GTTC 26

GT TECHNICAL CONFERENCE

AGENDA

HANAU (FRANKFURT) | GERMANY
MARCH 24 & 25

GAMMA TECHNOLOGIES

DAY 1 | Morning Sessions

8:20 **REGISTRATION**

9:20 **Opening Remarks| Gamma Technologies**
Jan Böbel
Director of European Operations

9:30 **Welcome Address | Gamma Technologies**
Dimple Shah
CEO

10:15 **Keynote Speaker | McKinsey & Company**
The Future of Engineering Simulation in the Age of AI

Alessandro Faure Ragani
Senior Expert

10:45 **COFFEE BREAK & EXPERT TALKS**

I	Useability Improvements for GT-POWER-xRT *Valery Martyuk*	II	Advancements in Two-Phase Refrigerant Modeling *Patrice Dubs*	III	GT-FEMAG: Efficient Multiphysics E-motor Design *Felix Brenner*

Expert Talks start 10 minutes after the start time of the break.

11:30 **Themed breakout rooms: Session I**

SMART THERMAL SYSTEMS FOR NEXT-GEN MOBILITY ROOM A	MODELING EMISSION CONTROL SYSTEMS & STRATEGIES ROOM B	BATTERY DESIGN & SAFETY: MODELING FOR RELIABILITY ROOM C
11:30		
Secop GmbH Simulation-Driven Design of Small Fridges for Cars: From China's EV Trend to Global Readiness Mattias da Silva Castro	**Dumarey** 1D-CFD-Trained Neural Networks for Diesel Oxidation Catalyst Modeling Paolo Ferreri	**About:Energy** Transforming Battery Pack Design with Multi-Scale Modeling Miles Robertson
11:50		
**IVECO GROUP	GammaTech Engineering** Integrated HVAC and Cabin Thermal Simulation for Heavy-Duty Trucks Using GT-TAITherm Federico Paolini Luca Panizzolo	**Everllence SE** Modeling of a Noble-metal-free Catalyst for the Methane Oxidation in Marine Applications Manuel Materna	**Toshiba Corporation** Development of a Battery Module Design Methodology for Thermal Runaway Mitigation Using GT-SUITE and GT-CONVERGE Ryosuke Yagi
12:10		
Dallara The Strategic Role of HVAC in High-Performance Vehicles: A GT-SUITE Simulation Approach Luca Ielo	**Automobili Lamborghini	GammaTech Engineering** Advanced Calibration and Validation of Three-Way Catalyst Models Using GT-xCHEM for Virtual Engine Optimization Sofia Tanzi	**Ampere	GammaTech Engineering** Thermal Modeling of Li-ion Cells for Module and Pack Design and Calibration Applications using GT-SUITE Cedric Servant Erwann Le Callonec
12:30		
Gamma Technologies Optimizing Passenger Comfort and BEV Range Using Reinforcement Learning Controls Marek Lehocky	**Robert Bosch** Holistic Simulation Approach for PC/LCV: Optimizing Energy Consumption & Emissions for REEV Ingo Ruthenberg	**Gamma Technologies** Designing Under Pressure: Navigating Thermal, Mechanical, and Electrochemical Tradeoffs in Battery Modules Somayeh Toghyani

