

# Final Program

All Times are Central European Summer Time (CEST).

# **Wednesday 14 August**

#### 08:50 Welcome and Opening Remarks

Maria Tenje, Uppsala University, Sweden – Conference chair Martin Wiklund, KTH, Sweden – Conference Co-chair

## Session 1 - Applications of Acoustic systems-1

## **Keynote Speaker 1**

**09:00** Prof. Monika Ritsch-Marte, University of Innsbruck, Austria Optical and acoustic manipulation for tomographic imaging

#### Contributed Talks

#### 09:50 Cooper Thome, USA

Acoustic pipette and biofunctional negative acoustic contrast microparticle system for rapid picomolar-level biomolecule detection in whole blood

#### 10:05 Raj Kumar Rajaram Baskara, UK

Acoustofluidic sorting of red blood cells using real-time machine vision

#### 10:20 Megan Havers, Sweden

Rapid acoustic isolation unveils proteome of extracellular vesicles from a minute volume of human blood plasma

10:35 COFFEE BREAK

## Session 2 – Applications of Acoustic systems-2

#### **Invited Speaker 1**

#### **11:00** Advaith Narayan Coakley Award winner 2023

Elucidating cell-cell and cell-field interactions for acoustically confined microswimmers

#### **Contributed Talks**

#### 11:30 Song Ha Lee, South Korea

Compressibility-based positive isolation of bacteria from platelets using tilted-angle standing surface acoustic wave

#### 11:45 Martim Costa, Sweden

Echogrid: high-throughput acoustic trapping towards micro and nanoplastic monitoring

#### 12:00 Shiyu Li, China

Reversing the acoustic contrast factor by tuning the medium can make focused beams trap cells in three dimensions

12:15 LUNCH

## **Session 3 – Acoustic Manipulation**

## **Keynote Speaker 2**

**13:30** Prof. Michael Baudoin, University of Lille, France *Advancing the frontiers of acoustic micro-actuators* 

## **Contributed Talks**

14:20 Esther Richter, UK

Simultaneous fluorescence and absorbance signal sorting of microfluidic droplets using Traveling Surface Acoustic Waves (TSAW)

14:35 T Sujith, India

Relaxation to frozen mode transition of viscoelastic fluids under ultrasound: effects on particle transport

14:50 Mia Kvåle Løvmo, Austria

Acoustofluidic platforms for tomography of biological samples by rotational manipulation

15:05 COFFEE BREAK

#### **EVENT ARRANGED BY YASN**

- **15:45** Panel discussion on Academia and funding in different parts of the world
- 17:00 Joint walk from the Ångström Lab to the University Main Building (~30 min)

# Reception

**18:00 - 19:00** Reception and Guided tour in the University Main Building

# **Thursday 15 August**

All Times are Central European Summer Time (CEST).

#### 08:50 Announcements

# **Session 4- Physics of Acoustic systems**

## **Keynote Speaker 3**

**09:00** Prof. Karen P. Volke Sepulveda, National Autonomous Uni of Mexico *The particle size-effect in optical and acoustic traps* 

## **Contributed Talks**

**09:50** Sebastian Sachs, Germany
Influence of dielectrophoresis on spherical and non-spherical particles in a standing surface acoustic wave field

**10:05** Mehrzad Roudini, Germany

Near-field acoustic resonance effects and cavitation in saw aerosol generation

**10:20** Alex Drago-González, Finland Superhydrophobic coating acts as a shield against ultrasound-induced heating

10:35 COFFEE BREAK

## **Session 5 - Acoustic Streaming**

## **Invited Speaker 2**

**11:00** James Friend, USA *Acoustic streaming* 

#### Contributed Talks

**11:30** Claude Inserra, France

Acoustic microstreaming around asymmetric bubbles

**11:45** Haopu Wang, China

Vesicle-based drug loading and intracellular delivery by gigahertz acoustic streaming

**12:00** Amirabas Bakhtiari, Germany

Advancing size-selective particle separation: Ultrasonic microbubble streaming for automated depletion

12:15 LUNCH

# **Session 6 - Physics: Two phase Acoustofluidics**

### **Invited Speaker 3**

13:30 Ali Vafaie, Australia

Analysis of ultrasound-induced motility enhancement in single sperm using a droplet acoustofluidic system

## **Contributed Talks**

**14:00** Sazid Hogue, Denmark

Numerical simulation of bulk acoustic waves induced droplet generation in an immiscible coflow system

**14:15** Pradipta Kr. Das, Sweden

Numerical study of acoustic streaming in spherical droplets suspended in unconfined media

14:30 Jeyapradhap Thirisangu, India

Droplet dynamics beyond the Rayleigh limit under acoustic-gravity forces: a route to extract specific droplet sizes from a broad range.

14:45 COFFE BREAK

## W. Terence Coakley Poster Session and Olympiad

Ångström Laboratory

15:00 – 17:30 Poster session: House 10 ground floor

15:00 - 17:30 Olympiad: House 10

**16:00 – 17:00** Board meeting: House 10 room (open to all)

## **Banquet**

**18:30 – Late** Norrland's Nation, Västra Ågatan 14, 753 09 Uppsala

# Friday 16 August

All Times are Central European Summer Time (CEST).

#### 08:50 Announcements

# **Session 7 – Applications of Acoustic systems-3**

## **Keynote Speaker 4**

**09:00** David Collins, University of Melbourne, Australia *TBA* 

### **Contributed Talks**

- **09:50** Samir Almohamad, France

  Micro-manipulation of miscible fluids with acoustic tweezers
- **10:05** Enrico Corato, Sweden

  Applications of high-power bulk wave Acoustofluidics
- **10:20** Zhirui Chen, Japan

  High-power bulk-wave-acoustophoresis devices utilizing an elliptical reflector focusing transducer

10:35 COFFEE BREAK

## **Session 8- Devices**

#### **Contributed Talks**

- **11:00** Mathias Ohlin, Acousort, Sweden

  Blood cell focusing in simulation optimized molded polymer acoustophoresis chip
- **11:15** Saumitra Joshi, Switzerland

  Localized bulk acoustic traps using milled aluminum devices
- 11:30 Emilie Vuille-dit-Bille, Switzerland

  Array of piezoelectric micromachined ultrasonic transducers (PMUTs) for the acoustofluidic manipulation of particles and spheroids
- 11:45 Award Announcements12:00 Announcement of Acoustofluidics 202512:15 Conference Adjourns