

Physmod 2013 Programme

Monday, 16th September
AP1&2

10:30	<i>Registration opens</i> <i>Morning coffee</i>	<i>Austin Pearce AP1&2</i>
12:00	<i>Lunch</i>	<i>Hillside Restaurant</i>
13:00	<i>Welcome & introduction, Alan Robins</i>	
13:20	David Hall, Envirobods, UK	Internal and external building exposure to air pollutants and external contaminants
	<i>Session 1, Flow Fields 1, Chair Alan Robins</i>	
14:00 P1.1	Moonen, P, Paterna, E, & Carmeliet, J, ETHZ (Switzerland)	Experimental design of spatially and temporally resolved PIV measurements
14:20 P1.2	Hancock, P, Zhang, S & Hayden, P, University of Surrey (UK)	Wind-tunnel simulation of a wind-turbine wake in unstable wind flow
14:40 P1.3	Perret, L, Blackman, K & Savory, E, ECN (France)	Effect of upstream flow regime on street canyon flow dynamics
15:00 P1.4	Pramod, J S, Birch DM & Hills, N, University of Surrey (UK)	Effect of turbulent vortex 'wandering' in direct numerical simulations
15:20	<i>Afternoon tea</i>	
	<i>Session 2, Flow Fields 2, Chair Janet Barlow</i>	
15:50 P2.1	Farr, T & Hancock, P, University of Surrey (UK)	Wind turbine torque fluctuations arising from atmospheric and upstream wake turbulence, and velocity-fluctuation cross correlations
16:10 P2.2	Gillmeier, S, Petersen, G, Leitl, B and Harms, F, University of Hamburg (Germany)	Experimental investigation of the effects of different approach flow conditions on flow over a small terrain model
16:30 P2.3	Janssen, T, Leitl, B, Harms, F & Kipsch, F, University of Hamburg (Germany)	Pedestrian wind comfort assessment for the future Campus Bundesstrasse at the University of Hamburg a case study
16:50 P2.4	Fiedler, M, Saha, C, Schroter, K, Ammon, C, Berg, W, Loebstin, C & Amon, T, Leibniz-Institute (Germany)	Flow fields within a naturally ventilated barn
17:10 P2.5	Ho, Y-K & Liu, C-H, University of Hong Kong	Wind tunnel modelling of flows over various urban-like surfaces using idealized roughness elements
17:30	Alan Robins	A few words about EnFlo and its 20 years at the University of Surrey
18:00	<i>Reception</i>	<i>EnFlo Laboratory</i>

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Session 3, Street Canyons 1, Chair Daniele Contini

9:00 P3.1	Immer, M, Moonen P & Carmeliet, J, EMPA, (Switzerland)	The influence of the approach flow on the flow within a shear-driven cavity
9:20 P3.2	Moonen, P & Takano, Y, EMPA (Switzerland)	The influence of roof shape on flow and dispersion in an urban street canyon
9:40 P3.3	Harms, F, Berbekar, E, Lubcke & Leitl, B, University of Hamburg (Germany)	Flow and dispersion processes in an idealized urban roughness
10:00 P3.4	Berbekar, E, Harms, F, Lubcke, M & Leitl, B, Budapest University of Technology and Economics, (Hungary)	Validation dataset for local-scale emergency response models
10:20 P3.5	Lubcke, M, Harms, F, Berbekar, E & Leitl, B, University of Hamburg (Germany)	Puff dispersion in a simplified central-European city

10:40 *Morning coffee*

Session 4, Dispersion 1, Chair Bernd Leitl

11:10 P4.1	Ohba, R, Okabayashi, K, Michioka, T & Sada, K	Wind tunnel experiments for nuclear safety analysis
11:30 P4.2	Robins, A, Cheng, H & Hayden, P, University of Surrey (UK)	The dispersion of short duration, ground level emissions in turbulent boundary layers
11:50 P4.3	Chaloupecka, H, Janour, Z, Jurcakova, K, Kukacka, L, Kelinekova, R & Nosek, S, CAS, (Czech Republic)	Sensitivity to source position when detector is in a fixed location
12:10 P4.4	Carpentieri, M, Kumar, P and Robins, A, UCL (UK)	Modelling nanoparticle dispersion in vehicle wakes
12:30 P4.5	Robins, A, G, Batten, J, Hayden, P, Nathan, P & Spencer, R, University of Surrey (UK)	Dispersion of emissions from roof-top stacks on buildings in central London

