

The logo for Acoustofluidics 2024 features a blue background with a complex, swirling pattern of white and light blue lines, resembling a fluid flow or acoustic field. A central orange circle with a red outline is overlaid on the pattern. The text "Acoustofluidics" is written in a bold, orange, sans-serif font, and "2024" is written in a bold, red, sans-serif font below it.

Acoustofluidics 2024

14-16 August 2024
Uppsala University, SWEDEN

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** Advait 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

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 Hoque, 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

