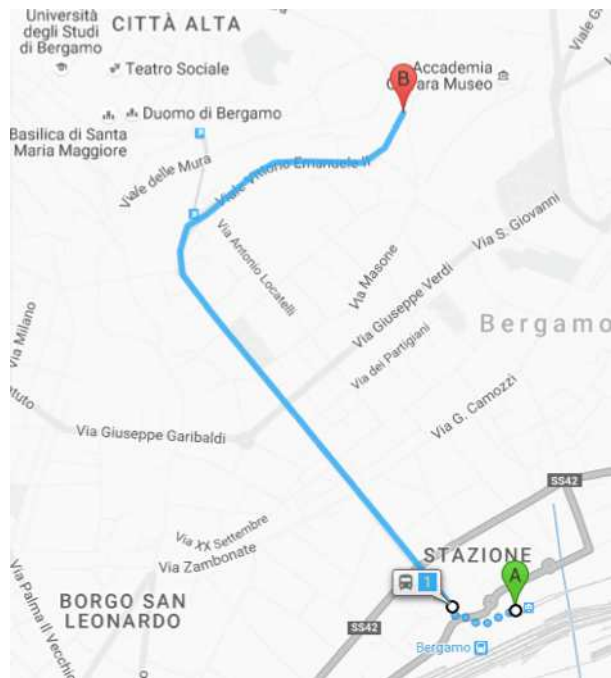


## Conference venue



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.



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## Organisation committee

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



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

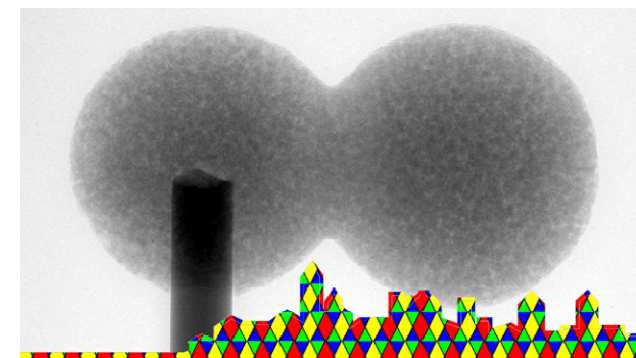


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Department  
of Engineering  
and Applied Sciences

# DIPSI Workshop 2019

Droplet Impact Phenomena  
& Spray Investigations



X-ray microCT image of a sublimating inverse oblate spheroidal drop

Bergamo, 17<sup>th</sup> May 2019  
Sant'Agostino Conference Room

**DRIPIT**  
Doctoral seminars

15-16<sup>th</sup> May 2019

## Workshop goals

This is the thirteenth 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: Doctoral seminars

On **15<sup>th</sup>-16<sup>th</sup> May 2019**, in the same location of the DIPSI Workshop, a series of doctoral seminars will be presented within the International Research Training Group *Droplet Interaction Technologies* (GRK 2160 DROPIT), led by Universität Stuttgart with University of Bergamo and University of Trento.  
<http://www.uni-stuttgart.de/itlr/graduierten/dropit.php>

## Program

### 15<sup>th</sup> May 2019, Wednesday

09:00 DROPIT Doctoral Seminars

### 16<sup>th</sup> May 2019, Thursday

09:00 DROPIT Doctoral Seminars

20:00 **Dinner** at Ristorante da Mimmo, Via Bartolomeo Colleoni, 17 – 24129 Bergamo

### 17<sup>th</sup> May 2019, Friday

08:45 Registration

09:00 Welcome speech

09:15 S1: Drop evaporation modelling

09:15 G. Lamanna, *Modelling of droplet evaporation at high pressure and temperature conditions and the validity of the quasi-equilibrium assumption.*

09:45 C. Rodriguez, *Complex multicomponent real-fluid thermodynamic model for high-pressure Diesel fuel injection.*

10:15 Coffee break

11:00 S2: Drop-wall interaction

11:00 A. Geppert, *An analytical solution for modelling the crown spreading on wetted walls based on stagnation point flow: Effects of film thickness and viscosity.*

11:30 M. Rossi, *3D flow velocity inside sessile evaporating droplets.*

12:00 B. Weigand, G.E. Cossali, *The International Research Training Group "Droplet Interaction Technologies" (DROPIT): Selected results.*

12:30 Lunch break

13:30 Poster session

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

S. Ackermann, L. Ostrowski, *A multi-scale approach for drop detachment in a coupled free-flow/porous-medium-flow system free-flow/porous-medium-flow system.*

M. Baggio, B. Weigand, *On the implementation of structured surfaces in FS3D.*

R. Bernard, V. Vaikuntanathan, G. Lamanna, B. Weigand, *On the crown rim expansion kinematics during droplet impact on wall-films.*

G.E. Cossali, S. Tonini, *Effect of temperature dependence of gas thermo-physical properties on analytical modelling of drop evaporation.*

P. Foltyn, B. Weigand, *Droplet collisions with solid superhydrophilic surfaces.*

L. Ostrowski, *Compressible droplet impingement.*

K. Schlottke, B. Weigand, *Investigating the near drop neighborhood of evaporating droplets.*

14:00 S3: Spray applications I

14:00 I. Lund, *Experimental and numerical analysis of spray drift potential.*

14:30 A. Montanaro, L. Allocca, *Effect of ambient conditions and very-high injection pressures on gasoline fuel sprays morphology.*

15:00 Coffee break

15:30 S4: Spray applications 2

15:30 A. Amoresano, A. Montanaro, L. Allocca, G. Langella, *Analysis of average penetration and determination of the signature of a multi-hole spray for GDI applications*

16:00 Ł.J. Kapusta, R. Rogóż, D. Bojanowski, *Joint experimental and numerical study to evaluate effect of injection pressure on SCR system performance*

16:30 Workshop closure

## Publication

A successive publication of the contributions 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 an extended abstract by **30<sup>th</sup> June 2019**.

We will include it in the Proceedings of the DIPSI Workshop 2019, assigning an ISBN code, and it will be uploaded in Aisberg platform of University of Bergamo.

The Book of Proceedings of the DIPSI Workshop 2018 is available at:

<https://aisberg.unibg.it/handle/10446/128087>