

## Call for Prenomination – The Nusselt-Reynolds Prize

Sponsored by

### Assembly of World Conferences on Experimental Heat Transfer, Fluid Mechanics, and Thermodynamics

The Nusselt-Reynolds Prize has been established by the Assembly of World Conferences to commemorate outstanding contributions by Wilhelm Nusselt and Osborne Reynolds as experimentalists, researchers, educators, and authors. As many as three prizes may be bestowed at every World Conference, one in each of the areas of heat transfer, fluid mechanics, thermodynamics, or any combination of these.

The prize shall be bestowed for outstanding scientific and engineering contributions and eminent achievements in the fields of heat transfer, fluid mechanics, and thermodynamics through (1) experimental studies and analytical/ numerical extension of the measurements, (2) development of experimental techniques, visualization techniques, and/or instrumentation, and/or (3) development of design theory (that needs experimental data) and theory based experimental correlations. These contributions should yield a deeper insight into physical phenomena involved or should yield significant technological advances. In addition to research, the awardee(s) should have made outstanding contributions to the field through teaching, design, or a combination of such activities. The prize is based on *achievement through publications* or through *the application of the science or art*. Nationality, age, sex, and society membership shall not be considered when evaluating qualifications of candidates. A candidate must be living at the time of designation as a recipient of the prize.

The prize consists of a bronze plaque, an engrossed certificate, and an honorarium. The prize is administered by the Prize Board. To facilitate nomination, the nomination procedure is split up into two phases:

- Prenomination by letter, CV and list of publications
- Full nomination

The full nomination will be done for three candidates maximum. The deadline for accepting prenomination for the Prize is *June 30<sup>th</sup>, 2011*. The Prize Board will evaluate prenomination until August 31, 2011. Final nomination packages are due the 20<sup>th</sup> of December, 2011. The prize will be awarded at the Eight World Conference during June 23-28, 2013 in Lisboa, Portugal, where the prize winners will also present plenary lectures on their subjects.

Nominators can obtain further information (Charter, Instructions for prenomination, List of previous recipients, List of members of the prize board) by downloading files from [http://w3.wtb.tue.nl/en/research/research\\_groups/process\\_technology/nusselt\\_reynolds\\_prize/](http://w3.wtb.tue.nl/en/research/research_groups/process_technology/nusselt_reynolds_prize/)

Cees van der Geld, Chairperson  
The Nusselt-Reynolds Prize Board  
Eindhoven University of Technology  
Faculty of Mechanical Engineering  
P.O. Box 513 5600 MB Eindhoven  
The Netherlands  
Tel. +31-40-2472923; Fax. +31-40-2475399  
Email: [c.w.m.v.d.geld@tue.nl](mailto:c.w.m.v.d.geld@tue.nl)

## 8<sup>th</sup> International Fluid Power Conference Dresden „Fluid Power Drives!“

### Invitation

The 8<sup>th</sup> International Conference on Fluid Power (8<sup>th</sup> IFK) is one of the world's most significant scientific conferences on fluid power control technology and systems. It offers manufacturers, users and scientists a common platform for the presentation and discussion of trends and innovations.

The symposium on the first day is dedicated to presentations focused on methodology and fundamental research. The two following conference days offer a wide variety of application- and technology-orientated reviews about the latest state of the art in fluid power. It is this combination that makes the IFK an ideal forum for the exchange of academic research and industrial application. An exhibition taking place simultaneously offers the possibility to get information about products and to get in touch with manufacturers.

The conference is followed by two days of excursions to regional companies and technical places of interest. Fluid power as a universal drive technology is playing a major role in machinery and plant engineering and frequently competes with electric drive systems. Due to high technology standards, combined with ideas and innovative approaches the manufacturers and users of fluid power drive systems are able to develop new strategies and offensively take the next steps of development.



Prof. Dr.-Ing. J. Weber  
IFD Director

The spectrum of conference topics shows:  
„Fluid Power Drives!“

I look forward to seeing you in Dresden in March 2012!

### Conference Topics

- Industrial applications in Fluid Power
- Mobile applications and transportation
- Pneumatic applications
- Fluid Power components
- Specific applications
- Fundamentals / Materials / Tribology
- Availability / Safety / Environmental compatibility
- Education and qualification in fluid power

A detailed list of all conference topics can be found at [www.ifk2012.com](http://www.ifk2012.com)

### Criteria and general information for contributions

The conference topics are suggestions for your paper. Unconventional contributions are explicitly welcome! Authors interested in contributing a paper to the conference are requested to forward an abstract of the article in English or German language as pdf-file to the e-mail address [papers@ifk2012.com](mailto:papers@ifk2012.com) at the latest by **31 May 2011**. Please use the writing instructions and the provided **template** available at [www.ifk2012.com](http://www.ifk2012.com).

