

UK Fluids Network Newsletter Issue 18 (6/6/18)

Welcome to Issue 18 of the UK Fluids Network newsletter, a regular summary of the Network's activities and news from the UK Fluids community.

To receive this newsletter, please sign up to the mailing list at <https://fluids.ac.uk/>.

We welcome your input and comments, or suggestions for new content in the newsletter – please use the form on <https://fluids.ac.uk/connect> or email info@fluids.ac.uk.

1. Website

(a) GDPR and the missing fluids researchers

In order to comply with the General Data Protection Regulation (GDPR), which came into operation on 25 May, we emailed everyone who was registered on the UKFN website beforehand, to obtain their consent to display their personal data on the Directory page and, by extension, to list them as SIG members (which relies on having registered).

We had a surprisingly good response, with approximately 800 out of 1100 users either clicking on the email link or confirming directly. However, this means that the missing 300 people will not appear in Directory searches and – perhaps more visibly – will be absent from the member lists of SIGs they belong to, until we have received their consent.

If you have not given your consent you can restore your visibility on the UKFN website:

- Either click on **your** version of the link that was emailed to you previously (it is of the form 'https://fluids.ac.uk/users/terms/accept/123'), whereupon you will be taken to the UKFN home page and your response acknowledged;
- Or email Nick Daish directly at info@fluids.ac.uk.

(b) Directory, <https://fluids.ac.uk/directory>

The Directory page now features a UK map showing the location of the search results, and the number of researchers who match the search criteria at each institution. Clicking on a dot selects that institution and changes its colour from blue to red, while its name is added to the location selection box; if no institutions are selected the results are drawn from the entire UK.

Users can also zoom in on the map to a specific area and select locations within that region, if for example they wished to find out who was working nearby in a particular research sub-discipline.

Some researchers may be missing from the search results as a result of not having yet given their consent to display their personal data - see (a) above on how to fix this.

2. UK Fluids Network mailing list

Important: the mailing list operates independently of the list of registered users, i.e. you will remain on the mailing list, and continue to receive this monthly newsletter and the weekly bulletin (see below) whether or not you gave consent on personal data use, since the mailing list only requires your email address, which is not made public.

As noted above, we have started a weekly bulletin, which is sent to the mailing list each Friday afternoon. It is a useful way to circulate time-critical messages (in addition to Twitter) on a weekly basis in between the monthly newsletters.

Please send any items for inclusion in the weekly bulletin **by Friday noon** at the latest by emailing info@fluids.ac.uk. Posts made to the 'All' mailing list by members will not be circulated directly, but the contents will be added to the weekly bulletin.

Posts will be repeated in the regular monthly newsletter, if still time-relevant.

3. UKFN thesis prize – results

Congratulations to the winner and runners-up in the UKFN thesis competition.

Winner:

Yi Man (University of Cambridge)

'Swimming at low Reynolds number: slip boundaries and interacting filaments'

Runners-up:

Rowan Brackston (Imperial College, London)

'Feedback control of three-dimensional bluff body wakes for efficient drag reduction'

Simeng Chen (University of Liverpool)

'An experimental investigation of drop impact phenomena with complex fluids on heated and soft surfaces'

There will be a dedicated semi-plenary session at the UK Fluids Conference devoted to presentations by the three finalists.

4. ERCOFTAC Osborne Reynolds Day 2018 – further extension to deadline

There has been a further extension to the Final Call for submissions to the 2018 ERCOFTAC Osborne Reynolds Day, so that now the deadline is **17:00 on Friday 15th June 2018**. The latest details may be found at <https://tinyurl.com/or18-final-extn>, while to register visit <https://tinyurl.com/or18-final-extn-register>.

Please note that the Osborne Reynolds Day takes place on Monday 3 September, the day before the UK Fluids Conference, and both are at the University of Manchester. This is the first time both these events have taken place together, so this year why not sign up for both?

5. UK Fluids Conference 2018 (<https://ukfluidsconference2018.weebly.com/>)

Registration is open, but please note **the early bird rate closes on 18 June 2018**.

Further news will be publicized in the newsletter, on the UKFN website and via Twitter.

6. JFM/FYFD video interviews on YouTube

There are two new monthly videos by Tom Crawford (<https://tomrocksmaths.com/>) and Nicole Sharp (<http://fyfluidynamics.com/>) on the latest fluids research from last year's APS-DFD meeting in Denver.