12:50 **LUNCH**

14:05 **Themed breakout rooms: Session II**

DAY 1 | Afternoon Sessions

	FUEL CELL FRONTIERS: HYDROGEN & BEYOND — ROOM A	MARINE SYSTEMS & PROPULSION: EFFICIENCY AT SEA — ROOM B	MECHANICAL SYSTEMS — ROOM C
14:05	**Convion** System-Level Design and Investigation of a Solid Oxide Fuel Cell System with Fuel Recirculation and External Ammonia Cracking Yahya Bahadori Satu Lehto	**CLEOS** Energy Efficiency Assessment of Shaft Generators on LNG Carriers and VLCC Tankers Nikolaos Aletras	**Luleå Technical University** 1D Simulation of Hydraulic Cam Phaser System Johan Germundsson
14:25	**H24Project/MissionH24** Simulation of a Hydrogen Fuel Cell Racecar Powertrain–Design and System Integration with Multiple Partners Nicolas Perez Roméo Coletti	**Delft University of Technology** GT-SUITE Model for Wind Assisted Ship Propulsion System, Integration of Direct Use of Wind Energy on Board and Conventional Powertrains to Reduce Vessels' Emissions Deborah Noffke	**Stellantis** Integrated Engine Friction Agostino Iorio
14:45	**BMW Group** Experimental Validation of 1D Simulation for Freeze Start Heat-Up Behavior in PEM Fuel Cells Markus Schwarz	**Gamma Technologies & AlbatrosDigital** Assessment of Marine Propulsion Systems under Realistic Voyage Scenarios (40MIN) Milan Cvetkovic Erik Verboom	**Obrist Engineering** Multi-Body Model of Pump for Liquid Hydrogen Markus Öttl
15:05	**Gamma Technologies** Enhancing Fuel Cell Vehicle Durability: From Machine Learning Degradation Model to EC-DMS Thomas Vevaud		**Gamma Technologies** Improving EV Gear Durability through Contact EHL Simulation and Micro-Geometry Modification Marcel Schmädicke

15:25 — **COFFEE BREAK & EXPERT TALKS**

- **I** — Gear Design New Features — *Marek Riha*
- **II** — Faster Underhood 3D Modeling for Full Vehicle with GT-Auto-3DFlow — *Dig Vijay*
- **III** — Advancements in PowerElectronics Modeling — *Anthony Tsoulfaidis*

Expert Talks start 10 minutes after the start time of the break.

16:10 — **Themed breakout rooms: Session III**

	INTELLIGENT SYSTEMS: AI FOR PREDICTIVE AGING AND THERMAL MANAGEMENT — ROOM A	AEROSPACE — ROOM B	THERMAL ANALYSIS — ROOM C
16:10	**Stellantis** Leveraging GT-SUITE ML Capabilities to Improve Simulations Loïc Tagba	**Airbus** Airbus ZEROe: Simulating Liquid Hydrogen Chilldown for Early-stage Aircraft Concept Roberto Alegre Usach	**Gamma Technologies** Understanding Battery Safety: Cooling and Venting Effects on Thermal Runaway Propagation Yogesh Nalam
16:30	**MAN Truck & Bus SE** Predicting Battery End-of-Life Using Machine Learning Models Philipp Wöhner	**SAFRAN Tech | GammaTech Engineering** 1D/3D Modeling and Design of Aeronautical Heat Exchangers Using Cryogenic Refrigerants Michael Ovando Castro Andrea Cappuccio	**ThermoAnalytics** 3D Cabin AI-Comfort-based Controller for an Electric Full Vehicle Model Sacha Jelic

INTELLIGENT SYSTEMS: AI FOR PREDICTIVE AGING AND THERMAL MANAGEMENT ROOM A	AEROSPACE ROOM B	THERMAL ANALYSIS ROOM C
16:50 **HYUNDAI MOTOR INDIA ENGINEERING** Real World Battery Aging Prediction using Simulation Approach & Application of ML on VTM Shaik Salman Vali Gopu Srinivas Reddy	**DLR** Simulation of a 75 kW Fuel Cell System Demonstrator for Hydrogen-Electric Regional Aircraft Daniel Juschus	**Volkswagen | GammaTech Engineering** A 1D-CFD Modeling Framework for Wheel-brakes Thermal Management Integrating a Monte Carlo Ray Tracing Method Matteo Caushi

