

T U E S D A Y

# 20 MARCH

**07:30** REGISTRATION OPENS

**08:15** Welcome, Rainer Rothbauer, *Convergent Science*

**08:30** KEYNOTE | Diesel Engine Combustion System Analysis Led Design at Cummins, John M. Deur, *Cummins Inc.*

**09:10** Validation of Numerical Simulation of Hyundai 2.0L Gasoline Engine In-Cylinder Flow, Minhho Choi, *Hyundai Motor Company*

**09:30** Using Numerical Simulations to Predict and Understand CCV, Muhsin M. Ameen, *Argonne National Laboratory*

**09:50** SPONSOR | *BETA CAE Systems International AG*

**10:05** BREAK

**10:35** Numerical Study of Knock Inhibition with Cooled Exhaust Gas Recirculation, Max Mally, *RWTH Aachen University - Institute for Combustion Engines*

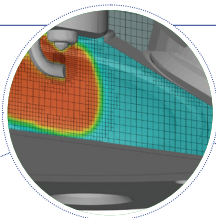
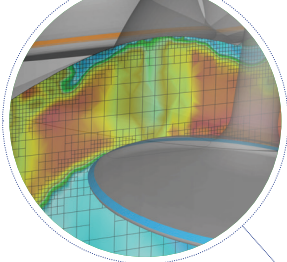
**10:55** Analysis of Water Injection Potential for Knock Mitigation, Federico Millo, *Politecnico di Torino*

**11:15** Numerical Investigation and Sensitivity Analysis of Knock in Boosted GDI Engines, Maziar Khosravi, *Ford-Werke GmbH*

**11:35** Computational Methodology for Knocking Combustion Analysis, Ricardo Novella, *CMT-Motores Térmicos*

**11:55** SPONSOR | *Tecplot, Inc.*

**12:10** LUNCH



T U E S D A Y

## afternoon

**13:30** Pre-Mixed Combustion Model for PFI Gasoline Engine, Chetan Tulapurkar, *Robert Bosch Engineering & Business Solutions Private Limited*

**13:50** Investigation of an Air Compressor Performance with FSI Simulation, Cem Demirkesen, *Ford Otosan*

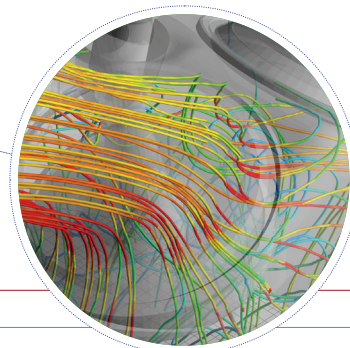
**14:10** FSI Simulation Study on a Mechanic Gas Stopper Movement at Different Pressures, Gokhan Coskun, *Sakarya University*

**14:30** SPONSOR | *Intelligent Light*

**14:45** BREAK

**15:20** Simulation and Optimization of Flow Inside Claw Vacuum Pumps, James Willie, *Gardner Denver Schopfheim GmbH*

**15:40** Multiphase Modeling: Gearbox Power Losses, Oil Pump Cavitation, and Fuel Tank Sloshing, David Rowinski, *Convergent Science*



T U E S D A Y

## networking

**17:15** All meet in the Savoia Hotel lobby

**17:30** Bus departs for Ferrari Museum Maranello

**18:30** Guest arrival at Ferrari Museum

**19:00** Ferrari Museum guided tour

**20:00** Cocktails

**20:30** Dinner at Ferrari Museum Convention Hall

**23:00** Bus departs for Savoia Hotel

W E D N E S D A Y

# 21 MARCH

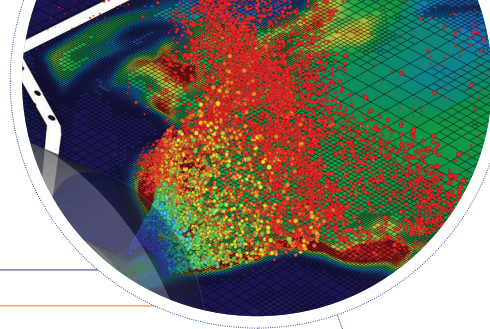
- 07:45** REGISTRATION
- 08:00** Welcome Back + Combustion Modeling Development in CONVERGE, Eric Pomraning, *Convergent Science*
- 08:20** KEYNOTE | How Combustion CFD Makes Design More Robust and Reduces Costs, Alexandre Raulot, *Groupe PSA*

