



Leading Global Mobility
Technology and Innovation Trends

OCTOBER 30th-31st 2018
CINTERMEX INTERNATIONAL BUSINESS CENTER
Monterrey, N.L., Mexico



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MAINFORUMTM

MEXICO'S AUTOMOTIVE INNOVATION NETWORK FORUM

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2018 CO-CHAIRS



Alan Taub, Ph.D.

Chief Technical Officer
American Lightweight Materials
Manufacturing Innovation Institute (ALMMII)
Lightweight Innovations for Tomorrow (LIFT)



Venkat Sumantran, Ph.D.

Chairman, Celeris Technologies Pvt. Ltd.
Co-Author of "Faster, Smarter, Greener:
The Future of the Car and Urban Mobility",
MIT Press 2017

Dear Members of the Global Automotive Community

It is with great pleasure that we have accepted the position of Co-Chair of the MAINFORUM 2018 and invite you to join us at this global event in Monterrey Mexico 30-31 October. www.MAINFORUM.org

It is, by now, well accepted that the auto industry and personal mobility are undergoing structural transformation.

At this event, we are focusing on the future in 2030 – the global automotive technology frontiers and the innovations that will drive the next wave fronts of disruptive change in four areas:

1. Advanced Light Weight Materials
2. Autonomous & Connected Vehicles
3. Low/Zero Emission Power Systems
4. Industry 4.0 Advanced Manufacturing

Additionally, there will be featured industry keynotes from The Center for Automotive Research, vehicle OEMs, and international design centers who are today setting the framework and the roadmap for the next decade.

There will also be the sharing of the MAINFORUM Technology Forecast 2030, dozens of global innovation-themed exhibitors, significant networking opportunities and a set of elective technical seminars.

As this is the third MAINFORUM, following successes in 2014 and 2016, space may be limited so please register early. Please join us and the +500 global delegates who are expected.

We look forward to greeting you in October.



ABOUT THE CONFERENCE

The MAINFORUM is a platform of networking, future perspectives sharing and development of R&D consortia-based activities between researchers, technologists, consultants, government authorities and industry leaders that are interested in being part of the next generation of mobility and the evolution of Mexico as a global source of manufacturing and R&D.

The conference is integrated by multiple sessions led by speakers with background from such world class organizations as General Motors, Tata Motors, Continental, John Deere, Ohio State University, Horiba MIRA, among others.

This 3rd edition will focus on the technology frontier 2030 and the supporting trends in the next generations of human mobility

- Advanced Driver Assistance & Fully Autonomous Capabilities
- Smart Sub-systems and Components
- Light-weighting with Advanced Materials - Steel, Aluminum, Composites & Intelligent Materials
- Next Gen Electric/Hybrid- Electric Vehicles and Shared Transportation Services

The MAINFORUM will also extend beyond products to the next generations of manufacturing technology. As we sprint into the age of data and connectivity, factories and manufacturing processes are going through a major reconfiguration. Industry 4.0 is a revolution and a time in history that needs to be well understood and assimilated in order to take action immediately. The MAINFORUM offers practical applications from strategy all the way down to technologies, including additive manufacturing, IoT, data science, artificial intelligence, simulation/digital twins, and VR/AR/MR.



Mark Keller
Global Body-in-White Platform
Ford Motor Co.
MAINFORUM 2016
Speaker

With a backward look over the last ten years, we have witnessed new industry participants such as Tesla, Google, Uber and Lyft as well as the wide spread application of light-weighting technologies, electronics, software, sensors, cameras and vehicle communications. Technology and innovation are moving faster and with more disruption!

- Where will the next ten years of innovation take us?
- What will be the opportunities for technology-based growth and collaboration?
- What will be the innovation opportunities for Mexico and its global partners?

These questions and many others will be addressed by the 3rd edition of the MAINFORUM.

