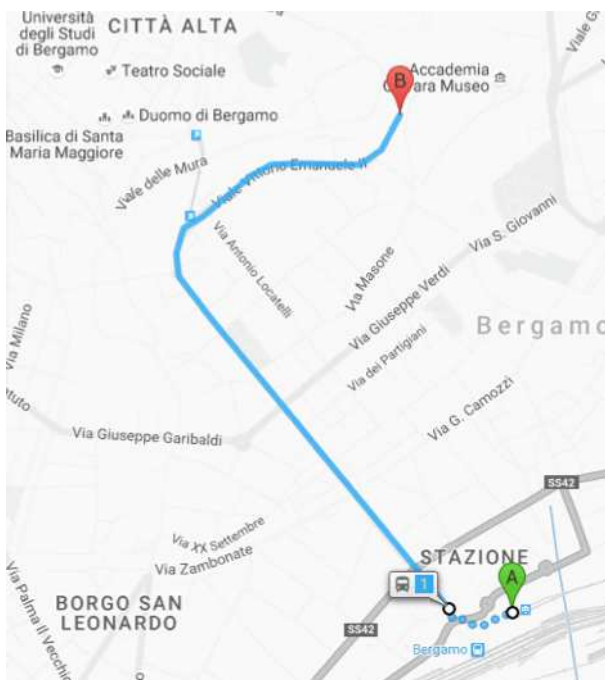


## Conference venue



Sant'Agostino Conference Room  
Via Fara, 24129 Bergamo

<https://goo.gl/maps/8n36WxNGWeS2>



Connections are guaranteed by taxi or Bus line 1 (ticket for "1 zona – tariffa A") starting from the train station.



UNIVERSITÀ DEGLI STUDI DI BERGAMO

Prof. G. E. Cossali  
[cossali@unibg.it](mailto:cossali@unibg.it)

+39 0352052309

+39 0352052077

Viale Marconi 5  
24044 Dalmine (BG)  
Italy

## Organisation committee

G. E. Cossali (Chairman)  
S. Fest-Santini  
M. Santini  
S. Tonini

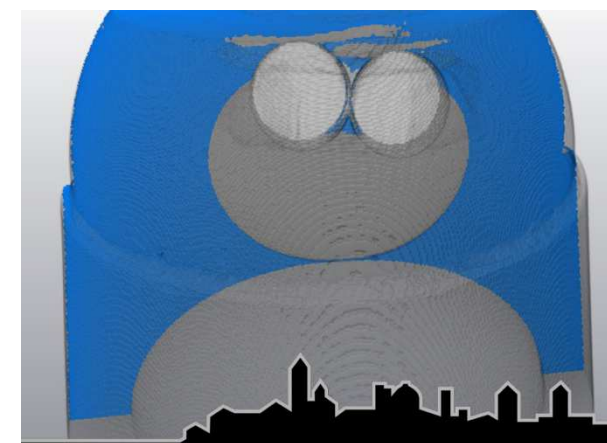


DIPSI 2017 Participants, Bergamo 26<sup>th</sup> May 2017



# DIPSI Workshop 2018

Droplet Impact Phenomena  
& Spray Investigations



X-ray microCT of 3D multiple interfaces: two glass spheres and a water drop in dodecane

Bergamo, 18<sup>th</sup> May 2018

**DRIPIT** Workshop

17<sup>th</sup> May 2018

## Workshop goals

This is the twelfth edition of the workshop on droplet impact phenomena and spray investigations organised by the University of Bergamo. It represents an important opportunity to share the recent knowledge on droplets and sprays in a variety of research fields and industrial applications.

## DROPIT Workshop

On **17<sup>th</sup> May 2018**, in the same location of the DIPSI Workshop, a dedicated workshop for the doctoral students will be organised within the International Research Training Group on the topics of Droplet Interaction Technologies (GRK 2160, DROPIT), leaded by Universität Stuttgart, in partnership with Università degli Studi di Bergamo and Università degli Studi di Trento.

