# GTTC 22

## GT TECHNICAL CONFERENCE

### AGENDA USA

**Presentation Day: OCT 11, 2022**
**Seminar Day: OCT 12, 2022**

GAMMA TECHNOLOGIES

# DAY 1 - TUESDAY, OCTOBER 11 | Morning Session

| | |
|---|---|
| 8:00 | **REGISTRATION & COFFEE** |

**8:50** — **Opening Remarks & Welcome Address**
Matt Warner, GT Vice President of Operations
Dimple Shah, GT President & CEO

**9:15** — **FEV North America** | Sumit Paul
*Model-based Assessment of Longitudinal ADAS Functions for Fuel Economy Improvement of Class 8 Long Haul Trucks*

**9:40** — **KULR** | Will Walker
*Test and Analysis Driven Approach to Design of Safe and Reliable Battery Systems*

**10:00** — **Gamma Technologies** | Ready for GT-SUITE 2023?
*We are Excited to Start to Reveal What's in our Next Release!*

**10:20** — **REFRESHMENTS & EXHIBITION**

| | BATTERY | THERMAL MGMT. | ENGINE/FUEL CELL | ENGINE |
|---|---|---|---|---|
| **10:50** | **General Motors** *Yong Miao* Using GT-AutoLion for Li-ion Battery Aging Analysis | **Zoox** *Srinivasa Rao Vaddiraju* Innovative Vehicle Architecture - An Opportunity to Design Systems from the Ground Up | **Enginuity Power Systems** *Philip Zoldak* Development of a Gaseous Fueled Boosted Opposed-Piston Four Stroke (OP4S) Engine | **Aramco Americas** *Praveen Kumar* Analysis-Led Exhaust Rebreathing Strategy Development for an Ultra-Low-NOx Heavy-Duty Gasoline Compression Ignition Engine |
| **11:15** | **EC Power** *Nathaniel Stanley* Optimizing Operational Setpoints in a Thermally Modulated Battery | **Emerson Commercial & Residential Solutions** *Daqing Li* GT-SUITE and its Application in CO2 Booster Rack Modeling | **Aramco Americas** *Rafael Lago Sari* Assessing Conventional and Fuel Cell Based Powertrain Systems for Heavy Duty Commercial Transport | **Aramco Services Company** *Christopher Whitney* Development of Controls for a Gasoline Compression Ignition Engine with GT-SUITE Tools |
| **11:40** | **Borg Warner** *Nithin Kondipati* Battery Thermal Management Under Fast Charging Conditions | **Thermoanalytics** *Jon Juszkiewicz* Cabin Comfort Simulation | **Plug Power** *Phillip Schoch* Fuel Cell Modeling at the Core of PEMFC Development | **ISUZU** *Yifan Wei* Transient Model-based Calibration for Engine ECU Maps using a Big Scale Multi-objective Optimization Solver Running on the Cloud |

| | |
|---|---|
| **12:00** | **LUNCH** |

GT

Note: The above agenda schedule is in the preliminary stage and might be subject to changes.

