Agenda
Day 1: June 22
All times EDT

Opening Session

9:00 am Welcome & Symposium overview

9:10 am Model Consistency & Data-driven Turbulence Modeling: Overview and developments, *Karthik Duraisamy (U. Michigan).*

9:40 am Turbulence Modeling Challenges: *Florian Menter (Ansys), Bernhard Eisfeld (DLR), Philippe Spalart (Retd. Boeing), Svetlana Poroseva (U. New Mexico)*

10:05 am Transition Modeling Challenges: *Paul Durbin (Iowa State), Jim Coder (Univ of Tennessee), Meelan Chaudhuri (NASA Langley), Gorazd Medic (Pratt & Whitney)*

10:30 am Break

Model consistency with Evolutionary/ Symbolic Techniques

10:40 am CFD-driven symbolic identification of turbulence models and perspectives for the quantification of model-form uncertainties, *Paola Cinnella (Sorbonne U.)*

11:10 am Advances in Evolutionary CFD-Driven Turbulence Modeling, *Fabian Waschkowski (U. Melbourne)*

Poster Session 1

11:40 am Improving Turbulence Models in RANS Simulations with Adjoint based Field Inversion and Machine Learning Approaches, *Anna Kiener (DLR)*

11:50 am Robust Reduced-Order Modeling of Turbulent Flows, *Saleh Nabi (Mitsubishi)*

Noon Close

Symposium on
Model-Consistent Data-driven Turbulence Modeling

Agenda
Day 2: June 23
All times EDT

Model Consistency via Field Inversion

9:00 am Machine learning-augmented turbulence modelling for RANS simulations of flows over periodic hills, *Pedro Volpiani (ONERA).*

9:20 am Mean-flow data assimilation based on minimal correction of turbulence models: Application to turbulent high Reynolds number backward-facing step, *Lucas Franceschini (University of Sao Paulo)*

9:40 am Sensitivity Analysis of Discrepancy Terms introduced in Turbulence Models using Field Inversion, *Florian Jackel (DLR)*

10:00 am Status of Data-Driven Improvements to the Spalart-Allmaras Model Applied to Multiple Configurations, *Chris Rumsey (NASA)*

10:20 am Break

Model consistency via Integrated Inference & Learning

10:30 am PDE Models with Neural Networks: Optimization, Global Convergence, and Applications in Fluid Mechanics, *Justin Sirignano (Oxford)*

11:00 am End-to-end differentiable learning of turbulence models, *Heng Xiao (Virginia Tech)*

11:30 am Learning and Inference Assisted By feature space Engineering (LIFE), *Vishal Srivastava (U. Michigan)*

Noon Close

Symposium on
Model-Consistent Data-driven Turbulence Modeling

Agenda
Day 3: June 24
All times EDT

Poster session 2

9:00 am Turbulence modelling with physics-based super-resolution Generative Adversarial Network, *Ludovico Nista (RWTH Aahen)*

9:10 am Data-driven subgrid-scale parameterization of forced 2D turbulence, *Yifei Guan (Rice)*

9:20 am Super-Parameterization Using Deep Learning: Experimentation With Multiscale Lorenz 96 Systems and Transfer Learning, *Ashesh Chattopadhyay (Rice)*

9:30 am Global uncertainty quantification and its application full Reynolds stress models to stratified shear layer, Xiang Yang *(Penn State)*

9:40 am Correcting Coarse-Grid Simulations of Fluid Flows with Machine Learning, *Jaideep Pathak (LBNL)*

9:50 am Break

Software & Benchmarking

10:00 am Enabling Software Tools / Codes *Nicholas Gauger (TU Kaiserslautern)*

10:20 am Establishing Benchmarks *Chris Rumsey (NASA)*

Emerging techniques

10:40 am Classifying regions of high model error within a data-driven RANS closure, *Richard Dwight (TU Delft)*

11:00 am Deep Learning for Efficient Reconstruction of High-Resolution DNS Data, *Amir Barati Farimani (CMU)*

11:20 am Learning spatio-temporal dynamics with a physics-constrained convolutional neural ODE, *Venkat Vishwanathan (CMU)*

11:40 am Sensor placement for enhanced mean flow reconstruction and inference of turbulence model corrections, *Vincent Mons (ONERA)*

Noon Wrap up & Close

Symposium on

Model-Consistent Data-driven Turbulence Modeling