

# Small-scale turbulence: Theory, Phenomenology and Applications

## August 13<sup>th</sup> - 25<sup>th</sup>, 2007

### 1<sup>st</sup> Day: Monday 13

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|  | Arrival and accomodation of participants |
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### 2<sup>d</sup> Day: Tuesday 14

|               |   |
|---------------|---|
| 9:00 – 10:30  | <b>A. Pumir :</b> Turbulence phenomenology and tetrads  |
| 11:00 – 12:30 | <b>C. Baudet :</b> Lagrangian investigation of turbulence: experimental techniques and statistical results. |
| 16:30 – 17:30 | <b>D. Pullin :</b> Evidence for the existence of eddy—structure in fine—scale turbulence                    |
| 17:30 – 18:30 | <b>D. Pullin :</b> Physical models for small--scale structures  |
| 18:45         | <i>Welcome drink (with families)</i>  |

### 3<sup>d</sup> Day: Wednesday 15

|               |  |
|---------------|--|
| 9:00 – 10:30  | <b>P. Comte :</b> LES and SGS modelling of turbulent shear flows   |
| 11:00 – 12:30 | <b>C. Cambon :</b> Strongly anisotropic turbulence structure and cascade: stably stratified and rotating flows |
| 17:00 – 18:00 | Presentation of people and posters   |
| 18:00 – 19:00 | Presentation of people and posters   |

### 4<sup>d</sup> Day: Thursday 16

|               |  |
|---------------|--|
| 9:00 – 10:00  | Free time for informal talks.                                  |
| 10:30 – 12:30 | <b>A. Pouquet :</b> MHD turbulence.                            |
| 17:00 – 18:00 | <b>R. Fox :</b> Micromixing model for turbulent reacting flow. |
| 18:00 – 19:00 | <b>R. Fox :</b> Micromixing model for turbulent reacting flow. |

### 5<sup>d</sup> Day: Friday 17

|               |  |
|---------------|--|
| 9:00 – 10:30  | <b>F.X. Demoulin :</b> Some aspects of turbulent mixing in two phase flows.  |
| 11:00 – 12:30 | <b>B. Renou :</b> Towards 2-D measurements of small scales (velocity and scalar): principles and limitations. Application for a highly turbulent flow field. |
| 17:00 – 18:00 | <b>R. Fox :</b> Micromixing model for turbulent reacting flow.   |
| 18:00 – 19:00 | <b>R. Fox :</b> Micromixing model for turbulent reacting flow.   |

### 6<sup>d</sup> Day: Monday 20

|               |  |
|---------------|--|
| 9:00 – 10:30  | <b>R. A. Antonia :</b> On the correlation between small-scale velocity and scalar characteristics in a turbulent channel flow. |
| 11:00 – 12:30 | <b>M. Cencini :</b> Active versus passive scalar turbulence.   |
| 17:00 – 18:00 | <b>D. Pullin :</b> Stretched vortices as a basis for for subgrid-scale modelling.  |
| 18:00 – 19:00 | <b>D. Pullin :</b> Large-eddy simulation of turbulence with the stretched-vortex SGS model.                                    |

### 7<sup>d</sup> Day: Tuesday 21

|               |   |
|---------------|---|
| 9:00 – 10:30  | <b>Y. Kaneda :</b> DNS study of the universality at small scales of turbulence at high Reynolds number. |
| 11:00 – 12:30 | <b>E. Villermaux :</b> Liquid fragmentation: from ligaments to drop size distribution.                  |
| 17:00 – 18:00 | <b>A. Lanotte :</b> 2-D turbulence.   |
| 18:00 – 19:00 | <b>A. Lanotte :</b> 2-D turbulence.   |

### 8<sup>d</sup> Day: Wednesday 22

|               |   |
|---------------|---|
| 9:00 – 10:30  | <b>E. Villermaux :</b> Scalar mixing: principle and consequences.                   |
| 11:00 – 12:30 | <b>F. Anselmet :</b> Measurements in a hydrodynamical channel for environment.      |
| 17:00 – 18:00 | <b>J. Bec :</b> Preferential concentrations of impurities in turbulent suspensions. |
| 18:00 – 19:00 | <b>J. Bec :</b> Preferential concentrations of impurities in turbulent suspensions. |

### 9<sup>d</sup> Day: Thursday 23

|               |  |
|---------------|--|
| 9:00 – 10:00  | <b>Y. Kaneda :</b> DNS study of the universality at small scales of turbulence at high Reynolds number |
| 10:30 – 12:30 | <b>R. A. Antonia :</b> On the measurement of small-scale turbulence.                                   |
| 17:00 – 18:30 | <b>C. Baudet :</b> Turbulence measurements under extreme conditions: cryogenic flows.                  |
| 18:30 – 19:30 | Round table  |

### 10<sup>d</sup> Day: Friday 24

|               |  |
|---------------|--|
| 9:00 – 10:30  | <b>F. Anselmet :</b> Measurements in a hydrodynamical channel for environment. |
| 11:00 – 12:30 | Conclusions and <i>au revoir</i> .   |