirk Heinrichs (DLR)					
14:15 - 15:00	Panel Discussion					
15:00 - 15:30	Coffee break					
15:30 - 17:10	Session 2: Traffic modeling and simulation (4 presentations) Chair: Andres Acosta (UNAL)	1. Simulating Future Mobility with SUMO	Dr. Robert Hilbrich, DLR	Session 3: Traffic management and ITS - part I (4 presentations) Chair: Prof. Jairo Espinosa (UNAL)	1. The future of the integration of urban and inter-urban ITS - Modeling as a decision support system in different time horizons	Klaus Banse, ITS Colombia
		2. Origin-Destination matrix estimation based on microsimulation and optimization	Christian Portilla		2. ITS in Germany and the Example Traffic Management System VAMOS in the Dresden Region	Prof. Jürgen Krimmling
		3. Cívica, A System for Moving Intelligently in the City of Medellín	Eng. Juan Fernando Duque Valencia, Metro de Medellín		3. An Expert Model for Managing Mobility: A Decision-making Support System for the Traffic Control Center of Medellín	Juan Manuel Restrepo
		4. Door-to-door service or fare?: Analyzing travellers' choice for ridepooling services with the help of Conjoint Analysis.	Alexandra König		4. Dynamic Assignment of Traffic Lights Plans as a Strategy for Reducing Vehicle Congestion	Mauricio Carranza

Thursday 19th

8:15 – 9:30 Special session 1: Meteorology, traffic and urban air quality, Part I

1. MIMOZA – A tool to evaluate the effect of Low Emission Zones on vehicles air emissions, Thamara Vieira Da Rocha - CITEPA
2. Pedestrianization and semi-pedestrianization: a model for recovery public space in the Center of Medellín, Matilde Tobón Maya – UNAL
3. Vehicular Emissions Reduction for Urban Traffic Networks, Anna Sarrazola – UNAL

Thursday 19th

09:30 – 10:15 Keynote - Bottom-up sustainable mobility: how to achieve solutions in the complex quadruple helix, Wouter Florizoone – VLAAMS BRABANT

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10:15 – 10:45 Coffee Break

Thursday 19th

10:45 – 12:15 Special session 2: Meteorology, Traffic and Urban Air Quality - part II

1. A box modeling approach for air quality management in Aburra Valley, Ricardo Ramírez Naranjo
2. Evaluation of Pollutants Dispersion in an Urban Traffic Scenario in the City of Medellín, César Augusto Gómez Pérez
3. Methodologies for Estimating Pollutant Emissions Generated by Trucks to the Atmosphere, Heliana Marcela Restrepo Peña
4. The "Other" Smart City, Hernán Benjumea

Thursday 19th

12:15 – 13:45 Social lunch with MOYCOT

13:45 – 15:00 Special session 3: Technologies and Developments in Electric Mobility Systems - part I

15:00 – 15:30 Coffee break

15:30 – 17:10 (change) Session 4 & 5: Governance, Mobility and Smart Cities

Thursday 19th

15:30 – 17:10 Session 4 &5 : Governance, Mobility and Smart Cities

1. The Pleasure of Walking through Downtown of Colonial Cities, *Jonatan Jair Villamarin Monroy*
2. Transit-oriented development in the metropolitan governance: a comparison between the Colombian Case and the South-Korean experience, *Natalia Da Silveira Arruda*
3. A Comparison of Accessibilities Between the City of Berlin and Mexico City, *Jorge Narezo*
4. Applying GPS Tracking to understand Para-transit: What can we learn from it?, *Laura Fischer*

Friday 20th

Date	Friday april 20th, 2018					
	Room Inntempo			Room Innova		
Hour	Section	Description	Speaker	Session	Description	Speaker
08:00 - 08:15	Welcome in charge of Professor Jairo Espinosa					
08:15 - 09:55	Special session 4: Technologies and Developments in Electric Mobility Systems - part II (4 presentations) Chair: Semaria Ruiz (UNAL)	1. A Taxonomy Of Energy Consumption Models For Electric Vehicles	Daniel Villa			
		2. Analysis of relevant variables to monitor a photovoltaic charging station through the Function to Data Matrix (FDM) method	Isabel Cárdenas Gómez			
		3. Defining engineering characteristics of an electric kit for motorcycle hybridization in the Colombian context using QFD	Simón Polanía			
		4. Design and Implementation of an Electric Vehicle for Shared Use in Bogotá	Juan Carlos Mendoza Collazos			
09:55 - 10:15	Coffee Break					
10:15 - 11:00	Keynote - The Potential of Video Analysis to improve Urban Traffic, Sergio Velastín					
11:00 - 12:15	Special session 5: Optimization Models for City Logistics - part I (3 presentations) Chair: Dr. Robert Hilbrich (DLR)	1. Analyzing the Efficiency of Vehicular Transit Microsimulator Calibration in Conflictive Intersections close to University of Azuay, Using Aimsun 8.1	Christian Marcelo Moyano Tobar			
		2. Optimal Design of a Charging Station for Electric Vehicles, based on Renewable Energy	Jessica Verónica Mena Ledesma			
		3. Microsimulation as an optimization tool for urban goods distribution: A review	Cristian Giovanny Gómez Marín			
12:15 - 13:45	Social lunch MOVICI-MOYCOT					
13:45 - 14:35	Special session 6: Optimization Models for City Logistics - part II (2 presentations) Chair: Dr. Robert Hilbrich (DLR)	1. Combinatorial auction for transport collaboration	Conrado Augusto Serna Urán			
		2. A Colaborative Inventory Model with joint Orders in the Urban Distribution of Goods	Julián Andrés Zapata Cortés			
14:35 - 14:55	Coffee Break					
14:55 - 16:35	Session 6: Data and methods (4 presentations) Chair: Mirko Goletz (DLR)	1 .The search for vehicles available for supply and demand of cargo and transport	Juan Felipe Quintana	Session 7: Traffic management and ITS - part II (4 presentations) Chair: Christian Portilla (UNAL)	1. Detection of motorcycles and use of safety helmets with an algorithm using image processing techniques and artificial intelligence models	Mario Varon
		2. Evaluation of the Cost-effectiveness of Freeway Service Patrol for Reducing Nonrecurrent Congestion	Luisa Reyes		2. An Automatic System for Optimizing the Travel Time of BRT Buses of Medellín - Metro Plus, Línea 1	Marta Suárez
		3. Dynamics of execution in vehicles tracking from historical events	Faider Florez Valencia		3. Vehicular Traffic Control Solutions using Neural Networks and Deep Learning	Ernesto Fernandez, Sistra SAS
		4. Urban Mobility – Efficient Everyday Displacements using TICs, the Universidad Autónoma de Barcelona case	Cinthya Lady Butron Revilla		4. Urban Tolling Implementation: As a solution to congestion problems in large underdeveloped cities	Miguel Yuseff
16:35 - 19:00	Closing and reception					

The rooms