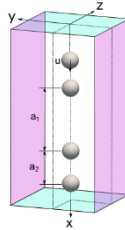


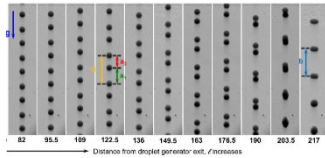
## Projects

### P1) Numerical and Experimental Investigation of Grouping Behavior in Monodisperse Droplet Streams

Participants: D. Appel (SP-A6)  
 Guests: M. Ibach (University of Stuttgart)  
 V. Vaikuntanathan (Shiv Nadar University)



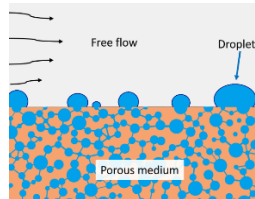
Ibach M., Schulte K., Vaikuntanathan V., Arad A., Katoshevski D., Greenberg B., Weigand B., Aug. 29th 2021 ICLASS



Vaikuntanathan V., Amini K., Arad A., Katoshevski D., Greenberg B., Weigand B., Aug. 29th 2021 ICLASS

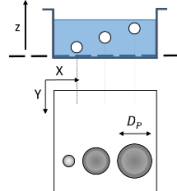
### P2) Evaporation in a Coupled Free Flow–Porous Medium System Including Droplets on the Interface

Participants: M. Veyskarami (SP-B6)  
 R. Helmig (University of Stuttgart)  
 C. Bringedal (University of Stuttgart)  
 M. Santini (University of Bergamo)  
 S. Fest-Santini (University of Bergamo)  
 Guests: A. Raouf (Utrecht University)  
 E. de Vries (Utrecht University)  
 S. Chen (University of Arizona)



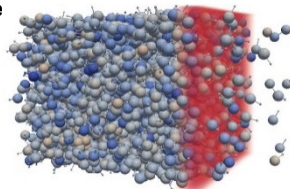
### P3) Application of the General Defocusing Particle Tracking Method to Analyze the Three-Dimensional Flow Field during Droplet Impact

Participants: S. Schubert (SP-C1)  
 A. Geppert (SP-C5)  
 Guests: M. Rossi (Technical University of Denmark)



### P4) Investigation of Surface Tension Effects on Evaporating Droplets with Micro and Macroscopic Mode

Participants: R. Tietz (SP-A3)  
 P. Mossier (SP-A2)  
 S. Tonini (University of Bergamo)  
 Guests: J. Keim (University of Stuttgart)  
 S. Frank (University of Stuttgart)



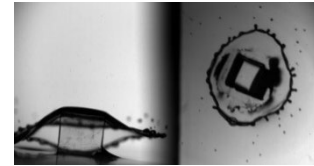
## Projects

### P5) Topological Visualization Methods to Analyze Drop Impacts

Participants: D. Klötzl (SP-C4)  
 P. Palmethofer (SP-B1)  
 W. Ren (SP-B5)  
 S. Schubert (SP-C1)

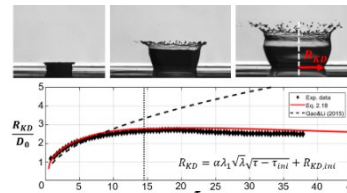
### P6) Experimental and Numerical Investigation of Droplet Impacts onto Pillars with a Wetted Base

Participants: P. Palmethofer (SP-B1)  
 W. Ren (SP-B5)  
 Y. Liu (University of Stuttgart)  
 Guests: J. Steigerwald (University of Stuttgart)  
 S. Bakshi (Indian Institute of Technology Madras)



### P7) Investigation of Early Phase Contact Line Movement During Droplet Impact to Improve the Analytical Crown Base Model (Experiments, Numerical Simulation, Analytics)

Participants: A. Geppert (SP-C5)  
 J. Stober (Sp-C2)  
 F. Massa (University of Bergamo)  
 S. Schubert (SP-C1)



## Contact

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 Tel. +49 711 685 62413  
 University of Stuttgart

Institute of Aerospace  
 Thermodynamics  
 Pfaffenwaldring 31  
 70569 Stuttgart

WebEx Meeting Information  
<https://unistuttgart.webex.com/unistuttgart/j.php?MTID=mef277d247c7afc5003fa12b84f42f2ab>  
 Access Code: 2734 415 0247  
 Password: DROFIT2022

GRK 2160/2: DROFIT  
<https://www.project.uni-stuttgart.de/dropit/>



# DROFIT

Spokespersons:  
 Prof. Dr.-Ing. Bernhard Weigand  
 Prof. Dr.-Ing. Elvio Cossali

Research Training Group 2160/2 – Droplet Interaction Technologies

# Summer School 2022

DROFIT Summer School aims to bring together multidisciplinary scientists to work on droplet interaction related topics using a combination of experimental, numerical and analytical tools.