Keynote Speakers and Session Chairs



Alan Taub
CTO at LIFT ALMMII
Former
Vicepresident Global
R&D at General
Motors



Venkat Sumantran
Chairman at Celeris
Technologies Pvt.Ltd.
Co-Author of "Faster,
Smarter, Greener:
The Future of the Car
and Urban Mobility"



Carla Bailo
CEO at Center
for Automotive
Research



Alexei Andreev
Managing Director at
Autotech Ventures



Alex Foessel
Director Latin
American
Technology
Innovation Center at
John Deere



Jorge Vazquez
Director R&D Mexico
at Continental



David Romero
Professor of Smart
Manufacturing at
ITESM



Bruno Juanes
Chief Innovation
Officer at Deloitte
Consulting Group
Mexico



Zack Henkin
Deputy Director at
Forth

Technical Session Speakers



Uday Vaidya
CTO at Institute
for Advanced
Composites
Manufacturing
Innovation



George Coates
Technical Advisor at
World Auto Steel /
CTO at the Phoenix
Group



Alan Lou
Professor Materials
Science Engineering
at Ohio State
University



**Gilberto Basilio
Sanchez**
Rest of America's
IoT Director, Intel
Corporation



Jair Mexia
Business Unit Head
and Digitalization
Leader, Siemens
Mexico



Sergio Bautista
Division Manager
Robotics & Motion,
ABB Mexico



Alejandro Silva
President, Renishaw
Mexico



Manuel Nieblas
Audit Partner-
Industrial Products
and Manufacturing
Leader at Deloitte
Consulting Group
Mexico



Gunther Barajas
Vicepresident at
Dassault Systèmes
Mexico



**Ignacio-Garcia de
Presno**
Infrastructure
Practice Leader
Partner at KPMG
Mexico



Julian Turner
Director at Westfield
Sportscars



Ottmar Kappes
Country Manager –
Mexico & LATAM at
Altair



Mel Torrie
President & CEO
at Autonomous
Solutions Inc.



Program

Monday
October 29th

R&D CENTERS AND PLANTS VISITS

Monterrey has become an emerging cluster of multi-industry research, development and innovation centers in the last 15 years.

In total, 97 public and private R+D+i centers, 10 medium-high tech incubators, 4 high-tech incubators and 1 Research and Technology Innovation park, are part of the ecosystem.

This initial part of the program consists of giving the MAINFORUM participants the opportunity to visit the research and technology innovation park (PIIT) and several R&D Centers and Manufacturing plants.

MAINFORUM Attendees

Tuesday
October 30th

8:30am
CEREMONY

9:00am
Keynote
FUTURE MOBILITY 2030

10:00am
CONNECTED, AUTONOMOUS & SHARED

10:30am Connected

11:00am Autonomous

11:30am Shared

12:00pm Smart Cities

12:30pm Panel Discussion

1:00pm
LUNCH

2:00pm
Keynote
OEM STATEMENTS FOR ELECTRIC AND HYBRID

3:00pm
LIGHTWEIGHTING & ADVANCED MATERIALS

3:30pm Aluminum

4:00pm Composites

4:30pm Steels

5:00pm Intelligent Materials

5:30pm Panel Discussion

Tuesday
October 31st

8:30am
Keynote
MOBILITY 2030, TECHNOLOGY, MARKETS & TALENT

10:00am
INDUSTRY 4.0
Technologies and digital transformation trends in the automotive industry

10:20am check-up!
Interactive session

11:00am Panel I
"Design and engineering in the industry 4.0"
Topics
Additive manufacturing, AR/VR/MR & Digital Twin

11:30am Panel II
"Advanced manufacturing in the industry 4.0"
Topics
Intelligent maintenance, collaborative robotics & data analytics

1:00pm
LUNCH

2:00pm
Keynote
COLLABORATIVE INNOVATION ECOSYSTEM

3:00pm
ZERO/LOW EMISSION MOBILITY

3:30pm Public Policy

4:00pm Powertrain

4:30pm Energy Storage

5:00pm Energy Generation

5:30pm Panel Discussion



Conference Topics

Connected, Autonomous and Shared Technologies

Like a tsunami, the technologies enabling and driving the frontiers of autonomy have been emerging for the last ten years. At each of the last two MAINFORUM conferences in 2014 and 2016, we have seen the progress. Now these technologies have reached the inflection point in the growth curve of innovation. Further advances by 2020, 2025 and 2030 will be nothing short of breathtaking. In this session, we will hear from its co-chairs – Alex Foessel, Director of Autonomous Systems Architecture for Deere & Co. and Jorge Vazquez, Director of R&D Mexico for Continental AG – one of the global premier autonomous systems manufacturers what the 2030 frontier is likely to be. And, you will hear from their session speakers what will be the major milestones on the roadmap to this exciting future.

