NAFEMS americas events

The International Association for the Engineering Modeling, Analysis and Simulation Community

CONFERENCE PROGRAM & AGENDA

Confidence in Engineering Simulation:

The Next 10 Years of CAE in Mexico

May 23rd, 2019 | Tecnologico de Monterrey - Campus Sante Fe, Mexico City

nafems.org/americas

Keynote from the Ford Motor Company on "Development of Automotive Engineering in Mexico: New Trends" and **Invited Presentation** from GE Aviation on "*Finite Element Analysis Challenges in External Configuration Hardware*"

Three Tracks with presentations from industry, software providers, researchers, and academia

Lunch and Networking Reception Included

With key support provided by:

cortina DESIGN ENGINEERING

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What is the future for engineering analysis and simulation in Mexico? Discover innovative engineering simulation processes and tools which are helping companies in Mexico improve production capabilities. Engage with domain experts, industry leaders, and peers in a focused, comprehensive one-day event that covers topics on engineering analysis, simulation, and systems modeling and simulation that every engineer in Mexico should know.

Join NAFEMS on May 23rd, 2019 in Mexico City for an event that will bring together leading visionaries, developers, and practitioners of CAE-related technologies in an open forum, unlike any other, to share experiences, discuss relevant trends, discover common themes, and explore future developments in Mexico. Topics will include:

- ***Driving the Design of Physical Systems, Components & Products***
- ***Innovation and Optimization through Engineering Simulation***
- ***Manufacturing Process Simulation***
- ***Implementing Simulation Governance & Democratization***
- ***Addressing Business Strategies & Challenges***

NAFEMS is the only worldwide independent association dedicated to engineering modeling, analysis & simulation. Currently, there are more than 1,400 member organizations worldwide ranging from major global corporations through small-scale engineering consultants. If you work with engineering simulation, you should be part of NAFEMS. Special thanks to Francisco Gomez (Cortina Design Engineering) for his important efforts in helping NAFEMS host its first-ever event in Mexico!

Sponsors

We would like to extend a special thanks to the sponsors of the 2019 NAFEMS Americas Conference on "Confidence in Engineering Simulation: The Next 10 Years of CAE in Mexico." Please be sure to visit and speak with each of our sponsors during the conference to see and hear about the latest advancements in their technologies. Special thanks to Francisco Gomez of Cortina Design Engineering for the hours of support provided to help organize this event.

AGENDA - Thursday, May 23rd

Program subject to change.

Plenary Session: Auditorium

9:00

Welcome & Introduction
A. Wood, Americas Regional Manager, NAFEMS & F. Gomez, Cortina Design Engineering

Development of Automotive Engineering in Mexico: New Trends
A. Ayala, Ford Motor Company

Finite Element Analysis Challenges in External Configuration Hardware
L. Vidriales, GE Aviation

10:30 Break in Exhibition Area

	Auditorium	Classroom 1202	Classroom 1203
	TRACK 1: Mfr Process Simulation 1 Chair: L. Vidriales, GE Aviation	**TRACK 2: Computational Fluid Dynamics** Chair: A. Tristán, Instituto de Evaluación e I. A.	**TRACK 3: Optimization** Chair: K. Flores, Ford Motor Company
11:00	**Structural, Injection Moulding and Forming Simulations During a Plastic-Metallic Infuser Development** J. Anaya, Mabe S.A. de C.V.	**Conjugated Heat Transfer Analysis of and Electric Transformer to Determine the Temperature Behaviour of Leads** J. Toledo Gonzalez, COMPLX	**Automated Pre-processing Method for BIW Mesh Creation Including Spot-Welds Using Open Source Programming Language** A. Garcia, Ford Motor Company
	Using Explicit Finite Element Code to Simulate Riveting Process Z. Yang, Valeo-Kapec NA	**Using CFD to Minimize Emissions and Combustion Instability of a GDI Engine at the Catalyst Heating Operating Point** J. Flores Mora, Robert Bosch Mexico Sistemas...	**Intrusion Car Body Optimization Combining Frontal and Side Crash Responses** F. Leonov S. López, LURI Engineering
	Analysis and Simulation of the Forging Process of an AISI 4340 Cast Ingot to Reduce Internal Defects and Energy... R. Ramírez-Galindo, Frisa Forjados S.A.	**Crude Oil Properties in CFD, Methodology and Case Studies** H. Hinojosa, Grupo SSC S.A. de C.V.	**CAE Simulation for Cost Reduction Strategies** M. E. Turanzas Forseck, Ford Motor Company
	Stamping Feasibility CAE Simulation at Early Design Stages E. Camargo, Ford Motor Company	**Beyond CFD - Powering Sustainable Innovation on an Integrated Platform** F. Dri, Dassault Systemes SIMULIA Corp.	**Leveraging Simulation to Optimize Design for 3D Printing** S. Sithambaram, SOLIDWORKS Corp.