13:00 *Lunch*

Hillside Restaurant

Session 5, Street Canyons 2, Chair Eric Savory

14:00 P5.1	He, X, Leitl, B, Harms, F & Kipsch, F, University of Hamburg (Germany)	A systematic study on ventilation in idealized urban structures
14:20 P5.2	Plehn L, Kipsch, F, Leitl, B & Harms, F, University of Hamburg (Germany)	The effect of a reconstructed city quarter on urban ventilation
14:40 P5.3	Kipsch, F, Leitl, B & Harms, F, University of Hamburg (Germany)	An experimental approach for quantifying the ventilation in complex urban structures

15:00 P5.4	Kukacka, L, Nosek, S, Kellnerova, R, Jurcakova, K and Janour, Z, CAS (Czech Republic)	Impact of building height variation on street canyon ventilation – preliminary results
15:20 P5.5	Smethurst, H, Hayden, P, Robins A & Carpentieri, M, University of Surrey (UK)	Urban dispersion and the street network concept
15:40	<i>Afternoon tea</i>	
	<i>Session 6, Dispersion 2, Chair David Hall</i>	
16:10 P6.1	Brocklehurst A & Barlow, J, University of Reading (UK)	Wind tunnel measurement of the source area of a rooftop meteorological mast in an urban area
16:30 P6.2	Heise, S, Leitl, B & Harms, F, University of Hamburg (Germany)	Near-field dispersion of emissions from small fire places
16:50 P6.3	Nosek, S, Janour, Z, Kukacka, L, Jurcakova, K, Kellnerova, R & Gulikova, E, CAS (Czech Republic)	Impact of open-cut coal mine terrain complexity on atmospheric dispersion
17:10 P6.4	Neto, WN & Barlow, J, University of Reading (UK)	The CoBoT technique for quantifying scalar fluxes from street canyons
17:30	Questions and discussion	What is the future role of wind tunnel experiments given the ever growing success and power of LES?
19:00	<i>Conference dinner</i>	<i>Lakeside</i>

Wednesday, 18th September
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Session 7, CFD, Chair Frank Harms

9:00 P7.1	Xie Z-T, University of Southampton (UK)	Designing a numerical environmental wind tunnel (NEWT)
9:20 P7.2	Wingstedt EMM, Fossum, HE & Reif, BAP, FFI, (Norway)	Modelling the viscous dissipation rate in stably stratified turbulence
9:40 P7.3	Allegrini, J, Dorer, V & Carmeliet, J, EMPA (Switzerland)	Validation of CFD simulations with wind tunnel measurements for buoyant flows in street canyons
10:00 P7.4	Joseph, GMD, Hargreaves, DM & Lowndes, IS, University of Nottingham (UK)	A CFD methodology to incorporate wind direction variability in discrete phase modelling of small particle dispersion
10:20 P7.5	Nagayami, Y, Okabayashi, K, Hara, T & Hori, E, MHI (Japan)	Verification and Validation of Large Eddy Simulation Applied to Atmospheric Dispersion over a Complex Terrain

10:40 *Morning coffee*

Session 8, Techniques, Chair Alan Robins

11:10 P8.1	Vik, T, Reif, BAP, FFI (Norway)	Evaporation of a thin liquid surface beneath a turbulent boundary layer
11:30 P8.2	Wustmans, M, Leidl, B & Harms, F, University of Hamburg (Germany)	Design and performance analysis of a two component shear force balance for thrust measurements at a wind turbine model
11:50 P8.3	Varga, A & Balczo, M, Budapest University of Technology and Economics (Hungary)	Development of a multi-hole probe for atmospheric boundary layer measurements

12:10 *Collect votes for best student presentation*

12:20 P8.4	Robins, AG & Hayden, P	Dense gas dispersion over a two-dimensional hill
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12:40 *Close of Physmod 2013* *Award for best student presentation*
Physmod 2015
Announcements

13:00 *Lunch* *Hillside Restaurant*