June 9<sup>th</sup> – 30<sup>th</sup>  
 Stuttgart, Germany  
 and  
 Bergamo, Italy



University of Stuttgart  
 Germany



UNIVERSITÀ  
 DEGLI STUDI  
 DI BERGAMO



Università di Trento  
 Italy

DFG Deutsche  
 Forschungsgemeinschaft

## Dates and Locations

### Come Together

9<sup>th</sup> of June  
19:00  
Naturfreundehaus  
Büsnauer Rain 1  
Stuttgart-Vaihingen  
(25min walk from Hotel Römerhof)



### Kick-Off Meeting

10<sup>th</sup> of June  
8:45 – 14:45  
International Meeting Centre - Eulenhof  
University of Stuttgart  
Robert-Leicht-Straße 161  
(10min walk from Hotel Römerhof)



### Final Meeting

30<sup>th</sup> of June  
8:45 – 16:15  
Sala Conferenze, San't Agostino  
Bergamo







### Closure Dinner

30<sup>th</sup> of June  
N.A.  
Bergamo




## Program\* | Kick-Off Meeting | 10<sup>th</sup> of June

- 8:45 Arrival & Coffee 
- 9:00 Welcome Speech and Introduction into Dropit  
Prof. Weigand & Prof. Cossali 
- 9:15 Key note Talk by **Dr. Visakh Vaikuntanathan**  
An overview of some experimental investigations on droplet interaction with solid, liquid, and air
- 9:50 Project Introduction  
**P1) Numerical and Experimental Investigation of Grouping Behavior in Monodisperse Droplet Streams**
- 10:10 Project Introduction  
**P2) Evaporation in a Coupled Free Flow-Porous Medium System including Droplets on the Interface**
- 10:30 Coffee break 
- 11:00 Project Introduction  
**P3) Application of the General Defocusing Particle Tracking Method to Analyze the Three-Dimensional Flow Field during Droplet Impact**
- 11:20 Project Introduction  
**P4) Investigation of Surface Tension Effects on Evaporating Droplets with Micro and Macroscopic Models**
- 11:40 Project Introduction  
**P5) Topological Visualization Methods to Analyze Drop Impacts**
- 12:00 Lunch 
- 13:20 Project Introduction  
**P6) Experimental and Numerical Investigation of Droplet Impacts onto Pillars with a Wetted Base**
- 13:40 Project Introduction  
**P7) Investigation of Early Phase Contact Line Movement during Droplet Impact to Improve the Analytical Crown Base Model (Experiments, Numerical Simulation, Analytics)**
- 14:00 Key note Talk by **Prof. Shamit Bakshi**  
Evaporation induced flow around a pendant droplet evaporating in atmospheric condition

\*) Program will be streamed via Webex, see Contact

## Program\* | Final Meeting | 30<sup>th</sup> of June

- 8:45 Arrival & Registration 
- 9:00 Introductory remarks  
Prof. Weigand & Prof. Cossali
- 9:20 Cooperation between the University of Bergamo and the University of Stuttgart  
Prof. Cavaliere, Prof. W. Ressel  
(Rectors of both Universities)  
- 9:50 Coffee break 
- 10:20 Key note Talk by **Prof. David Katoshevski**  
Grouping Principles and Applications
- 11:00 Project Results  
**P1) Numerical and Experimental Investigation of Grouping Behavior in Monodisperse Droplet Streams**
- 11:30 Small break
- 11:40 Project Results  
**P2) Evaporation in a Coupled Free Flow-Porous Medium System including Droplets on the Interface**
- 12:10 Project Results  
**P3) Application of the General Defocusing Particle Tracking Method to Analyze the Three-Dimensional Flow Field during Droplet Impact**
- 12:40 Lunch 
- 14:00 Project Results  
**P4) Investigation of Surface Tension Effects on Evaporating Droplets with Micro and Macroscopic Models**
- 14:15 Project Results  
**P5) Topological Visualization Methods to Analyze Drop Impacts**
- 15:00 Coffee break 
- 15:30 Project Results  
**P6) Experimental and Numerical Investigation of Droplet Impacts onto Pillars with a Wetted Base**
- 16:00 Project Results  
**P7) Investigation of Early Phase Contact Line Movement during Droplet Impact to Improve the Analytical Crown Base Model (Experiments, Numerical Simulation, Analytics)**
- 16:30 Closing

\*) Program will be streamed via Webex, see Contact