Industry 4.0

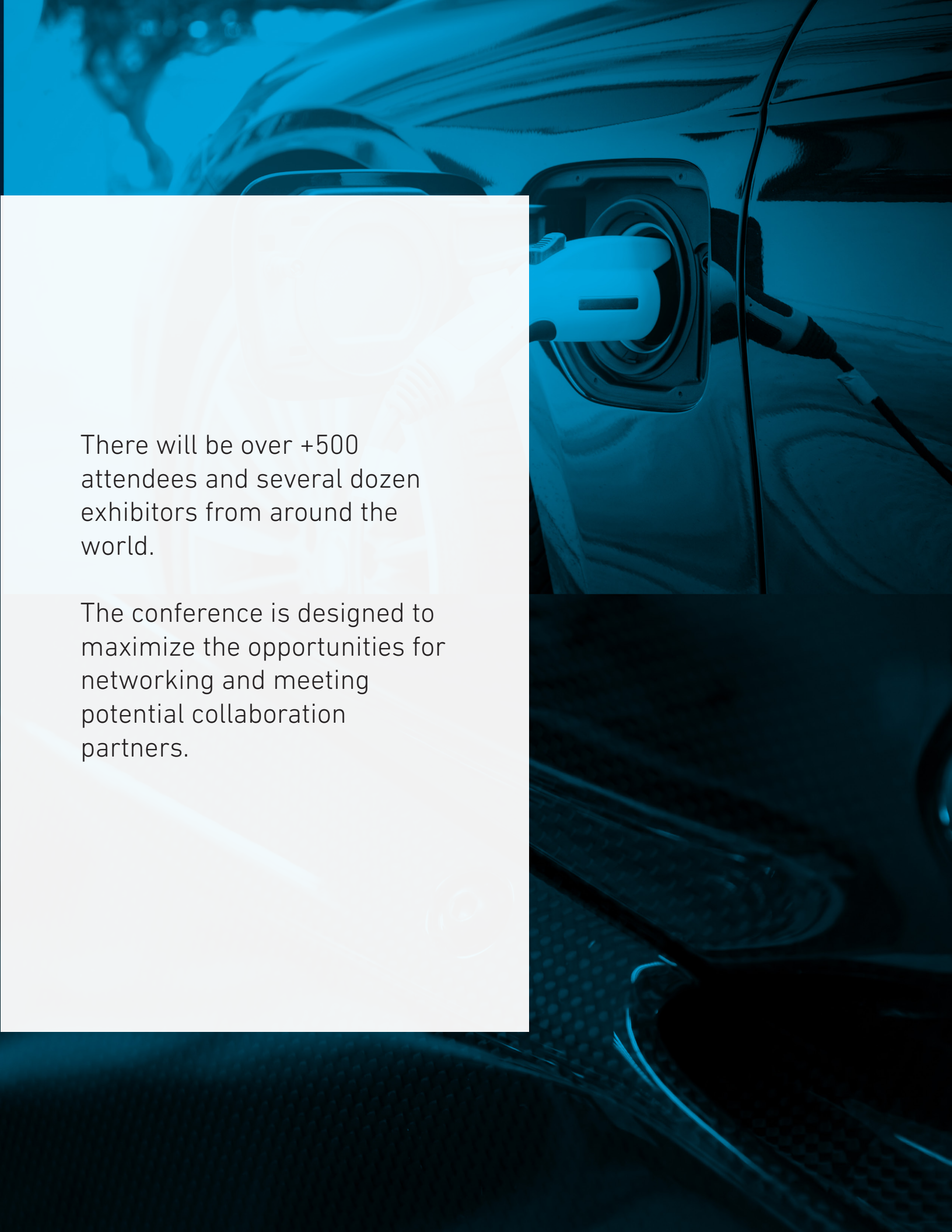
We are undergoing the 4th industrial revolution which is driven by the convergence of the digital and physical worlds. The impact is reaching not only manufacturing industries, but also commerce, government, finances, society, etc. This session will be divided into 2, presenting many examples of the use and implementation of 4.0 technologies by automotive OEMs or suppliers. The first part will cover design and engineering. Technologies such as additive manufacturing, augmented reality/virtual reality and digital twin will be addressed in this section. The second part will focus in advanced manufacturing, bringing to the stage speakers with experience in intelligent maintenance, collaborative robots and data analytics.

