

To: **Members of the [Special Interest Group \(SIG\): Acoustofluidics](#)  
in [UK Fluids Network \(UKFN\)](#)**

Dear Colleagues,

**Fifth SIG Meeting:** 10.30am-5.00pm, Friday 7<sup>th</sup> Dec. 2018  
Heriot-Watt University, Edinburgh, UK  
Web-link: [Special Interest Group \(SIG\): Acoustofluidics](#)

**Arriving Place:** Main Entrance of Heriot-Watt University  
(Location 1 on the [Campus map](#))

**Meeting room:** **LB1 Court Meeting Room, The 2<sup>nd</sup> floor, Lord Balerno Building**  
(No 9 on the weblink: [Campus map](#))

**The aim of the meeting is for members of the SIG**

- To meet and understand each other's interests and capabilities on theoretical and numerical modeling of Acoustofluidics;
- To introduce, practice and exchange ideas for modeling works using commercial softwares, such as Comsol and Abacus, the open software, OpenFoam, and lattice Boltzmann methods (LBM);
- To discuss about the funding opportunities, collaborations, student/research staff exchanges/visiting.

**Proposed Agenda**

10:00-10:15: Registration (Coffee and Tea)

10:15-10:20: Welcome and safety

13:10-14:00: Lunch and poster section (Seminar Photo?)

16:00-16:30: Open section for discussion on the development strategies of modeling of fluids-SAW interaction in microfluidic devices

Current proposed Presentations: (10:20 – 16:00)

- Designing resonant chambers, using Disperse for the initial step followed by Abaqus and then experiments, Dr Jeremy Hawkes, University of Manchester.
- COMSOL Multiphysics with a focus on SAW/fluid interactions, Dr James Gaffney, COMSOL, UK
- Simulation and experiment of acoustic separation, Dr Xin Yang (Chris), Cardiff University
- Thin Film acoustic wave generation and wave mode analysis by Comsol, Dr Ran Tao, Northumbria University
- CFD modeling ....., Robert Barber, Scientific and Technology Facilities Council,
- The LB attentions to simulation of streaming and deformation of a drop acting by SAW, Stephen Burnside, Heriot-Watt University
- Photonic design in Comsol and Matlab, Dr. Julien Reboud, University of Glasgow
- Finite element and numerical simulations for acoustic particle manipulation applications, Gergely Simon, EPS, Heriot-Watt University
- Numerical Study of Interactions of Acoustic Waves with Fluid and Particles Using ANSYS, by Sadaf MaramiZonouz, Northumbria University, Newcastle, UK.
- Simulation using Openfoam for Liquid droplet pumping and jetting driven by surface acoustic waves, Seyedmehdi Hosseini Biroun, Northumbria University, Newcastle, UK

#### Proposed Posters:

- Simulation of new feature acoustic separation device, Hanlin Wang, Cardiff University
- Power modulation for SAW separation, Fangda Wu, Cardiff University
- An alternative manufacturing method for a SAW device, Cardiff University
- Numerical Study of Interactions of Acoustic Waves with Fluid and Particles Using ANSYS, Sadaf MaramiZonouz, Northumbria University
- Simulation of thin film SAWs, Yong Wang and Xiang Tao, Northumbria University
- Coupling impacts of streaming and thermals of a drop on SAW, M. Mehmood, Heriot-Watt University

#### **Finances**

The UKFN will provide us with limited funding, but it will be mainly used to cover refreshments and lunch, and reasonable expenses for the travel of invited speakers. We could provide some funding for research staff/students from our SIG members to fund their travel expenses. If you need to have funding support, please contact [b.chen@hw.ac.uk](mailto:b.chen@hw.ac.uk) or [Richard.fu@northumbria.ac.uk](mailto:Richard.fu@northumbria.ac.uk) in advance.

#### **Who May Attend**

All members of the SIG, Research Fellows, post-doc researchers or PhD students are invited to attend.

#### **Confirming Attendance**

For attendance, please reply to [b.chen@hw.ac.uk](mailto:b.chen@hw.ac.uk) with “**Attending**” or “**Not Attending**” in the main body of the email.

If possible, could you also list additional people from your group who will be coming and whether Staff, PhD or Research Fellow.

We’d appreciate replies whether you can attend or not. This will help us with room sizes and catering. Please indicate any dietary matters we need to consider for lunch (vegetarian/gluten-free, etc).

#### **Travel and Maps**

Our Edinburgh Campus is about 6 miles from the city centre. It's well served by frequent local bus services and is also easy to access by car. The easiest way to plan your journey to the campus is to use the Traveline Scotland Journey Planner, which uses up-to-date public transport timetables.

The details of the travel to the Campus and Campus map is weblink [here](#).

The arrival place at “main reception which is marked 1 on the [Campus map](#) and the meeting room is in the same building on the left side of the reception desk.

#### **Phone Contact**

If there are any problems or queries, feel free to contact Dr. Baixin Chen at 07570337377.