

## 8. Workshop Kavitation, Vom Modell zur Anwendung, Program

(Stand 30.11.2021)

**29.11.2021 Monday** travel (from 2:00 pm) **Handover of keys from 5 to 7 pm in the room Phillip Jacob Spener**  
**19:00 Dinner**

**30.11.2021 Tuesday** Blue background indicates **online** presentations, changes marked by **!!!**

**7:00 Breakfast**

**-8:00 am**

**8:50 am Welcome**

<b>Bubble Dynamics</b>	9:00	Rosselló, Juan Manuel	New jet in town: The "bullet" jet explained
	9:15	Depp, Benedict	Optische Vermessung der instationären Kontaktlinienbewegung bei der diffusionsgetriebenen Keimbildung
	9:30	Kanduč, Matej	Cavitation in lipid bilayers poses strict negative pressure stability limit in biological liquids
	9:45	Pfeiffer, Patricia	Thermally assisted Heterogeneous Cavitation through Gas Supersaturation
	10:00	Euchler, Eric <b>no show</b>	Über das Deformations- und Versagensverhaltens von Elastomeren infolge von Kavitation
	10:15	Reese, Hendrik	Simulating cavitation bubbles near elastic structures using OpenFOAM
<b>10:30 am Coffee Break</b>			
<b>Hydrodynamic Cavitation</b>	11:15	Dular, Matevz	From bubble-bacterium interaction to waste activated sludge treatment by cavitation
	11:30	Gosda, Roland	Numerische Simulation ausgedehnter Spitzenwirbelkavitation eines Propellers mit einer Randelementmethode mit Relaxationszonen
	11:45	Robrecht, Robin	Work in Progress: Modellierung der Ablösung von Porenkeimen und des Diffusionsprozesses bei Spitzenwirbelkavitation
	12:00	Hatzissawidis, Grigorios)	Übergang von Schicht- zu Wolkenkavitation bei der Umströmung eines NACA0015-Profiles
	12:15	Kerres, Lara	Räumliche und zeitliche Skalen der Wolkendynamik als Grundlage für die Entwicklung eines generischen Experiments
	12:30	Peters, Andreas	Compressible multi-scale Euler-Lagrange simulations of cavitating flows
12:45	Roudini, Mehrzad <b>!!!</b>	Fluid Dynamics and Damage Analysis In Resonant Acoustofluidic Nebulizers	

**1:00 pm Lunch Break**

**2:00 - Hiking**

**4:30 pm**

**Erosion & Particle**

4:30 pm!!!	Mnich, Dominik	Precision Cleaning with Single Cavitation Bubbles seeded in a Jet
4:45!!!	Kühlmann, Jonas	Investigation of surface damage caused by multiple laser-induced single bubble cavitation events
5:00!!!	Lechner, Christiane	Jet formation of bubbles expanding and collapsing right at a solid boundary -- a numerical investigation on the influence of viscosity.
5:15!!!	Lopez, Christina	Influence of surface roughness on the cavitation resistance of austenitic steel and nickel-aluminium bronze
5:30!!!	Reuter, Fabian	Damage from single cavitation bubbles near boundaries
5:45!!!	Riahi, Farbod	Influence of cavitation bubble dynamics on the size of nanoparticles synthesized by double-pulsed laser ablation in liquids

**7:00 pm Dinner**

**7:30 pm Evening Discussion Gemeindekrug Drübeck**

**1.12.2021 Wednesday**

Blue background indicates **online** presentations, changes marked by **!!!**

**7:00 Breakfast**

**-8:00 am**

**Acoustic Cavitation**

9:00	Aghelmaleki, Atiyeh	Acoustic cavitation bubble structures in viscous liquids
9:15	Denner, Fabian	Reduced-order modelling of acoustic emissions from cavitation bubbles
9:30	Schenke, Sören	Nonlinear dynamics of ultrasound waves radiated from cavitation bubbles
9:45	Skoda, Romuald	Numerische Simulation der Blasendynamik und lokalen Entmischung in binären Dodekan/Heptan-Mischungen
10:00	Mettin, Robert	Acoustic Resonance and Atomization for Gas-Liquid Systems in Microreactors
10:15	Stephens, Dwayne	Iterative modelling of sound field and bubble distribution in acoustic cavitation

**10:30 am Coffee Break**

**Application**

11:15	Rüdiger, Frank	Reduzierung der Aktivität von Biomasse mittels Kavitation
11:30	Schädel, Robin	Viskoses Pumpen von Flüssigkeiten mit Kavitationsblasen
11:45	Borich, Anna <b>!!!</b>	Cavitation on and in the cells
12:00	Schreiner, Felix	Methode zur Kopplung von Strömungssimulation und einem Erosionsmodell zur quantitativen Vorhersage von Erosion
12:15	Kadivar, Ebrahim	Cavitation control of sheet and unsteady cloud cavitation using miniature vortex generator (MVG)
12:30	George, Benedikt	Investigation of Inertial Cavitation of Sonosensitive and Biocompatible Nanospheres in Flow Through Tissue Mimicking Phantoms Employing Focused Ultrasound

**1:00 pm Lunch Break**

**2:30 pm Closing**