Lightweighting and Advanced Materials

As the global emissions regulations continue to challenge the automotive industry to lower emissions levels, removing weight from the cars has been the best strategy with greatest cost-benefit results. Enormous efforts around the globe are being undertaken to develop the next generation of light weight materials. Under the direction of Alan Taub, CTO of LIFT (Lightweight Innovation for Tomorrow), you will learn from the latest discoveries and innovations reached in conventional materials such as steel and aluminum, up to the recent use of alternative materials such as magnesium and composites. As other sectors of technologies progress, you will learn how materials R&D has taken advantage of this new knowledge to create intelligent materials for automotive components and to use artificial intelligence to define custom made materials chemistries for specific applications.

Zero/Low Emissions Mobility

Just a few years ago at the MAINFORUM 2014, the market share forecast of electric vehicles was enormously underestimated. The evolution that this topic has had in the past 4 years is to be well and seriously studied. Electric mobility is going to create a disruptive change in the entire auto industry. In this session, we will not just focus on the powertrain technologies, but we will also examine the impact more broadly. We will speak about energy storage, which today is considered to be the main barrier holding back a greater and quicker takeover of the ICE by electric mobility. We will also learn about global regulations, like London's for a zero-emission urban area. And, finally we will learn about the future trends in the infrastructure for energy generation, transportation and point of charge.



There will be over +500 attendees and several dozen exhibitors from around the world.

The conference is designed to maximize the opportunities for networking and meeting potential collaboration partners.

Special Added Value Features

Mobility Solutions Tech Forecast 2030!

Applying the Delphi Method and the participation of the MAINFORUM community, we will develop a 2030 mobility industry tech forecast and release the results and final report during the conference. In the following weeks, you will receive an email from us inviting you to participate with questions related to the topics of the program in a specific format that we will explain.

Meet the author of FASTER, SMARTER, GREENER The future of the car and urban mobility

Dr. V. Sumantran, MAINFORUM 2018 Co-Chair, has recently released his co-authored book in collaboration with MIT press, which is a call to redefine mobility so that it is connected, heterogeneous, intelligent and personalized, as well as sustainable, adaptable and city-friendly. We will organize a meet and greet with the author where you will be able to get signed copies of the book and discuss the content with him. To learn more about the book please visit <https://mitpress.mit.edu/books/faster-smarter-greener>. With your registration you will get a discount code if you'd like to buy the book in advanced to get it signed by the author.



