

# Journal of Fluids Engineering

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**Research Papers:** Flows in Complex Systems

## Effect of J-Groove on the Suppression of Swirl Flow in a Conical Diffuser

Junichi Kurokawa, Hiroshi Imamura and Young-Do Choi

*J. Fluids*

*Eng.* 2010;132(7):071101-  
071101-8.  
doi:10.1115/1.4001899.

## Rotordynamic Moment on the Backshroud of a Francis Turbine

## Runner Under Whirling Motion

Bingwei Song, Hironori Horiguchi, Zhenyue Ma and Yoshinobu Tsujimoto

*J. Fluids*

*Eng.* 2010;132(7):071102-  
071102-9.  
doi:10.1115/1.4001802.

## An Experimental Study of the Flow Around a Formula One

## Racing Car Tire

Emin Issakhanian, Chris J. Elkins, Kin Pong Lo and John K. Eaton

*J. Fluids*

*Eng.* 2010;132(7):071103-  
071103-8.  
doi:10.1115/1.4001880.

## Research Papers: Fundamental Issues and Canonical Flows

## PIV Study of Laminar Wall Jets of Non-Newtonian Fluids

K. F. K. Adane and M. F. Tachie

*J. Fluids*

*Eng.* 2010;132(7):071201-  
071201-8.  
doi:10.1115/1.4001894.

## Low Reynolds Number Flow in Spiral Microchannels

Denis Lepchev and Daniel Weihs

*J. Fluids*

*Eng.* 2010;132(7):071202-  
071202-13.  
doi:10.1115/1.4001860.

## Numerical and Experimental Analysis of Turbulent Flow in

## Corrugated Pipes

Henrique Stel, Rigoberto E. M. Morales, Admilson T. Franco, Silvio L. M. Junqueira, Raul H. Erthal and Marcelo A. L. Gonçalves

*J. Fluids*

*Eng.* 2010;132(7):071203-  
071203-13.  
doi:10.1115/1.4002035.

## Research Papers: Multiphase Flows

## Influence of Gas-Liquid Two-

## Phase Intermittent Flow on Hydraulic Sand Dune Migration in Horizontal Pipelines

Afshin Goharzadeh, Peter Rodgers and Chokri Touati

*J. Fluids*

*Eng.*. 2010;132(7):071301-071301-7.  
doi:10.1115/1.4001869.

Modeling the Unsteady  
Cavitating Flow in a Cross-Flow

## Water Turbine

E. Sansone, C. Pellone and T. Maitre

*J. Fluids*

*Eng.*. 2010;132(7):071302-071302-13.  
doi:10.1115/1.4001966.

CFD Evaluation of Solid  
Particles Erosion in Curved Ducts

Samy M. El-Behery, Mofreh H. Hamed, K. A. Ibrahim and M. A. El-Kadi

*J. Fluids*

*Eng.*. 2010;132(7):071303-071303-10.  
doi:10.1115/1.4001968.

Pressure Loss in a Horizontal  
Two-Phase Slug Flow

A. R. Kabiri-Samani and S. M. Borghei

*J. Fluids*

*Eng.*. 2010;132(7):071304-071304-8.  
doi:10.1115/1.4001969.

## Technical Briefs

Study of Unguided Flow in a

## Chamber

A. Abdel-Fattah

*J. Fluids*

*Eng.*. 2010;132(7):074501-074501-7.  
doi:10.1115/1.4001394.

The Analysis of Cavitation  
Problems in the Axial Piston

## Pump

Shu Wang

*J. Fluids*

*Eng.*. 2010;132(7):074502-074502-6.  
doi:10.1115/1.4002058.

Effect of Second Order  
Velocity-Slip/Temperature-Jump

## on Basic Gaseous Fluctuating Micro-Flows

M. A. Hamdan, M. A. Al-Nimr and Vladimir A. Hammoudeh

*J. Fluids*

*Eng.*. 2010;132(7):074503-074503-6.  
doi:10.1115/1.4001970.