

CONFERENCE SCHEDULE – DAY ONE

Tuesday, September 29 | All times listed in CDT

8:50 **Welcome** | Kelly Senecal | Convergent Science

9:00 **KEYNOTE | Even Blood Is Not Happy With Turbulence: Hemostatic Perspectives**
Choon-Sik Jhun | Penn State University College of Medicine

9:30 **Technoeconomic Analysis Framework: A Shrouded Wind Turbine LES Study**
Mahmoud Koraiem | Stony Brook University

9:50 **Numerical Evaluation of Spark Assisted Cold Idle Operation in a HD GCI Engine**
Emma Zhao | Argonne National Laboratory

10:10 **3D-RANS Study on Liquid Properties of Gasoline, Ethanol and Water Mixtures**
Tim Franken | Brandenburg University of Technology Cottbus-Senftenberg

10:30 **The Initial Flow Condition Influence on the Combustion Process in a CI Engine**
Michele Pipicelli | Università degli Studi di Napoli Federico II (CNR - Istituto Motori)

10:50 **Modeling High-Pressure Mixing and Combustion in Rocket Engines With CONVERGE**
David Rowinski | Convergent Science

11:20 **SPONSOR** | Tecplot

11:35 **Break**

12:10 **KEYNOTE | X-Ray Diagnostics for the Validation of Nozzle Flow and Spray Simulations**
Christopher Powell | Argonne National Laboratory

12:40 **CFD Modeling of Fuel Injection via Coupling of In-Nozzle Flow and Ensuing Spray**
Hengjie Guo | Argonne National Laboratory

1:00 **Using X-Rays and Machine Learning to Improve Internal Flow Simulations Tools**
Gina M. Magnotti | Argonne National Laboratory

1:20 **Low- and High-Temperature Flame Analysis For Spray A and D Using RANS and LES**
Fabien Tagliante | Sandia National Laboratories

1:40 **Real Fluid Modeling in CONVERGE**
Chaouki Habchi | IFP Energies nouvelles

2:00 **Hot Surface Ignition Assistant for Aircraft Compression Ignition Engines**
Je Ir Ryu | U.S. Army Research Laboratory

2:20 **LES of a Turbulent Spray Burner Using Thickened Flame Model and AMR**
Aleksandra Rezchikova | IFP Energies nouvelles

2:40 **Expanding CONVERGE's Advantages in Gas Turbines and Aftertreatment**
Scott Drennan | Convergent Science

3:00 **Thermal Evaluation of SCR Catalyst Using CFD in Diesel Engine**
Saurabh Sharma | Isuzu Technical Center of America

CONFERENCE SCHEDULE – DAY TWO

Wednesday, September 30 | All times listed in CDT

8:50 **Welcome Back** | Elizabeth Favreau | Convergent Science

9:00 **KEYNOTE | Transport Challenges and Opportunities in Carbon Constrained World**
Amer A. Amer | Aramco Research Center

9:30 **Piston Bowl and Cooling Gallery Design Optimization for Heavy-Duty Engines**
Chaitanya Kavuri | Caterpillar Inc.

9:50 **Understanding Low Load Advanced Compression Ignition With Gasoline Using LES**
Patrick O'Donnell | Clemson University

10:10 **Towards Advanced Modeling of Multi-Mode Combustion Engines**
Sayop Kim | Argonne National Laboratory

10:30 **Development of CFD Models for Ignition Processes in Internal Combustion Engines**
Joochan Kim | Argonne National Laboratory

10:50 **Development and Validation of Spray-Wall Interaction Models for GDI Applications**
Roberto Torelli | Argonne National Laboratory

11:10 **Real-Fuel Injection for GDI Applications: Nozzle-Flow and Ensuing Spray**
Lorenzo Nocivelli | Argonne National Laboratory

11:30 **Simulating Cycle-to-Cycle Variation in a GDI Engine With RANS and LES/TFM**
Eric Pomraning | Convergent Science

11:50 **SPONSOR** | R Systems

12:05 **Break**

12:50 **Prediction of Cyclic Variability and Knock in a GDI Engine at High Speed and Load**
Ronald Grover | General Motors

1:10 **Developing a Methodology to Tailor Chemical Mechanisms for SI Combustion**
Anqi Zhang | Aramco Research Center

1:30 **Comparison Study Between Online and Tabulated Chemistry Approach for SI engine**
Krishna Prasad Shrestha | Brandenburg University of Technology Cottbus-Senftenberg

1:50 **Recent Chemical Kinetic Mechanism Developments**
Henry Curran | NUI Galway

2:10 **Extending Tabulated Flamelet Models for Compression Ignition Engine Applications**
A. Cody Nunno | Argonne National Laboratory

2:30 **Electromobility in CONVERGE**
Tristan Burton | Convergent Science

2:50 **CONVERGE Development Update: Version 3.1**
Keith Richards | Convergent Science

3:10 **Closing Remarks**
Kelly Senecal | Convergent Science