12:40 Lunch in Cafeteria

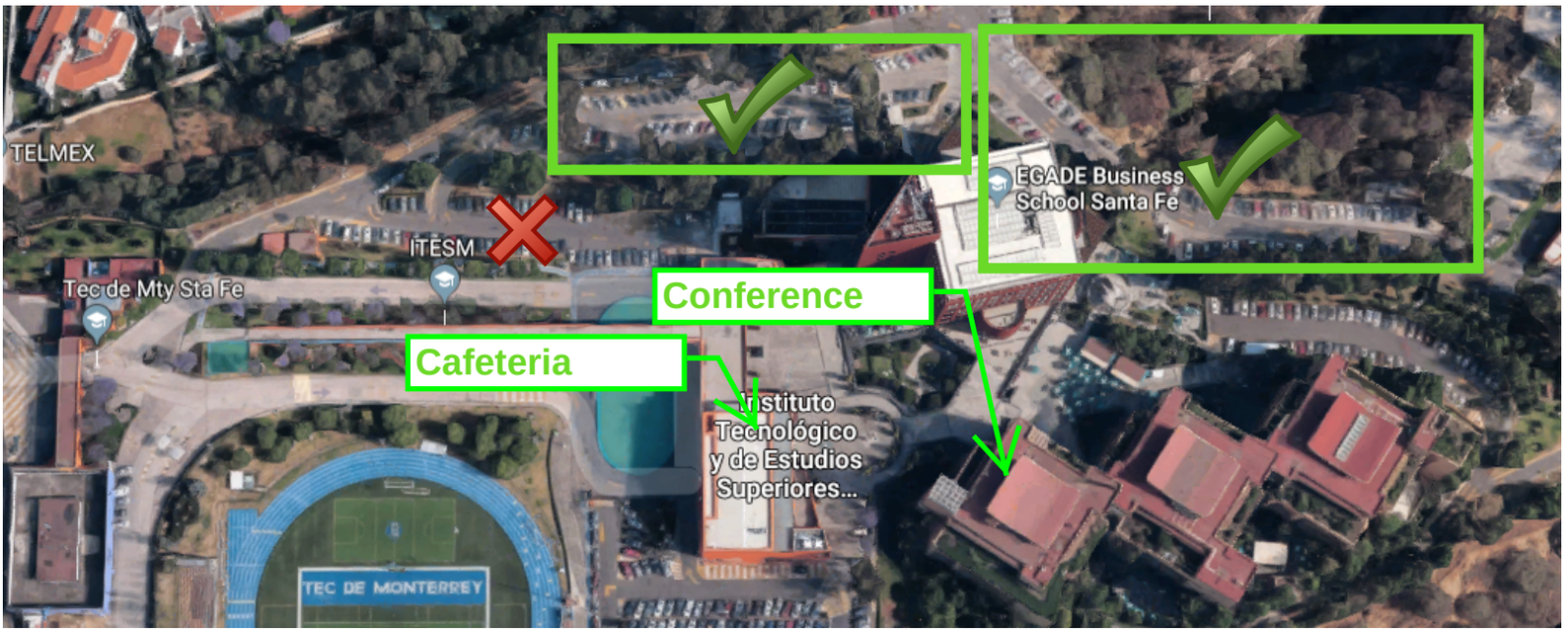
	TRACK 1: Mfr Process Simulation 2 Chair: J. Anaya, Mabe S.A. de C.V.	**TRACK 2: Machine Learning** Chair: L. Vidriales, GE Aviation	**TRACK 3: Dynamics & Vibration** Chair: F. Ramírez, Cortina Design Engineering
1:40	**The Relationship between Ribs Layout on a Body Exterior 'Belly Pan" Part, and its Prediction of Warping** V. Hernández, Ford Motor Company	**CAE Applied at the Right Place and at the Right Time** K. Flores, Ford Motor Company	**Seam Weld Optimization in Automotive Systems for Durability Analysis** C. Florez, Ford Motor Company
	Modeling Structural Behaviour of Metallic Safety Components R. Pérez Santiago, Joyson Safety Systems	**How the Simulation-Driven CAE Process May Be Profoundly Changed by DI & ML** V. Cook, Altair Mexico	**Design and Analysis of a Multiphase DC Motor, through Numeric Simulation** M. Ibañez, Grupo SSC S.A. de C.V.
	Influence of Second-Shot Process Conditions on the Warpage Behavior of a Two-Shot Overmolded Automotive Pillar N. Santoni, Ford Motor Company	**Statistic Modelling Approach for Front Low Speed Impact** O. Saavedra, Ford Motor Company	**Weld Points vs. Body Performance Study** C. Quiroz Garfias, Ford Motor Company
	Roll Forming Processes Design Based on Finite Element Analysis D. Melo, COMPLX	**Virtual Design Optimization of a Valve Train Actuator Using Computer Based Optimization Algorithms** R. Buendia, Delphi Technologies	**Modal Analysis and Fatigue for Bus Structure** A. Tristán, Instituto de Evaluación e Ingeniería Avanzada