# DAY 1 - TUESDAY, OCTOBER 11 | Afternoon Session

| | COMPONENT THERMAL MANAGEMENT | HVAC/COMPRESSOR | MECHANICS | VEHICLE SYSTEM INTEGRATION |
|---|---|---|---|---|
| 1:30 | **American Battery Solutions** *Vamsie Krishna Sampath Kumar*<br><br>GT-SUITE Model for Battery Pack Thermal / Controls Analysis | **Stellantis** *Vivek Jairazbhoy*<br><br>Development of a Real-Time Data Science Model of a Front End Heat Exchanger for Automotive Heat Pump Applications | **General Motors** *Hatem Orban*<br><br>Dynamic Analysis of a Multi-link Mechanism Variable Compression Engine in GT-SUITE | **Ford** *TBA*<br><br>TBA |
| 1:55 | **Gamma Technologies** *Joe Wimmer*<br><br>FE Electromagnetic Approach to eMotor Cooling | **Trane Technologies** *Joseph Ziolkowski*<br><br>Vapor Injection Port Optimization for a Scroll Compressor | **Eaton** *Nilesh Bagal*<br><br>Use of Different GT-SUITE Components (Engine + VT + Hydraulics) in Engine Brake Product Development | **FEV North America** *Fnu Dhanraj*<br><br>Application of 48V Mild-Hybrid Technology for Meeting GHG and Low NOx Emission Regulations for MHD applications |
| 2:20 | **Echogen Power Systems** *Vamshi Avadhanula*<br><br>Overview of GT-SUITE Modeling for CO2-based Pumped Thermal Energy Storage Systems | **Emerson** *Adam D'Amico*<br><br>Numerical Prediction of Gas Pulsation in a Scroll Compressor Using 1-D Modeling | **Cummins Inc.** *Arnab Chanda (presented by Ashwin Henry)*<br>Dynamic Analysis Capability Development of Transfer Switch using GT-SUITE | **Mahle Powertrain** *Ziming Yan*<br><br>Tailoring the High-Power Low-Voltage Hybrid System for Heavy-Duty Off-road Application |

**2:40** — **REFRESHMENTS & EXHIBITION**

**3:20** — **CUMMINS INC.** | Shakti Saurabh
*An Engine Digital Twin for Air-handling Diagnostics using GT-POWER*

**3:40** — **GENERAL MOTORS** | Sowmya Jayaraman
*Integrated Thermal Simulation Methodology for ICE & Electric Vehicles*

**4:00** — **HANON SYSTEMS, LLC USA** | Steven Koester
*Performance Tool Automation*

**4:20** — **GAMMA TECHNOLOGIES** | Iakovos Papadimitriou, GT Chief Technology Officer
*GT v2023 Developments and Future Vision*

**5:00** — **RECEPTION**

Note: The above agenda schedule is in the preliminary stage and might be subject to changes.

# DAY 2- WEDNESDAY, OCTOBER 12 | GT Seminar Sessions

## MORNING SESSIONS | 8 CONCURRENT SESSIONS

**9:00**

| | | | |
|---|---|---|---|
| Multiphysics Vehicle Optimization | Battery Modeling with GT-SUITE and GT-AutoLion | Thermal Management Systems | Fuel Cell System Modeling Advancements |
| Mechanical Dynamics and Predictive Friction | Designing and Deploying GT Models Beyond Today's Experts | Use of GT-POWER-xRT for Hardware-, Software- and Model-in-the-Loop Development | 3D CFD for non-CFD Experts with GT-CONVERGE |

**12:00**   **LUNCH**

## AFTERNOON SESSIONS | 8 CONCURRENT SESSIONS

**1:30**

| | | | |
|---|---|---|---|
| Combustion Modeling in GT-POWER & ACT | Exhaust Aftertreatment, Reformers, and Chemistry Applications | Multi-physics Solutions for Detailed Pumps, Compressors and Expanders | Electric PowerTrain Modeling with GT-SUITE, GT-FEMAG, and GT-PowerForge |
| Thermal Management Components: Fast & Accurate 1D + 3D solution | Addressing NVH Challenges in Electrified Powertrains | Leveraging Optimization and Automation to Accelerate Innovation | Co-simulation and XiL Solutions Across Applications |

**4:30**   **ADJOURN**

Note: The above agenda schedule is in the preliminary stage and might be subject to changes.

**Presentation Day - OCTOBER 11:**
Technical presentations will be held over multiple half-day sessions.|
Check later for more detailed agenda information for the variouspresentation sessions.

**Seminar Day - OCTOBER 12:**
Learn how GT-SUITE solves unique challenges in a wide range of applications including full
vehicle modeling, battery simulation, virtual calibration, and more!

Scan the QR code or click the link
below to register for the event

https://www.gtisoft.com/event/gt-conference-2022-usa/