Monday 17 May 2021

time	**session 1: extreme events and related flow structures**	
9:20	Opening	
9:30	Structure and scaling of extreme events in turbulence	Alain Pumir, Dhawal Buaria & Eberhard Bodenschatz
10:10	Flow structure dynamics with extreme dissipation events in homogeneous turbulence – An experimental investigation using Shake-The-Box and Flowfit	Andreas Schröder, Daniel Schanz, Sebastian Gesemann, Florian Huhn, Daniel Garaboa Paz & Eberhard Bodenschatz
10:30	*coffee break*	
11:00	Connecting boundary layer dynamics with extreme bulk dissipation events in Rayleigh-Bénard flow	Valentina Valori & Jörg Schumacher
11:20	Flow structures govern particle collisions in turbulence	Jason R. Picardo, Lokahith Agasthya, Rama Govindarajan & Samriddhi Sankar Ray
11:40	Study of objective vortical structures in a Von Kármán mixing flow	Farid Aligolzadeh, James R. Dawson & Markus Holzner
12:00	*discussion*	
12:20	*lunch break*	
	session 2: analysis through DNS, multifractal and weak solutions	
14:00	Extreme events and extreme computing in turbulence	P.K. Yeung, K. Ravikumar & K.R. Sreenivasan
14:40	Non-local amplification and self-attenuation of extreme events in turbulence	Dhawal Buaria, Alain Pumir & Eberhard Bodenschatz
15:00	Constructing weak solutions in truncated inviscid equations of hydrodynamics: Lessons from the Burgers equation	Sugan D. Murugan, Uriel Frisch, Sergey Nazarenko, Nicolas Besse & Samriddhi Sankar Ray
15:20	*tea break*	
15:50	Disentangling Lagrangian turbulence	Lukas Bentkamp, Cristian C. Lalescu & Michael Wilczek
16:10	Multiplier distributions and cascade models for enstrophy, dissipation and particle clustering in turbulence	Thomas Hartlep & Jeffrey N. Cuzzi
16:30	Intermittency and thin sets in 3D Navier-Stokes turbulence: A link with the multi-fractal model	J. D. Gibbon
16:50	How close are shell models to the 3D Navier–Stokes equations?	Dario Vincenzi & John D. Gibbon
17:10	*discussion*	
17:30		

all times are Central European Summer Time (local time in Delft)

Tuesday 18 May 2021

session 3: large scale influences and organization

9:10	Significant thin shear layers in high Reynolds number turbulence	Takashi Ishihara, Gerrit E. Elsinga & Julian C. R. Hunt
9:50	Collective vortex organisation in two-dimensional turbulence	Javier Jiménez
10:10	Turbulent structure and intermittency in homogenous isotropic turbulence	Xinxian Zhang & Javier Jiménez
10:30	*coffee break*	
11:00	What scales control the evolution of intense events in the dissipative range of isotropic turbulence?	Alberto Vela-Martín
11:20	Extreme dissipation at very high Reynolds number	Gerrit E. Elsinga, Takashi Ishihara & Julian C. R. Hunt
11:40	Helical triad phase coherence in 3D Navier-Stokes turbulence	Miguel D. Bustamante & Brendan P. Murray
12:00	*discussion*	
12:20	*lunch break*	

session 4: intermittency in extreme turbulence (atmosphere, astrophysics and superfluids)

14:00	Studying of intermittency and bursting phenomena in stratified boundary layer using probability density functions	Eliezer Kit, Eli Barami, Semion Sukoriansky & Harindra Fernando
14:40	Molecules, magnetic fields and intermittency in cosmic turbulence: Following the energy trail	Edith Falgarone, Thibaud Richard, Pierre Hily-Blant, Alba Vidal-Garcia, Pierre Lesaffre, Benjamin Godard, Andrew Lehmann & Guillaume Pineau des Forêts
15:00	Coherence of extreme dissipation structures in a non-star-forming molecular cloud	Pierre Hily-Blant, Edith Falgarone, Simon Delcamp and the MIST team
15:20	*tea break*	
15:50	Reconnection-controlled decay of magnetohydrodynamic turbulence and the role of invariants	D. N. Hosking & A. A. Schekochihin
16:10	Probing the nature of dissipation extrema in compressible MHD turbulence	Thibaud Richard, Pierre Lesaffre, Edith Falgarone & Andrew Lehmann
16:30	Intermittency of velocity circulation in quantum and classical turbulence	Giorgio Krstulovic, Nicolás P. Müller & Juan Ignacio Polanco
16:50	*discussion*	
17:10		

Wednesday 19 May 2021

session 5: singularity & irrevesibility

9:10	Experimental and numerical investigations around the 4th Millenium problem (Navier-Stokes existence and smoothness)	Bérengère Dubrulle
9:50	Lagrangian irreversibility and intermittent dissipation in turbulence	Jason R. Picardo, Akshay Bhatnagar & Samriddhi Sankar Ray
10:10	Exploration of Lagrangian and Eulerian irreversibility in an experimental Von Kármán flow	Cheminet Adam, Debue Paul, Valori Valentina, Ostovan Yasar, Cuvier Christophe, Laval Jean-Philippe, Foucaut Jean-Marc, Daviaud François & Dubrulle Bérengère
10:30	*coffee break*	
11:00	Identification of turbulent structure in pipe flow using Tomographic PIV	Kovid Bhatt & Yoshiyuki Tsuji
11:20	Time-reversible Navier-Stokes equations	Vishwanath Shukla
11:40	Finite dissipation from helicity following reconnection	Robert M. Kerr
12:00	*discussion*	
12:20	*lunch break*	

session 6: numerical experiments and control

14:00	Statistical properties of turbulence in the presence of a smart small-scale control	Luca Biferale, Michele Buzzicotti & Federico Toschi
14:40	Exploring causality through sensitivity in homogeneous isotropic turbulence	Miguel P. Encinar & Javier Jiménez
15:00	Turbulence without vortex stretching	Tong Wu & Wouter J. T. Bos
15:20	*tea break*	
15:50	Predator-prey modeling of large-scale energy fluctuations in turbulence	Ryo Araki, Wouter J. T. Bos & Susumu Goto
16:10	Highly causal events in turbulent channel flow	Kosuke Osawa & Javier Jiménez
16:30	*discussion & close*	
16:50		