## parallel session—sala falco + sala gloria

- 09:00** Low Temperature Dual Fuel Modeling Using Detailed Chemistry In Heavy-Duty Engine, Lorenzo Bartolucci, *University of Rome Tor Vergata*
- 09:20** Consideration of Turbulence-Chemistry-Interaction in Dual Fuel Combustion, Christoph Wieland, *Technical University Munich*
- 09:40** Modeling of Direct Gas Injection in Internal Combustion Engines, Abhishek Y. Deshmukh, *RWTH Aachen Univ. - Institute for Combustion Technology*
- 10:00** BREAK
- 10:30** Combustion Modeling of a NG Engine Using Detailed Chemistry in CONVERGE, Lorenzo Testa, *Politecnico di Torino*
- 10:50** EGR-Diluted NG Combustion Simulation in a High-Performance SI Engine, Mirko Baratta, *Politecnico di Torino*
- 11:10** A Numerical Study on Aerodynamics and Mixing Effects on Prechamber Ignition System, Nicolas lafrate, *IFP Energies nouvelles*
- 11:30** Numerical Prediction of Abnormal Combustion in a Turbocharged GDI Engine, Muhammed Fayaz Palakunnummal, *London South Bank University*
- 11:50** Turbulent Combustion Model Development at Argonne National Laboratory, Muhsin M. Ameen, *Argonne National Laboratory*
- 12:10** LUNCH

## parallel session—sala savoia

- Technical Update on Gas Turbine and Aftertreatment Applications**, Scott Drennan, *Convergent Science*
- Modeling and Simulation of Liquid Film Boiling—A New Feature in CONVERGE**, Chaouki Habchi, *IFP Energies nouvelles*
- Spray-Wall Interaction and Liquid Characteristics Near the Impingement Location**, Roberto Torelli, *Argonne National Laboratory*
- BREAK
- Numerical Studies of Combustion Recession on ECN Diesel Spray A**, XiaoHang Fang, *University of Oxford*
- An Efficient Combustion Progress Variable (CPV) Approach for Engine Applications**, Corinna Netzer, *Brandenburg University of Technology*
- Assessment of Innovative Bowl Geometries Over Different Swirl Ratios/EGR Rates**, Andrea Bianco, *Powertech Engineering*
- Computational Optimization of DME Combustion using CONGO**, Marius Zubel, *RWTH Aachen University - Institute for Combustion Engines*
- SMART Optimization of Internal Combustion Models**, Yann Caniou, *Noesis Solutions NV*



- 13:30** KEYNOTE | Challenges and Opportunities for Future Powertrain Development, Vincenzo Bevilacqua, *Porsche Engineering Services GmbH*
- 14:10** SPONSOR | POWERTECH Engineering Srl
- 14:25** Recent Progress in Simulations of Nozzle Flow and Ensuing Spray at Argonne, Roberto Torelli, *Argonne National Laboratory*
- 14:45** SPONSOR | Microsoft Azure
- 15:00** BREAK
- 15:30** VOF-LES Simulations of Primary Atomization and Near-Nozzle Spray Structure, Michele Battistoni, *University of Perugia*
- 15:50** LES of a Premixed Burner Using Thickened Flame Model and AMR, Cédric Mehl, *IFP Energies nouvelles*
- 16:10** Scavenging Efficiency of Semi-Open Ignition Chamber, Fabio Ciccateri, *Finno Energy Oy Ltd.*
- 16:30** What to Expect in CONVERGE Version 3.0, Keith Richards, *Convergent Science*
- 17:00** Closing Statements, Kelly Senecal, *Convergent Science*



W E D N E S D A Y

# networking

- 18:30** All meet in the Savoia Hotel lobby
- 18:45** Bus departs for Bologna city center
- 19:15** Informal dinner at Osteria de' Poeti
- 22:30** First bus departs for Savoia Hotel
- 23:30** Second bus departs for Savoia Hotel