DAY 1 | Evening

17:10   **SHORT BREAK**

17:20   **GT-Content & Closing Remarks**
A Multiphysics Modeling Approach for Optimizing Cooling Concepts in Traction E-motors Using GT-SUITE
Yogesh Nalam
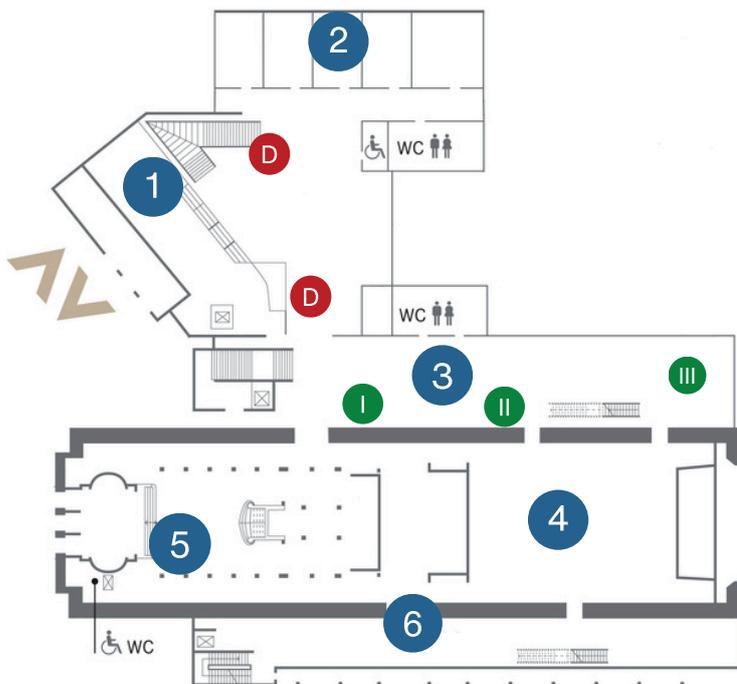
17:55   **DRINKS & NETWORKING**

18:20   **Dinner**

19:35   **Casino Night**

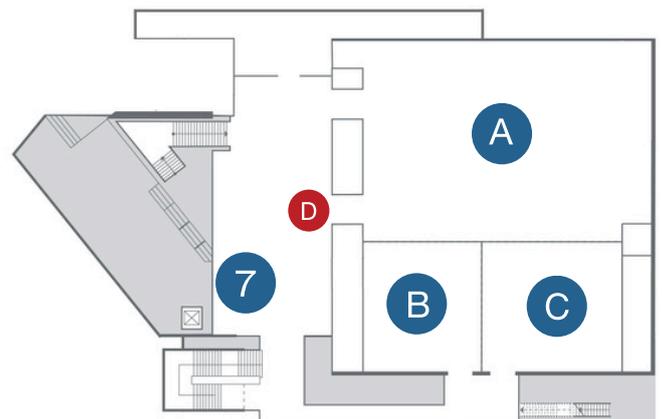**22:30**   **END OF THE EVENT**

Venue Map

First Floor | Erdgeschoss

Second Floor | Obergeschoss

1. Registration & Information Desk
2. Meeting Rooms
3. Expert Booths (I,II,III) & Partners zone

4. Dinner
5. 6. Casino Night
7. Academic Poster Session
A. Main Sessions & Presentation Room (A)
B. Presentation Room (B)
C. Presentation Room (C)
D. Demo Booth GT-Play & GT Intelligence Studio

CONVERGENT SCIENCE   Simerics TECHNOLOGY BY DESIGN   THERMO ANALYTICS

DAY 2 | Morning Sessions

8:00	**REGISTRATION**
9:00	**Opening Remarks	Gamma Technologies** Jan Böbel Director of European Operations
9:05	**Porsche** Evaluation of the Potential of Automation Using Dedicated Use-cases in Thermal Management Models Philip Muhl
09:25	**Bugatti-Rimac d.o.o.	GammaTech Engineering** Deploying Cloud-Based Simulation for Vehicle Thermal Management: From GT-SUITE to GT-Play Leonardo Iacobelli	Andrea Bertone
09:45	**Gamma Technologies** GT Vision & Future Directions Iakovos Papadimitriou
10:20	**COFFEE BREAK & EXPERT TALKS**

I   Integrated XiL Workflows: MiL, SiL & HiL via FMI, Simulink & FMU Compilation
Manish Shenoy

II   New Features in Aftertreatment Modeling for Automotive, Industrial & Marine Systems
Menelaos Zafeiridis

III   Beyond Degradation: Machine Learning Insights Into Battery Performance and Aging
Somayeh Toghyani

Expert Talks start 10 minutes after the start time of the break.

