

# CONFERENCE SCHEDULE

**WEDNESDAY, SEPTEMBER 21 | Monona Terrace, Hall of Ideas-Room H**

7:00 REGISTRATION | BREAKFAST & REFRESHMENTS

8:00 **WELCOME** | Kelly Senecal | *Convergent Science*

8:10 **KEYNOTE** | **Development and Application of High-Fidelity, Multi-Physics Numerical Models to Develop Propulsion System Components for Electric Vehicles**  
Scott Parrish | *General Motors R&D*

8:50 **Thermal Runaway and Vent Gas Ignition Simulation of a Battery Pack Using LES**  
Veeraraghavan Viswanathan | *Convergent Science*

9:15 **Simulation of Thermal Runway Propagation in a Lithium-Ion Battery Module**  
Adèle Poubeau | *IFP Energies nouvelles*

9:40 **Advances in CONVERGE Battery Modeling Tools** | Kislaya Srivastava | *Convergent Science*

10:05 BREAK

10:30 **Go With the Flow: Modeling FSI and Complex Moving Boundaries With CONVERGE**  
Jasim Sadique | *Convergent Science*

10:55 **CFD Simulation of Face Shield Effects on an Emitter During a Cough Process**  
Teng Deng | *Huazhong University of Science and Technology*

11:20 **CFD Validation of a Controllable Pitch Marine Propeller Using Truly Autonomous Mesh Generation With Adaptive Mesh Refinement** | Mathias Vangö | *Convergent Science*

11:45 **Development of a Data-Driven Wall Function Methodology for Complex Flows**  
Erwan Rondeaux | *IFP Energies nouvelles*

12:10 **SPONSOR** | TotalCAE

12:25 LUNCH

1:30 **SPONSOR** | Tecplot

1:45 **KEYNOTE** | **The Role of High Fidelity and High Throughput Computational Modeling in Developing Low Climate Impact Transport Technologies**  
Yuanjiang Pei | *Aramco Americas' Detroit Research Center*

2:25 **Automated Optimization of Pre-Chamber Geometry Using CFD**  
Ahmad Hadi Bakir | *University of Tennessee Space Institute*

2:50 **Heavy-Duty Flex-Fuel Mixing Controlled Combustion Enabled by Prechamber Ignition**  
Jared Zeman | *Marquette University*

3:15 **An Overview of the Pre-Chamber Engine Modeling at KAUST**  
Mickael Silva | *Clean Combustion Research Center at KAUST*

3:40 BREAK

4:05 **4D Flow MRI-Based CFD for Flow Dynamics Assessment in Coarctation of the Aorta**  
Labib Shahid | *University of Wisconsin-Madison*

4:30 **Introducing CONVERGE Horizon** | Cooper Burns | *Convergent Science*

4:55 **Rapid Exhaust Port Optimization Using High Performance Computing and Machine Learning Methodologies** | Jacob Hanson | *Polaris Industries*

5:20 **CLOSING** | *Convergent Science*

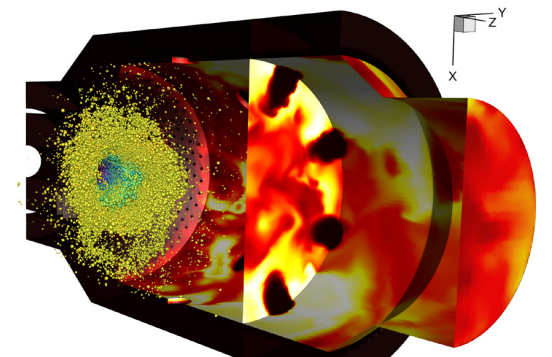
6:00 **NETWORKING EVENT** | Scavenger Hunt + Dinner at The Coopers Tavern

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# CONFERENCE SCHEDULE

**THURSDAY, SEPTEMBER 22** | *Monona Terrace, Hall of Ideas-Room H*

7:00 REGISTRATION | BREAKFAST & REFRESHMENTS

8:00 **WELCOME** | Kelly Senecal | *Convergent Science*

8:10 **KEYNOTE** | **Predicting Hydrogen Combustion in Heavy Duty ICE**  
Amer Avdić | *Daimler Truck AG*

8:50 **Development of an Optimal H2 Combustion Engine: Comprehension and Requirements**  
Olivier Laget | *IFP Energies nouvelles*

9:15 **Numerical Modeling of Fuel-Air Mixing in a Direct Injection Hydrogen Engine**  
Bifen Wu | *Argonne National Laboratory*

9:40 **Computational Study of Hydrogen CI Combustion in an OP2S Engine**  
Ming Huo | *Achates Power*

10:05 BREAK

10:30 **Modeling Hydrogen Combustion in IC Engines Using Detailed Chemistry**  
Sameera Wijeyakulasuriya | *Convergent Science*

10:55 **High Hydrogen Blends Combustion in Microturbine Combustors**  
Joshua Christopher | *Argonne National Laboratory*

11:20 **Simulation of Mode Transition in Hydrogen-Based Rotating Detonation Engine (RDE)**  
Veeraraghava Raju Hasti | *Purdue University*

11:45 **Numerical Investigation of Vaporization and Ignition of Ammonia Sprays**  
Ahmad Hadi Bakir | *University of Tennessee Space Institute*

12:10 LUNCH

1:10 **Impact of Thermophysical Properties on Materials Temperature Predictions**  
Charles E.A. Finney | *Oak Ridge National Laboratory*

1:35 **Simulation of Combustion Systems Using Neural Networks**  
Cédric Mehl | *IFP Energies nouvelles*

2:00 **CFD Simulations of an Optical RCM Using Gasoline/Ethanol Blends**  
Musharrat Chowdhury | *Marquette University*

2:25 **Non-Reacting and Reacting Spray A Simulations With Synthetic Biofuels**  
Prashant Goel | *Politecnico di Torino*

2:50 **Exploiting the Potential of LES for Ducted Fuel Injection Investigation**  
Andrea Bianco | *POWERTECH Engineering*

3:15 BREAK

3:40 **CFD Simulations of Stratification and Charge Cooling Effects on a GDCI Engine**  
Haiwen Ge | *Texas Tech University*

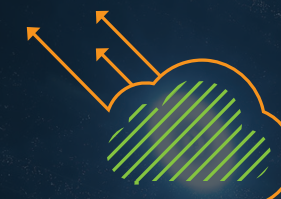
4:05 **ChemNODE: A Robust ML Framework for Efficient Chemical Kinetic Solvers**  
Tadbhagya Kumar | *Argonne National Laboratory*

4:30 **Effect of Impurities on Condensation of SCO2 in De Laval Nozzle Using RFM**  
Harshit Bhatia | *IFP Energies nouvelles*

4:55 **What's New & What's Coming in CONVERGE** | Keith Richards | *Convergent Science*

5:20 **CLOSING** | *Convergent Science*

5:30 **RECEPTION** | Snacks and Refreshments



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