<http://www.uni-stuttgart.de/itlr/graduieren/dropit.php>

## Preliminary program

### 17<sup>th</sup> May 2018, Thursday

#### 13:00 DROPIT Workshop

**20:00 Dinner** at Ristorante Caffè Funicolare, Via Porta Dipinta 1, 24129 - Bergamo

### 18<sup>th</sup> May 2018, Friday

#### 08:30 Registration

#### 08:50 Welcome speech

#### 09:00 S1: Phase change in drops/sprays

09:00 C. Crua, J. Manin, L.M. Pickett, *Transcritical mixing of sprays for multi-component fuel mixtures*.

09:25 M. Heikal, *The effect of Fuel Injection equipment on micro-explosion of water in diesel emulsions*.

09:50 G. Lamanna, C. Steinhausen, P. Palmetshofer, B. Weigand, *Influence of solubility effects and diffusion coefficient models on the drop vaporisation rate at high pressure*.

#### 10:15 Coffee break

#### 10:45 S2: Spray formation

10:45 U. Fritsching, L. Buss, H.F. Meier, D. Noriler, D. Beckers, V. Uhlenwinkel, *Spray formation and propagation in open and enclosed atmosphere*.

11:10 G. Langella, A. Amoresano, *How the half cone angle fluctuation characterizes a pressure swirl spray behaviour*.

11:35 L.J. Kapusta, *Spray measurements in SCR systems development*.

12:00 M. Malý, A.S. Moita, J. Jedelsky, A.P.C. Ribeiro, A.L.N. Moreira, *Nanofluid Sprays for Cooling Applications*.

#### 12:25 Lunch break

#### 13:30 Poster session

S. Ackermann, *Upscaling of coupled free-flow and porous-media-flow processes*.

M. Baggio, B. Weigand, *Implementation of structured surfaces in the DNS multiphase code Free Surface 3D (FS3D)*.

S. Chiocchetti, M. Dumbser, *High order schemes for a first order hyperbolic formulation of compressible flow with surface tension*.

R. Haide, M. Santini, S. Fest-Santini, *Experimental investigations on multi-phase systems with X-Ray micro CT*.

L.J. Kapusta, *Ignition delay measurements of Triglyme-HTP propellant in high pressure environment using drop test method*.

T. Laroche, N. lafrate, N. Lamarque, B. Cuenot, A. Misdariis, *LES and Experiment comparison of a fuel spray impinging on a cold wall*.

R. Payri, F.J. Salvador, M. Cialesi –Esposito, *Direct numerical simulation of the nozzle near field in plain orifice atomizers*.

A. Straub, T. Ertl, *Visual Analysis of Interface Deformation in Multiphase Flow*.

W. Reschke, S. Fasoulas, *Gas-kinetic simulation of microdroplet-gas interaction*.

S. Tonini, G.E. Cossali, *Effect of local surface curvature on heating and evaporation of deformed droplets*.

G. Varma Raja Kochanattu, G.E. Cossali, S. Tonini, *Modelling of heat and mass transfer from spheroidal drops with general non-uniform Dirichlet boundary conditions*.

#### 14:00 S3: Spray applications

14:00 H. Hinterbichler, H. Steiner, G. Brenn, *The dynamics of self-similar consumer sprays*.

14:25 I. Lund, *Micro-jet technology for single plant herbicide application*.

#### 14:50 Coffee break

#### 15:20 S4: Drop/spray impact

15:20 H. Jadidbonab, N. Mitroglou, I. Karathanassis, M. Gavaises, *We-T Classification of Diesel fuel droplet impact regimes*.

15:45 A. Montanaro, L. Allocca, *Experimental analysis of a GDI spray impacting on a heated wall*.

16:10 W. Aniszewski, S. Zaleski, Y. Saadeh, S. Popinet, *Numerical simulations of plane turbulent jet with liquid film in context of coating*.

#### 16:35 Workshop closure

## Publication

A successive publication of the works presented during the workshop will be made as short communication format. Anyone, who has contributed to the workshop with oral or poster presentation, will be asked to send us a manuscript by **30<sup>th</sup> June 2018**. We will include it in a CD-ROM with ISBN which will be distributed to all the participants. A format for the manuscript will be provided successively.