### Further Information

#### General

Markus Schneider  
☎ +49 351/463-38609  
✉ [general@ifk2012.com](mailto:general@ifk2012.com)

#### Papers

Martin Petzold  
☎ +49 351/463-33701  
✉ [papers@ifk2012.com](mailto:papers@ifk2012.com)

#### Exhibition

André Sitte  
☎ +49 351/463-33707  
✉ [exhibition@ifk2012.com](mailto:exhibition@ifk2012.com)

#### Address

Technische Universität Dresden  
Institut für Fluidtechnik  
8. IFK Sekretariat  
D-01062 Dresden

[www.ifk2012.com](http://www.ifk2012.com)



8<sup>th</sup> International  
Fluid Power Conference

March 26-28, 2012  
ICD Dresden



- 1 Oblique route to turbulence  
**M. R. Malik**
- 5 Direct numerical simulation of complete transition to turbulence via oblique breakdown at Mach 3  
**C. S. J. Mayer, D. A. von Terzi & H. F. Fasel**
- 43 Thrust efficiency of harmonically oscillating flexible flat plates  
**P. J. S. A. Ferreira de Sousa & J. J. Allen**
- 67 Geometric study of Lagrangian and Eulerian structures in turbulent channel flow  
**Y. Yang & D. I. Pullin**
- 93 Drops climbing uphill on an oscillating substrate  
**E. S. Benilov & J. Billingham**
- 120 Topological analysis of separation phenomena in liquid metal flow in sudden expansions.  
Part 1. Hydrodynamic flow  
**C. Mistrangelo**
- 132 Topological analysis of separation phenomena in liquid metal flow in sudden expansions.  
Part 2. Magneto-hydrodynamic flow  
**C. Mistrangelo**
- 163 Synchronization of flexible sheets  
**G. J. Elfring & E. Lauga**
- 174 Variations on a beta-plane: derivation of non-traditional beta-plane equations from Hamilton's principle on a sphere  
**P. J. Dellar**
- 196 Three-dimensional extension of Lighthill's large-amplitude elongated-body theory of fish locomotion  
**F. Candelier, F. Boyer & A. Leroyer**
- S 227 The rapid advance and slow retreat of a mushy zone  
**N. R. Gewecke & T. P. Schulze**
- 244 Stirring, stretching and transport generated by a pair of like-signed vortices  
**F. Rizzi & L. Cortelezzi**
- 281 The energetics of the breakup of a sheet and of a rivulet on a vertical substrate in the presence of a uniform surface shear stress  
**S. K. Wilson, J. M. Sullivan & B. R. Duffy**
- 307 The influence of the inertially dominated outer region on the rheology of a dilute dispersion of low-Reynolds-number drops or rigid particles  
**G. Subramanian, D. L. Koch, J. Zhang & C. Yang**
- 359 Spheres in the vicinity of a bifurcation: elucidating the Zweifach–Fung effect  
**V. Doyeux, T. Podgorski, S. Peponas, M. Ismail & G. Coupier**
- S 389 Hydrodynamic interactions for the measurement of thin film elastic properties  
**S. Leroy & E. Charlaix**
- 408 Three-dimensional vortex dynamics in oscillatory flow separation  
**M. Canals & G. Pawlak**
- 433 Information stored in Faraday waves: the origin of a path memory  
**A. Eddi, E. Sultan, J. Moukhtar, E. Fort, M. Rossi & Y. Couder**
- 464 Inviscid critical and near-critical reflection of internal waves in the time domain  
**A. Scotti**
- 489 The asymptotic structure of a slender dragged viscous thread  
**M. J. Blount & J. R. Lister**
- 522 Turbulence structure and interaction with steep breaking waves  
**D. Lakehal & P. Liovic**
- 578 The dynamics of a vesicle in simple shear flow  
**H. Zhao & E. S. G. Shaqfeh**

S indicates supplementary data or movies available online.



**Mixed Sources**  
Product group from well-managed  
forests and other controlled sources

Cert no. SA-COC-1527  
www.fsc.org  
© 1996 Forest Stewardship Council

### Cambridge Journals Online

For further information about this journal  
please go to the journal web site at  
[journals.cambridge.org/flm](http://journals.cambridge.org/flm)

**CAMBRIDGE**  
UNIVERSITY PRESS