10:50   **Themed breakout rooms: Session I**

	THERMAL MANAGEMENT ROOM A	HYDROGEN COMBUSTION: MODELING FOR PERFORMANCE ROOM B	DIGITAL TWINS AND INTEGRATION ROOM C
10:50	**ISUZU Motors** Thermal Modeling of Electric Truck Drive Unit Sergei Pankratov	**Hyundai Motor Group	GammaTech Engineering** Virtual Development of a L6 Hydrogen Engine: from Predictive Combustion Modeling to Hardware Optimization Emanuele Servetto	**Politecnico di Torino** A Digital Twin for Developing Hybridised Powertrain Solutions for Non-Road Mobile Machinery Luciano Rolando
11:10	**FEV Vehicle** Underhood Airflow Simulation with Auto3DFlow Ömer Köseoglu	**Politecnico di Torino** Enhanced Predictive Combustion Modeling of a Hydrogen-Fueled PFI Engine via Modified Premixed Turbulent Flame Speed Correlation Gerardo Stanzione	**Brno University of Technology** Complex Digital Twin Vehicle Model using Functional Mock-Up Interface (FMI) Michael Böhm
11:30	**Barcelona Technical Center** Modular Thermal Management System Design Joaquim Guitart Corominas	**Hyundai Motor Group	GammaTech Engineering** Development of a Crankcase Ventilation System Model for a Heavy Duty H2 ICE Application Alessio Viti	**CTU in Prague** Frugal L-category BEV Platform Studies Rastislav Toman
11:50	**Gamma Technologies** Investigation of the Acoustical Response of a CO_2 Heat Pump System Marek Lehocky	**Gamma Technologies** Using GT-POWER in the Development Workflow of H2 Engines with Deep Physics Stepan Kyjovsky	**Gamma Technologies** Leveraging the Power of GT-Play API for Digital Twins. Integrating Battery Aging with Battery Field Data Nils Framke

DAY 2 | Afternoon Sessions

12:10   **LUNCH BREAK**

13:10   **Themed breakout rooms: Session II**

THERMAL MANAGEMENT FOR EVS: FAST CHARGING & BEYOND ROOM A	ELECTRIFICATION CHALLENGES: POWER DISTRIBUTION & MOTOR MODELING ROOM B	ALTERNATIVE FUELS: AMMONIA & HYBRID COMBUSTION STRATEGIES ROOM C

13:10

DANA Thermal Products France
Virtualization For Vehicle Thermal Management System
Nadir El Maamouri
Théo Duhamel
Ibrahim Zaaroura

Hyundai Motor Group | GammaTech Engineering
Development of Multi-Level LV Distribution System Topologies for BEVs: from 12V to 48V
Giulio Castagna

Gamma Technologies
ML-powered Surrogate Models for Emission Prediction in Ammonia Engines
Valery Martyuk

13:30

MoldTecs SAS/ Ecole Centrale de Nantes
Electric Vehicle Thermal Management Study for Fast Charging Cycles: Battery Disconnect Unit Model
Christelle Ratajczack
Guillaume Goumy

Horse Powertrain
Development of Electrically Excited Synchronous Machine (EESM) Thermal Model for System Performance Evaluation
Duc-Khanh Nguyen

Aristotle University Thessaloniki
Exhaust Gas Aftertreatment Solutions for Ammonia Engines
Grigorios Koltsakis

13:50

Dallara
Powertrain Cooling and Braking Systems Sizing for LMDh Cars Using GT-SUITE
Alberto Momesso

