1st SIG43 workshop on fibre suspension flows

VTT Technical Research Centre of Finland, Jyväskylä, Finland, 2nd – 3rd April, 2009
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Introduction

ERCOFTAC Special Interest Group on fibre suspension flows (SIG43) was established in 2008. The first workshop organized by the group was held April 2-3, 2009, at the Technical Research Centre of Finland (VTT), in Jyväskylä, Finland. Local workshop arrangements were carried out by Dr. Janne Poranen and Mr. Juha Salmela from VTT. The workshop collected together researchers from five countries: Finland, Sweden, Norway, Poland and France. There were also participants from industry (Metso Paper, Tamfelt) and from SME's who are offering CFD services to industry (Numerola, Process Flow). Altogether 25 persons took part in the first SIG43 workshop.

Scientific program

The workshop consisted of 12 presentations dealing with CFD and experiments for fibre suspension flows:

- Opening, **Janne Poranen**, VTT and **Jari Hämäläinen**, University of Kuopio
- Modeling of fiber suspension flows in papermaking processes by combining Non-Newtonian fluid dynamics and turbulence, **Juha-Pekka Huhtanen**, Tampere University of Technology
- CFD study of refining hydraulics, **Dariusz Asendrych**, Częstochowa University of Technology
- Simulations of long particles in turbulent flows, **Lihao Zhao**, Norwegian University of Science and Technology
- Modelling of fibre suspensions in papermaking process, **Heidi Niskanen**, University of Kuopio
- Experiments on the development of the fiber orientation distribution in elongational base flow, **Hannu Eloranta**, Tampere University of Technology
- Application of ultrasound anemometry for measuring filtration of fibre suspensions: Effect of fibre and pulp properties, **Sanna Haavisto**, VTT
- Experimental study on the transition from dilute fiber suspension to fiber network, **Gabriele Bellani**, KTH
- Filtration of Fibre Suspension in a Shear Flow **Mika Laitinen**, Numerola Oy
- Fibre suspension modeling at Process Flow, **Hannu Karema**, Process Flow Ltd Oy
- Flow of pulp in pipes, **Salaheddine Skali-Lami**, Nancy-University
- New experimental results on the flow regimes in closed channel flows of wood fibre suspensions, **Ari Jäsberg**, University of Jyväskylä
- UDV measurements and CFD simulation of two-phase flow in a stirred vessel, **Sanna Haavisto**, VTT

Tour to the experimental facilities in Jyväskylä region

There are several fibre suspension research units in the Jyväskylä region which were visited during the workshop. The tour started from the Metso Paper's pilot paper machine, which is the main research unit of the world leading paper machine supplier. The experimental laboratory of University of Jyväskylä, Department of Physics, was visited next. Also the experimental laboratories at VTT were introduced.

Workshop material

An abstract booklet and a CD-ROM consisting of all the presentations are available. Full papers have not been written. For further information on the SIG43 and the 1st workshop, please, contact the SIG43 coordinator, Professor Jari Hämäläinen (jari.hamalainen@uku.fi).

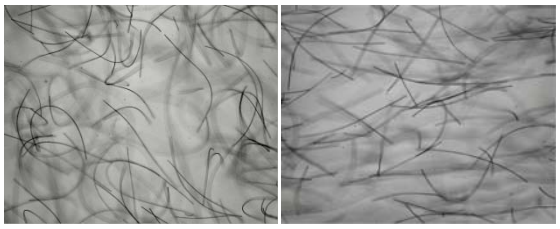

Figure. *Random and oriented fibres (experiments by Hannu Eloranta, TUT)*