Workshop on Active Drag Reduction
Aachen, Germany, 15-16 March 2018

An interdisciplinary symposium organized by the DFG funded research unit FOR 1779
RWTH Aachen University, Forschungszentrum Jülich

The symposium will be held at:

NOVOTEL Aachen
Peterstrasse 66
52062 Aachen
Germany

Organizing Committee:
Wolfgang Schröder
Dirk Abel
Michael Klaas
Siegfried Müller
Matthias Meinke
Michael Schiek
Stefan van Waasen
# Workshop on Active Drag Reduction

Aachen, Germany, 15-16 March 2018

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<th>15 March 2018</th>
<th>Time</th>
<th>Session</th>
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<tr>
<td></td>
<td>08:30 – 09:00</td>
<td>Registration</td>
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| 09:00 - 09:30 | Welcome and Introduction, W. Schröder  
Forschungszentrum Jülich (FOR 1779): Active drag reduction via wavy surface oscillations |
| 09:30 - 10:10 | Y. Zhou (HIT Shenzhen)  
Active drag reduction in a turbulent boundary layer |
| 10:10 - 10:50 | S. Bagheri (KTH)  
Turbulent flow over hairy surfaces |
| 10:50 - 11:20 | Coffee Break |
| 11:20 - 11:50 | W. Li (RWTH)  
Experimental investigation of friction drag over moving surfaces |
| 11:50 - 12:20 | P. Meysonnat (RWTH)  
Numerical investigation of friction drag via transversal wavy surfaces motions |
| 12:20 - 13:00 | B. Hof (TU Wien)  
Elimination of turbulence in pipe flow |
| 13:00 - 14:00 | Lunch (Novotel) |
| 14:00- 14:40 | S. Chernyshenko (Imperial)  
Questions concerning quasi-steady mechanism of the Reynolds number, pressure gradient, and geometry effect on drag reduction |
| 14:40- 15:10 | L. Pyta (RWTH)  
Reduction of friction drag in subsonic flow via feedback control |
| 15:10 - 15:40 | F. Seidler (FZ Jülich)  
New actuating systems and real-time network simulation for distributed surface actuation |
| 15:40 - 16:10 | Coffee Break |
| 16:10 - 16:50 | J. Whidborne (Cranfield)  
Drag Reduction with Extremum Control - Possibilities and Problems |
| 16:50 - 17:30 | A. Polyakov (INRIA Lille)  
Robust Active Flow Control: Sliding Mode Control Approach |
| 17:30 - 18:00 | M. Novara (DLR)  
3D Lagrangian particle tracking with Shake-The-Box in turbulent boundary layer flows |
| 19:30 | Dinner (Ratskeller, Markt 40, 52062) |
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16 March 2018

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<tr>
<th>Time</th>
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<tr>
<td>08:30 - 09:10</td>
<td>H. Alfredsson (KTH)</td>
<td>Control of bluff body separation using plasma vortex generators - success and surprise</td>
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<td>09:10 - 09:40</td>
<td>G. Deolmi (RWTH)</td>
<td>Effective boundary conditions for compressible flows over rough boundaries</td>
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<td>09:40 - 10:20</td>
<td>W. Dahmen (South Carolina)</td>
<td>Multiscale Simulations and Reduced Models</td>
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<td>10:20 - 11:00</td>
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<td><strong>Coffee Break</strong></td>
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<td>11:00 - 11:30</td>
<td>F. Goldschmidtböing (Freiburg)</td>
<td>A high stroke and high frequency actuator array for turbulence manipulation</td>
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<td>11:30 - 12:10</td>
<td>K. Fukagata (Keio)</td>
<td>Resolvent analysis for turbulent friction drag reduction</td>
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<td>12:10 - 12:50</td>
<td>B. Noack (CNRS, LIMSI, Orsay)</td>
<td>Closed-loop turbulence control using machine and human learning</td>
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<td>12:50 - 13:00</td>
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<td>Closing</td>
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**Location:**
NOVOTEL Aachen
Peterstrasse 66
52062 Aachen
Germany

**Registration:**
Wenfeng Li: w.li@aia.rwth-aachen.de

**Online:**
www.aia.rwth-aachen.de/adr/symposium