Cummins Deutschland | GammaTech Engineering
Electromechanical Modeling of a Three-Phase BLDC Motor in GT-SUITE Using an Equivalent RLE Circuit Representation
Kay Schmidt
Giulio Castagna

University of Rostock
Modeling and Simulation of a Spark-ignited Ammonia-hydrogen Dual-fuel Engine
Niklas Gierenz

14:10

FH Aachen University of Applied Sciences
Enhancing Cold-Start and Energy Efficiency In Hybrid Fuel Cell-Battery Powertrains Using PCM-Assisted Waste Heat Recovery
Aezid Ul Hassan Najmi

Gamma Technologies
Electrons to Newton-Meters: A Holistic E-Axle Optimization Strategy
Anthony Tsoulfaidis

Gamma Technologies
A Faster Way to Get Detailed Engine Models to GT-POWER-xRT
Valery Martyuk

14:40   **Aston Martin Lagonda | GammaTech Engineering**
CFD Alignment: Underhood Calibration with GT-Automation
Matteo Comollo

15:00   **Gamma Technologies**
When Agents Build the Model: Accelerating Digital Twins with Intelligent AI
Christoph Boettcher
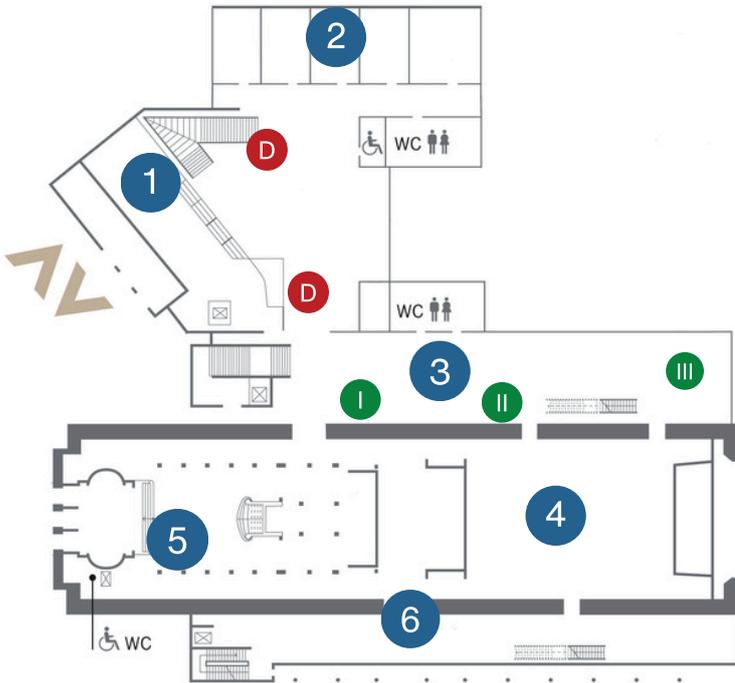
15:30   **CLOSING REMARKS**
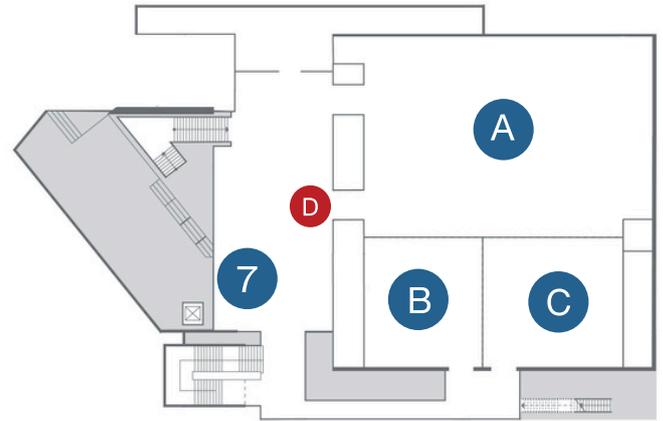
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THANK YOU FOR BEING PART OF GTTC GERMANY 2026!

HAVE ANY QUESTIONS? CONTACT US

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