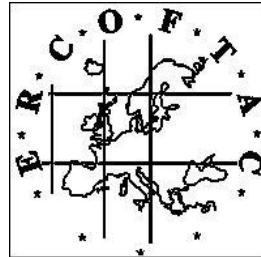




Wrocław University of Technology



**SIG42 Conference on Synthetic Turbulence Models**

## **Synthetic Turbulence and Vortex Flow**

11-12 July 2013, Wrocław

# **PROGRAMME**

**Venue:**

Wrocław University of Technology, Poland  
27 Wybrzeże Wyspiańskiego Street

**Organizing committee:**

Henryk Kudela	Wrocław University of Technology
Franck Nicolleau	Sheffield Fluid Mechanics Group
Andrzej Nowakowski	Sheffield Fluid Mechanics Group

Thursday 11<sup>th</sup> July 2013

(Session chair Franck Nicolleau)

**09:00** Registration & Welcome. Main hall of Wroclaw University of Technology. Main building (A1)

**09:30** Opening ceremony - Introduction

**10:00** Walk to the conference venue (place to be confirmed)

**10:30 – 11:00** Talk 1

**Andrew Baggalay** (School of Mathematics and Statistics, The University of Glasgow)  
*Vortex-density fluctuations, energy spectra and vortical regions in superfluid turbulence*

**11:00 – 11:30** Talk 2

**Long Zhou** (LSTM, Friedrich-Alexander Universität Erlangen-Nürnberg)  
*Wavelet Synthetic Turbulence*

**11:30 – 12:00** **COFFEE BREAK**

**12:00 – 12:30** Talk 3

**Tomasz Bobiński, Łukasz Klotz and Jacek Rokicki** (Warsaw University of Technology)  
*Flow Bifurcations in a Wake Behind Bluff Bodies*

**12:30 – 13:00** Talk 4

**Fernando Tejero, Piotr Doerffer and Paweł Flaszynski** (IMP PAN, Polish Academy of Sciences, Gdansk)  
*Streamwise vortex creation in time*

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**13:00 – 14:00** **LUNCH**

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(Session chair Andrzej Nowakowski)

**14:00 – 14:30** Talk 5

**Thomas Michelitsch** (CNRS Institute Jean Le Rond d'Alembert University of Paris VI)  
*Application of the self-similar fractional Laplacian approach for prediction of Kolmogorov energy*

**14:30 – 15:00** Talk 6

**Henryk Kudela** (Wroclaw University of Technology)  
*Self-similar collapse of  $n$  vortices*

**15:00 – 15:30** **COFFEE BREAK**

**15:30 – 16:00** Talk 7

**Andrzej Kosior and Henryk Kudela** (Wroclaw University of Technology, Institute of Aviation)  
*Simulation of the vortex tube reconnection using graphics cards and parallel computations by Vortex in Cell method.*

**16:00 – 16:30** Talk 8

**Mike Reeks** (School of Mechanical and Systems Engineering, The University of Newcastle)  
*Particle drift in turbulent flows: the influence of local structure and inhomogeneity*

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**19:00** **CONFERENCE DINNER (The Cathedral Restaurant, John Paul II Hotel)**

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# Friday 12<sup>th</sup> July 2013

(Session chair Henryk Kudela)

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**10:00 – 10:30** Talk 9

**Franck Nicolleau and Navin Sangtani Lakhawani** (Sheffield Fluid Mechanics Group, The University of Sheffield)

*Vortex generation after a fractal orifice*

**10:30 – 11:00** Talk 10

**Artur Tyliszczak and Bernard Geurts** (Politechnika Częstochowska - Twente University)

*LES of excited circular and rectangular jets*

**11:00 – 11:30** Talk 11

**Andrzej Boguslawski, Artur Tyliszczak, Stanisław Drobniaak and Dariusz Asendrych** (Politechnika Częstochowska)

*Self-sustained oscillations in a homogeneous density round jet.*

**11:30 – 12:00** **COFFEE BREAK**

**12:00 – 12:30** Talk 12

**Kamil Kielczewski and Ewa Tuliszcza-Sznitko** (Poznan University of Technology)

*LES of the turbulent flow with heat transfer in rotating system*

**12:30 – 13:00** Talk 13

**Andrzej Nowakowski** (Sheffield Fluid Mechanics Group, The University of Sheffield)

*Vortices in multicomponent flows*

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**13:00 – 14:00** **LUNCH**

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(Session chair Mike Reeks)

**14:00 – 14:30** Talk 14

**Tomasz Kozlowski and Henryk Kudela** (Wroclaw University of Technology)

*Fly simulation cause by flapping of the profile using the vortex particle method*

**14:30 – 15:00** Talk 15

**Christophe Henry, Maria Knorps and Jacek Pozorski** (IMP PAN, Polish Academy of Sciences, Gdansk)

*A study of particle agglomeration in flow: perspectives for kinematic turbulence simulations*

**15:00 – 15:30** **COFFEE BREAK**

**15:30** **Fluid Mechanics Lab Visit (large-scale water channel)**

**General discussion and end of conference**