

Euromech Colloquium 472 on Microfluidics and Transfer

September 6-8, 2005, Grenoble, France

Dear Colleagues

You are cordially invited to participate to the Euromech Colloquium 472 on **Microfluidics and Transfer** to be hosted by the LEGI (Laboratory of Geophysical and Industrial Flows) in Grenoble.

The development of microfluidic systems has grown rapidly over the past decade, generating a number of applications, some of them already turned into commercial products. In such systems, unusual lengthscales are involved (typically from 1 to 100 microns) and several new scientific questions arise. In particular, physical phenomena, negligible in flows of conventional sizes, may play an important role in microflows. Interface phenomena are especially important owing to the large values reached, in miniaturized systems, by the surface/volume ratio. Interface dynamics in microsystems, is a recent subject, interesting in its own right, and valuable to explore in view of controlling heat or mass transfer in microfluidic systems. At the moment, research studies currently investigate effects due to the coupling between microflows and geometry, wall slip, surface roughness, electrokinetics, variable fluid properties and conduction/convection. A substantial part of the research effort attempts to explore new fundamental processes, disentangling, in some case, their complex nature, along with exploring exciting new applications.



Service communication/INP Grenoble

The colloquium is intended to review recent advances on microflows, focusing on fundamental aspects of Microfluidics and Transfer.

The conference will be organized in six sessions introduced by keynotes lectures

General Introduction (P. TABELING)

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| <ul style="list-style-type: none"> ● Gas microflows ● Micro heat transfer (single phase flows) ● Micro heat transfer (two phase flows) ● Flows under electrical fields ● Physico-chemical properties of interfaces ● Isothermal two-phase flows. Interface phenomena | <ul style="list-style-type: none"> ● S. COLIN (INSA Toulouse, France) ● G-P CELATA (ENEA, Italy) ● J-R THOME (EPFL, Switzerland) ● A. CASTELLANOS (Univ. Seville, Spain) ● M. ADLER (Univ. Marne-la-Vallée, France) ● D. LOHSE (Univ. Twente, The Netherlands) |
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Conference chairmen

Michel FAVRE-MARINET

Polytechnic National Institute of Grenoble
Ecole Nationale Supérieure d'Hydraulique et de Mécanique de Grenoble
Laboratory of Geophysical and Industrial Flows
E-mail : Michel.Favre-Marinet@hmg.inpg.fr

Patrick TABELING

Ecole Supérieure de Physique et de Chimie Industrielles, Paris
Microfluidics, MEMS and Nanostructures
E-mail : patrick.tabeling@espci.fr

Deadlines

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| | • Submission of 2-page abstract | March 1, 2005 |
| | • Notification of acceptance | May 1, 2005 |

Laboratory of Geophysical and Industrial Flows, Ecole Nationale Supérieure d'Hydraulique et de Mécanique,
GRENOBLE, 1025, rue de la Piscine, BP 95, 38402 Saint-Martin-d'Hères CEDEX