The latest videos are

April: Bees, squid and oil plumes

‘Fluid dynamics of bees, how to build squid-inspired robots and modelling oil plumes eight years on from the Deepwater Horizon oil spill’
(https://www.youtube.com/watch?v=RmOHEDrbr_I)

May: Martian bees, canopies and dandelion seeds

‘Dandelion seeds that outperform man-made parachutes, designing the flow over forest canopies, and bee-inspired micro-robots for exploring Mars’
(<https://www.youtube.com/watch?v=tuj6CYeUv6Y>)

The playlist with all the videos from this JFM/FYFD collaboration is here:

https://www.youtube.com/playlist?list=PLeMcS_6ekd586uRs34jE8aD8pF26nPvPi

7. Short Research Visits (<https://fluids.ac.uk/srv>)

The latest batch of SRVs has been awarded. This brings the total number of SRVs to 48.

- Dr Steven Wang (Newcastle University)
Title: ‘A novel fluid electric generator’
Visiting: University of Cambridge
- Mr Emmanuel Epelle (University of Edinburgh)
Title: ‘Application of CFD to three-phase modelling of particle transport phenomena during Underbalanced Drilling (UBD) in the oil and gas industry’
Visiting: Cranfield University
- Dr Apala Majumdar (University of Bath)
Title: ‘Controlling transport processes for liquid crystalline systems and applications’
Visiting: University of Oxford
- Mr Mubbashar Mehmood (Heriot-Watt University)
Title: ‘Experimental study of thermal impacts of Rayleigh SAW on micro droplets by using ZnO based piezoelectric devices’
Visiting: Northumbria University
- Dr Dominika Zabiegaj (Northumbria University)
Title: ‘Interaction of nanosolids in highly diluted dispersions: bulk and interfacial characterisation’
Visiting: Loughborough University
- Dr Mark Quinn & Mr Tom Fisher (University of Manchester)
Title: ‘Investigation of pressure-sensitive paint applications to high-speed cooling flows’
Visiting: University of Oxford
- Dr Megan Davies Wykes (University of Cambridge)
Title: ‘Irreversible processes in density-stratified mixing: a probabilistic approach’
Visiting: University of Bristol
- Dr Alex Wray (University of Strathclyde)
Title: ‘Low-order modelling of thick films at moderate Reynolds number’
Visiting: University of Oxford

- Dr Zhengzhong Sun (City University)
Title: 'Optimal mixing, mass and heat transfer in turbulent puffs'
Visiting: Durham University
- Dr Liora Malki-Epshtein (University College London)
Title: 'The effect of particle driven gravity currents on the built environment'
Visiting: University of Cambridge
- Dr Yong Sung Park (University of Dundee)
Title: 'The limiting value of advancing contact angles on partially wetted surfaces'
Visiting: University of Aberdeen
- Dr Yifan Li & Dr Jon Terry (Northumbria University, University of Edinburgh)
Title: 'The use of droplet microfluidics to enable hybrid soft material printing'
Visiting: University of Edinburgh/Northumbria University

Any UK fluids researcher – PhD student, postdoc, PI, industrial collaborator – can apply for a Short Research Visit grant to spend 1-2 weeks with another researcher or group, and UKFN will cover up to £1000 of your travel, subsistence and accommodation expenses. Previous visits have been used to develop a mathematical model, share an experimental facility or advance a numerical technique. The SRV page on the website contains full details of how to apply, plus summaries of all SRVs and reports on completed visits.

The next deadline for SRV proposals is 31 July 2018.

8. ERCOFTAC conferences and workshops

ERCOFTAC is involved in the organization and promotion of many conferences and workshops relevant to the UK fluids community. The following take place over the next few months.