Anthony Greszler
Vice president Government and Industry Relations
Volvo Trucks

Jodi Presswood
General Manager Bus and Global Truck Products
Navistar

MAINFORUM 2014
Speakers

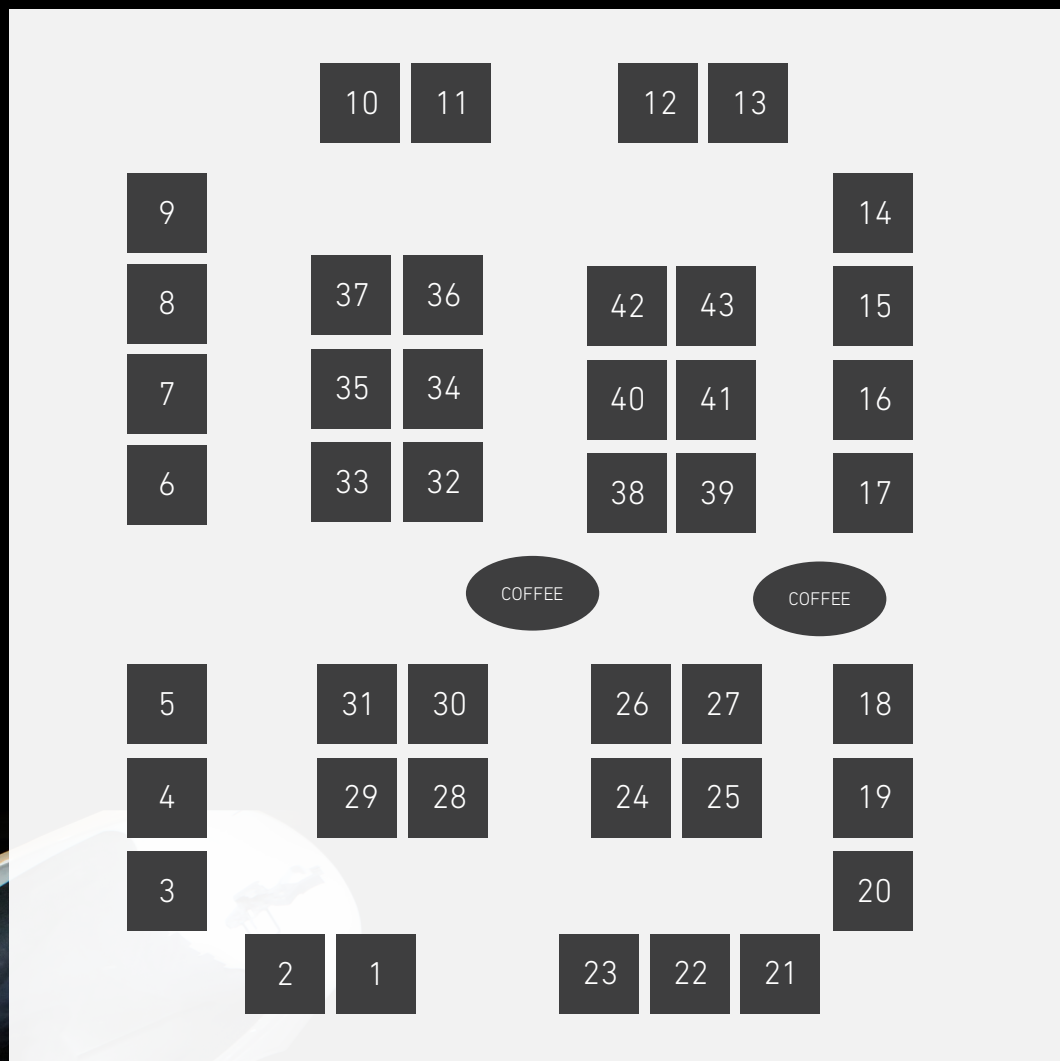
Technical presentations and workshops

The conference will include a parallel program in which global researchers will present their latest's technology developments in deep technical detail and expert consultants will offer practical workshops in innovation/R&D related topics. We will populate this part of the conference through a global call-for-proposals that will be initiated in June.

Industry 4.0 Check-up!

With the collaboration of Deloitte, Tecnológico de Monterrey (ITESM) and CLAUT, an industry 4.0 check-up/assessment will be conducted during the industry 4.0 technical session. You will be able to discover where you are standing as a company in the 4th industrial revolution and which direction you should point to be on top of the wave. This activity will give you quality information to look for partners to collaborate.

AUTOMOTIVE TECHNOLOGY SHOW



Tom Reinhart
Institute Engineer, Engine, Emissions & Vehicle Research
Southwest Research Institute

Wally Wade
Former Technical Fellow and Chief Engineer
Ford Motor Co.

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Speakers

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NON-MEMBER	\$ 9,000.00	\$ 10,500.00
STUDENTS Full Time University ID Required	\$ 2,000.00	\$ 2,500.00
PRESS/ANALYST Credentials Required	FREE	FREE
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*Price currency is in mexican pesos.



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