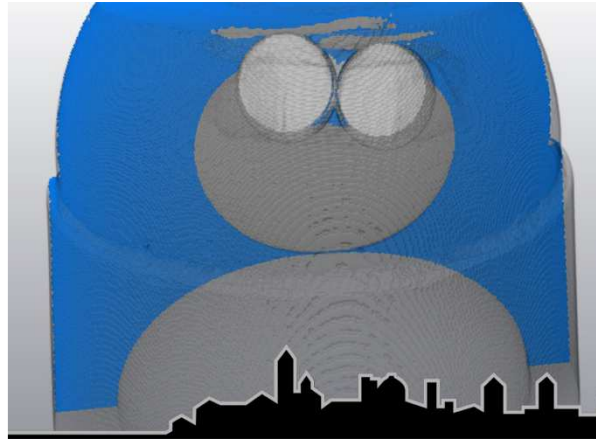




## **DIPSI Workshop 2018**

### **Droplet Impact Phenomena & Spray Investigations**



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

**Friday 18<sup>th</sup> May 2018, Sant'Agostino Conference Room**  
**Chairman: Prof. G.E. Cossali**

**08:30 Registration**

**08:50 Welcome speech, Prof. G.E. Cossali**

**09:00 Session 1: 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. Palmethofer, B. Weigand, *Influence of solubility effects and diffusion coefficient models on the drop vaporisation rate at high pressure.*

**10:15 Coffee break**

**10:45 Session 2: 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. Iafraite, 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. Crialesi –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 Session 3: 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 Session 4: 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**

The event is supported by the Research Training Group 2160/1 DROPIT, in collaboration with the University of Stuttgart, Luchsinger S.r.l. and EyePro System S.r.l.