

Conference Program

September 22-23, 2022



IEEE EVIS-2022 **5th** Electric Vehicles International Symposium **INTERNATIONAL CONFERENCE | 2022**

Theme: “Developing Sustainable Transport”

Days 1 and 2 (22th-23th September)
International Conference





Conference Program

September 22-23, 2022

HEADQUARTERS:

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Intelligent Energy Systems Group (IES-Group)
Consolidated Academic Body UMSNH-CA-103
Red Internacional de Electromovilidad

INDUSTRIAL PARTNERS:

BMW, MINI, E-DRIVE



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THURSDAY, 22 SEPTEMBER 2022

09:00 – 09:30 Opening Ceremony

Conference remarks: Dr. Norberto Garcia Barriga, Conference Chairman.

Introductory remarks: Dr. Fernando Ornelas Téllez, Chair of the IEEE Centro Occidente Section.

Opening remarks: Dr. Raúl Cardenas Navarro, Principal of the Universidad Michoacana de San Nicolás de Hidalgo.

Chair: Dr. Nandini Barbosa Cendejas, UMSNH.

09:30 – 09:45 Industrial Exhibition Inauguration

10:00 – 11:00 Plenary Session 1

EXPERIENCES IN THE MODELLING OF ELECTRIC LOADS FOR INTERCONNECTION OF RAILWAY SYSTEMS TO THE NATIONAL TRANSMISSION NETWORK

Lecturer: Dr. José Alberto Gómez Hernández, Gerencia de Ingeniería Especializada de CFE, México

Chair: Dr. Claudio Rubén Fuerte Esquivel, Universidad Michoacana de San Nicolás de Hidalgo

11:00 – 12:00 Paper Session 1

Chair: Dr. Juan Anzures Marin, *Universidad Michoacana de San Nicolas de Hidalgo*

- **REAL-TIME DIGITAL FIELD-ORIENTED CONTROL OF A THREE-PHASE PERMANENT MAGNET SYNCHRONOUS MOTOR**

Norberto Garcia and Luis Arturo Arellano

Universidad Michoacana de San Nicolas de Hidalgo, Mexico

- **ANALYSIS AND OPTIMIZATION OF FAULT - TOLERANT BEHAVIOUR OF MOTORS IN ELECTRIC VEHICULAR SYSTEMS**

Shivani Khare, Shubham Singh, Siddharth Roy and Yogesh Mandake

Bharati Vidyapeeth University, India

- **DESIGN AND SIMULATION OF A TWO-PHASE INTERLEAVED POWER FACTOR CORRECTOR FOR AN ELECTRIC VEHICLE CHARGER**

Norberto Garcia and Dalia Botaka-Mbimba

Universidad Michoacana de San Nicolas de Hidalgo, Mexico

12:00 – 12:30 Coffee Break



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- 12:30 – 13:30 Plenary Session 2
IoT FOR MONITORING RAILWAY INFRASTRUCTURE
Lecturer: B.E. Juan García Rios, ALSTOM, Chile
Chair: Dr. Fernando Ornelas Téllez, Universidad Michoacana de San Nicolas de Hidalgo
- 13:30 – 14:30 Plenary Session 3
STATE OF ELECTRIC MOBILITY IN LATIN AMERICA AND THE CARIBBEAN
Lecturer: M.Ec. Jone Orbea, UN Environment Programme, Mexico
Chair: Dr. Félix Calderón Solorio, Universidad Michoacana de San Nicolas de Hidalgo
- 14:30 – 15:30 EV competition
Chair: MS. Félix Jimenéz, Universidad Michoacana de San Nicolas de Hidalgo
MINI ELECTRIC BATTERY OR SOLAR POWERED VEHICLE
- 16:00 – 19:00 Short course
IMPLEMENTATION OF A REAL-TIME ENERGY METER
Instructors: MS. Félix Jimenéz and B.E. Israel Luna, Universidad Michoacana de San Nicolas de Hidalgo

FRIDAY, 23 SEPTEMBER 2022

- 09:00 – 10:00 EV competition
Chair: MS. Félix Jimenéz, Universidad Michoacana de San Nicolas de Hidalgo
UNIPERSONAL ELECTRIC VEHICLE PROTOTYPE
- 10:30 – 11:30 Paper Session 2
Chair: Dr. Fernando Martínez Cárdenas, Instituto Tecnológico de Morelia
- **RECOMBINATION AND TECHNOLOGICAL COMPLEXITY IN LEAD-ACID BATTERIES FOR ALTERNATIVE ENERGY VEHICLES**
Guadalupe Jaimes, Arturo Lara and Artemio Chávez
Universidad Autónoma Metropolitana, México
 - **ENERGY MANAGEMENT SYSTEM IN A UNIVERSITY CAMPUS MICROGRID: A SLIDING MODE CONTROL APPROACH**
Hector Gerardo Chiacchiarini and Norberto García-Barriga
Universidad Nacional de Sur, Argentina
Universidad Michoacana de San Nicolas de Hidalgo, Mexico



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- **POWER QUALITY ANALYSIS AT A RENEWABLE ENERGY-BASED CHARGING STATION**
Norberto Garcia and Braulio Martinez
Universidad Michoacana de San Nicolas de Hidalgo, Mexico

11:30 – 12:30 Plenary Session 4
CHAdEMO: ACCELERATING TRANSITION TOWARDS A CARBON NEUTRAL SOCIETY
Lecturer: Tomoko Blech, CHAdEMO, France
Chair: Dr. Jaime Cerda Jacobo, Universidad Michoacana de San Nicolas de Hidalgo

12:30 – 13:00 Coffee Break

13:00 – 14:00 Plenary Session 5
WIRELESS POWER TRANSFER FOR ELECTRIC VEHICLES
Lecturer: Dr. Alicia Triviño Cabrera, Universidad de Malaga, Spain
Chair: Dr. Edgar Lenymirko Moreno, Instituto Tecnológico de Morelia

14:00 – 15:00 Special Session on Industry Activity
Chair: Dr. Elisa Espinoza Juárez

ELECTRIC MOBILITY, A STEP TOWARDS THE FUTURE
Lecturer: Gabriela Gallegos, ABB

CHALLENGES AND OPPORTUNITIES FOR ELECTRIC MOBILITY IN MEXICO
Lecturer: M.A. Daniel Abraham López, E-DRIVE

ACCTITUDE
Lecturer: Raúl García Caboara, BMW

15:00 – 15:15 Closing ceremony

16:00 – 19:00 Short course
IMPLEMENTATION OF A REAL-TIME ENERGY METER
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Academic Partners



Industrial Partners



Government Partners



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22-23 September 2022

Information, Art and Culture Centre, Morelia, México

It is our pleasure to announce that the 2022 IEEE Electric Vehicles International Symposium will be hosted by the Universidad Michoacana de San Nicolás de Hidalgo in the city of Morelia in México, on the 22th-23rd September 2022.

The title of IEEE EVIS-2022 is "Developing Sustainable Transport" and it will focus on the design of digital controllers for electric motors and power electronics converters, nonlinear controllers for energy management systems, power quality analysis of charging infrastructure, high speed railway systems, wireless power transfer and construction of solar and battery electric vehicles. In addition, we will also welcome contributions from experts and speakers from industry.

Contact

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