3:20 Break in Exhibition Area

	TRACK 1: Airbag Simulation Chair: R. Apaez, Driven / CLAUT Innovation Center	**TRACK 2: Computing & Licensing** Chair: C. Cervantes, Cortina Design Engineering	**TRACK 3: Simulation Confidence** Chair: F. Canales, Ford Motor Company
3:50	**SAC Folding CAE Methodology** P. Rodriguez, Ford Motor Company	**The Effect of HDR InfiniBand on CAE Simulations** G. Cisneros-Stoianowski, HPC-AI Advisory Council	**Multiobjective CAE Model Homologation** R. Singer, Ford Motor Company
	Airbag Folding Simulation Impact for Steering Wheel Design I. Juarez, Joyson Safety Systems	**How to Make The Most Of Your Analysis and Simulation Applications** F. Thomas, Open iT	**Reliable Analysis without FE Mesh** S. Nageswaran, Altair Engineering
	CAE Side Curtain Airbag Deployment for Interior Trim Integrity in the Automotive Industry H. Hernandez, Ford Motor Company		

5:05 **Networking Reception in Exhibitor Area**

Tecnologico de Monterrey - Campus Santa Fe, Mexico City



Exhibiton Hall

Exhibitmpq will include

- *ESSS*
- *GrupoSSC*
- *Altair Engineering*
- *Intelligy*
- *MSC Software*

Conference Venue

Tecnologico de Monterrey -
Campus Santa Fe, Mexico City
Mexico

NAFEMS

As the only non-profit international association dedicated to the analysis, simulation, and systems engineering community, NAFEMS has established itself as the leading advocate for establishing best practices in engineering simulation. Over 35 years later, industry end-users, software and hardware solutions providers, researchers, and academic institutions continue to recognize NAFEMS as a valued independent authority that operates with neutrality and integrity. NAFEMS Americas supports over 400 member companies located in the Americas region who are actively engaged in the analysis, simulation, and systems engineering community.

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CAASE20

The Conference on Advancing Analysis & Simulation in Engineering

June 16th - 18th, Indianapolis

Co-hosted by: NAFEMS DE Digital Engineering