- Gas Engine Combustion Fundamentals: 2nd International Energy Agency/ERCOFTAC joint workshop
18 June 2018, Zürich, Switzerland
https://www.ercoftac.org/events/new_gas_engine_combustion_fundamentals/
- 13th International SPHERIC Workshop
25-28 June 2018, Galway, Ireland
https://www.ercoftac.org/events/13th_international_s/
- 5th International Conference on Turbulence and Interactions
25-29 June 2018, Martinique
https://www.ercoftac.org/events/5th_international_conference_on_turbulence_and_interactions/
- Active Transport in the Ocean: Turbulence, Chemistry and Biology
2-6 July 2018, Wimereux, France
https://www.ercoftac.org/events/active_transport_in/
<http://log.cnrs.fr/IMG/pdf/activetransportintheocean2018d.pdf>
- 14th International Workshop on Measurement and Computation of Turbulent Flames
27-28 July 2018, Dublin, Ireland
https://www.ercoftac.org/events/14th_international_w/

- Waves in Flows Summer School and Workshop
27-31 August 2018, Prague, Czech Republic
https://www.ercoftac.org/events/waves_in_flows/
<http://www.prague-sum.com/>
- Conference on Modelling Fluid Flow (CMFF'18)
4-7 September 2018, Budapest, Hungary
https://www.ercoftac.org/events/conference_on_modell/
<http://www.cmff.hu/>
- XXIII Fluid Mechanics Conference 2018
9-12 September 2018, Zawiercie, Poland
https://www.ercoftac.org/events/xxiii_fluid_mechanic/
<http://kkmp2018.wimii.pcz.pl/>
- 12th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements (ETMM12)
26-28 September 2018, Montpellier, France
https://www.ercoftac.org/events/new_etmm12/

For a full list, see the ERCOFTAC website (https://www.ercoftac.org/events/events_list/).

9. Forthcoming workshops and conferences (What's On & Tweets)

- Doctoral training day on complex fluids and microfluidics
29 June 2018, Bath
<https://tinyurl.com/ydfkawoh>
NB Only available for GW4 universities (Bath, Bristol, Cardiff, Exeter)
- ICCFD10 (International Conference on Computational Fluid Dynamics)
9-13 July 2018, Barcelona, Spain
<http://www.iccfd.org/iccfd10/>
- Acoustofluidics 2018
29-31 August 2018, Lille, France
<https://cbmsociety.org/conferences/acoustofluidics18/>
- Dynamics Days Europe 2018
3-7 September 2018, Loughborough
<http://dynamicsday2018.lboro.ac.uk/index.html>
- Ocean Remote Sensing Summer School
10-14 September 2018, Brest, France
http://conferences.telecom-bretagne.eu/synergy_summer_school_2018/
- Seventh Symposium on Hybrid RANS-LES Methods (HRLM7): latest developments for industrial turbulence modelling & simulation
17-19 September 2018, Berlin, Germany
<https://hrlm7.sciencesconf.org>

- Please contact us by **Friday, 6 July 2018** if you would like to advertise a workshop or conference in the next newsletter.

10. Open PDRA, faculty and other positions

PhD studentships

- (a) PhD, Department of Civil Engineering, University of Dundee
Sensing Unsteadiness in Buoyant PLUMES (SUBPLUMES)
Ref: <https://www.findaphd.com/search/ProjectDetails.aspx?PJID=97616>
Closing date: 12 June 2018
- (b) PhD, School of Chemical and Process Engineering, University of Leeds
Simulation of behavioural modification effects on multiphase pipe flows
Ref: <https://tinyurl.com/phd-leeds-mphase-pipe>
Closing date: 30 June 2018
- (c) PhD, Centre for Medical Informatics, University of Edinburgh
Through the tumour labyrinth: developing a mechanistic understanding of blood flow and oxygen delivery in tumour vasculature
Ref: <https://tinyurl.com/phd-ed-cmi>
Closing date: 30 June 2018

Postdocs

- (d) PDRF, Centre for Medical Informatics, University of Edinburgh
Automatic assimilation of particle velocimetry data into computational blood flow models
Ref: <https://tinyurl.com/pdrf-ed-cmi>
Closing date: 1 July 2018

Academic staff

- (e) Departmental Lecturer, Department of Engineering Science, University of Oxford
Civil Engineering Fluid Mechanics
Ref: <https://tinyurl.com/lecturer-ox-engsci>
Closing date: 29 June 2018

Industrial

- (f) YINI (Year in Industry) programme place, Rolls-Royce, Derby
CFD Methods/Physical Sciences/Design System Engineering team
Further information: <https://fluids.ac.uk/files/YINI-RR-2018.1526978040.pdf>
Closing date: 29 June 2018
 - (g) CFD Developer, BAE Systems, Filton
Further information: <https://tinyurl.com/bae-cfd-developer>
- Please contact us by **Friday, 6 July 2018** if you would like to advertise open PDRA, faculty and other positions in the next newsletter.