

# DOE ASCR Workshop on Turbulent Flow Simulation at the Exascale: Opportunities and Challenges

4-5 August 2015, The Mayflower Hotel, Autograph Collection, Washington, D.C.  
<https://www.ornl.gov/turbulentflow2015/>

## Draft Agenda (28 July 2015)

### Day One, Tuesday, August 4, 2015

7:15 AM - 8:00 AM	Check in and continental breakfast	
8:00 AM - 8:15 AM	Welcome, meeting overview, charge to participants	Michael Sprague, Program Chair
8:15 AM - 8:45 AM	Comments from DOE ASCR	William Harrod & Michael Martin
8:45 AM - 9:30 AM	Plenary Talk & Discussion: Challenges on the path to exascale	Jeff Hittinger
9:30 AM - 9:45 AM	Break	
9:45 AM - 11:45 AM	Working Session #1: Exascale computing for scientific problems of DOE interest and our fundamental understanding of turbulence	Breakout Leads
11:45 AM - 1:00 PM	Lunch (provided)	
1:00 PM - 1:15 PM	Briefing from Working Session #1	Breakout Leads
1:15 PM - 2:00 PM	Plenary Talk and Discussion: Path to block-structured-grid AMR exascale CFD	John Bell
2:00 PM - 2:45 PM	Plenary Talk & Discussion: Path to high-order unstructured-grid exascale CFD	Paul Fischer
2:45 PM - 3:00 PM	Break	
3:00 PM - 4:45 PM	Working Session #2: Impacts of turbulent flow simulations at the exascale for DOE applied programs (wind/atmosphere, nuclear, fusion, combustion)	Breakout Leads
4:45 PM - 5:00 PM	Briefing from Working Session #2 and Day 1 Closing Remarks	Breakout Leads & Program Chair
5:00 PM	Adjourn	

### Day Two, Wednesday, August 5, 2015

7:15 AM - 8:00 AM	Continental breakfast	
8:00 AM - 8:15 AM	Recap Day 1 and Goals for Day 2	Program Chair
8:15 AM - 9:00 AM	Plenary Talk and Discussion: Simulation of Turbulent Flow on Emerging HPC – An Aerospace Perspective	Jeffrey Slotnick
9:00 AM - 9:15 AM	Break	
9:15 AM - 11:30 AM	Working Session #3: Challenges in adaptation of	Breakout Leads

	existing codes and algorithms for turbulent flow simulations at the exascale	
11:30 AM - 11:45 AM	Briefing from Working Session #3	Breakout Leads
11:45 AM - 1:00 PM	Lunch (provided)	
1:00 PM - 2:45 PM	Working Session #4: Opportunities and challenges of new simulation approaches for turbulent flow at the exascale	Breakout Leads
2:45 PM - 3:00 PM	Briefing from Working Session #4, Next Steps, and Closing Remarks	Breakout Leads & Program Chair