



**UNIVERSITA'  
NICCOLO' CUSANO**

**12<sup>th</sup> December 2017**  
9.30 - Aula IV

**Mini Symposium on  
LATTICE BOLTZMANN  
METHODS FOR  
COMPLEX SIMULATIONS**

Organizers: **Dr. Daniele Chiappini** ([daniele.chiappini@unicusano.it](mailto:daniele.chiappini@unicusano.it)),  
**Dr. Giovanni Di Ilio** ([giovanni.diilio@unicusano.it](mailto:giovanni.diilio@unicusano.it))

On behalf of the University of Rome Niccolò Cusano we are glad to invite you to the mini symposium on lattice Boltzmann methods for complex simulations, which will be held at the University of Rome Niccolò Cusano, in Rome on the 12th of December, 2017.

During last decades, lattice Boltzmann methods gained a primary role in fluid dynamic simulations for a large number of engineering applications.

The aim of this mini symposium is to give an insight on recent advances in computational fluid dynamics within the lattice Boltzmann framework.

Experiences from different research centers and universities will be collected in this occasion with the possibility to highlight all the critical aspects which arise in real system simulations.

Acknowledgments:

Under the PRIN Research project n. **20154EHYW9**: Combined numerical and experimental methodology for fluid-structure interaction in free surface flows under impulsive loading





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Università degli Studi Niccolò Cusano - Telematica Roma

## Agenda of Mini-symposium – Tuesday December the 12th 2017

<b>09:30 - 09:40</b>	Dr. Daniele Chiappini <i>UNIVERSITY OF ROME NICCOLO' CUSANO</i>	Introduction
<b>09:40 - 10:05</b>	Dr. Benedikt Dorshner <i>ETH ZURICH</i>	Entropic lattice Boltzmann methods for complex flows
<b>10:05 - 10:30</b>	Dr. Giovanni Di Ilio <i>UNIVERSITY OF ROME NICCOLO' CUSANO</i>	Simulation of turbulent flows with the entropic multirelaxation time lattice Boltzmann method on body-fitted meshes
<b>10:30 – 10:55</b>	Prof. Giacomo Falcucci <i>UNIROMA2</i>	Lattice Boltzmann Modeling of Complex Fluid-Structure Interactions in Energy Systems and Biological Apparatus
<b>10:55 – 11:20</b>	Dr. Felix Milan <i>UNIROMA2/EINDHOVEN UNIVERSITY of TECHNOLOGY</i>	Lattice Boltzmann simulations of droplet dynamics in time-dependent flows
<b>11:20 – 11:45</b>	Dr. Xiao Xue <i>UNIROMA2/EINDHOVEN UNIVERSITY of TECHNOLOGY</i>	On the effects of thermal fluctuations in the fragmentation of a liquid ligament
<b>11:45 – 12:10</b>	Dr. Andrea Montessori <i>UNIVERSITY OF ROMA 3</i>	Lattice Boltzmann approach to sub-nano flows In Graphene-Oxide Membranes
<b>12:10 – 12:20</b>		Break
<b>12:20 – 13:00</b>		Discussion