

Meeting of UKFN Executive Committee

10:00, Thursday 18 July 2019
University of Leeds

MINUTES

Present:

Matthew Juniper (Chair)
Nick Daish
Anne Juel
Paul Linden (via Skype)
Neil Sandham
Steve Tobias¹
Cath Noakes, Deputy Director, Leeds Institute for Fluid Dynamics
Peter Jimack, Director, EPSRC CDT in Fluid Dynamics
Claire Savy, Centre Manager, EPSRC CDT in Fluid Dynamics

Apologies:

Yannis Hardalupas

A. Executive Committee business (Members of EC)

1. Minutes of last EC meeting (17/1/19)

The EC agreed the minutes from the last EC meeting.

2. Outstanding actions from previous EC meetings

The only actions concerned the website, and were discussed under Item 3.

3. Website

MJ summarised the status of the website, including noting the outstanding actions (Item 2) were on the list of developments under consideration.

NS reported that the website continued to function well, but commented that the Directory search was sometimes less useful when people found in the search had a long list of research interests or application areas – this could be improved if a researcher's list were limited to, say, 10 of each.

Action: ND to send out a request via the newsletter to limit interests/areas to a maximum of 10 of each, by 1/8/19.

NS asked whether there were any potential issues due to underlying software changing after the end of the grant. MJ agreed to ask the web developer whether the software used to build the website is likely to change and if so what would need to be done to make it future-proof.

¹ Also Director of Leeds Institute for Fluid Dynamics.

Action: ND/MJ to ask web developer about status of software used to generate website by 26/7/19⁽²⁾.

4. Special Interest Groups

MJ summarised the status of spending on the SIGs: following the latest review, including allocation of additional funds allocated to SIGs who had requested them, there was a projected underspend of £53K. From this a contingency totalling about £18K across all SIGs had been set aside, although this was unlikely to be spent entirely. The remainder has been combined with other unspent Travel and Subsistence (see Item 6).

AJ asked how the 'Multi-scale and non-continuum flows' SIG was faring after the recent sad passing of its leader Jason Reese, and suggested it would be appropriate for UKFN to publish an *in memoriam* acknowledgement on the SIG's individual page, to which the EC agreed.

Action: AJ to compose suitable notice by 7/8/19; ND/MJ to add to the website by 14/8/19.

5. Short Research Visits

No actions.

6. Overall UKFN budget

The overall T&S budget has around £16K spare capacity, which is definitely available for other purposes, with in all likelihood an additional sum from the £18K SIG contingency (Item 4). Possible uses were discussed.

- Hold another round of SRVs – EC agreed
- Provide T&S support to Tom Crawford to make another set of videos – EC agreed
- Support the *building* of a fluids demo model for MathsWorldUK
 - The EC noted this would be in the spirit of public engagement and worthwhile, and the demo itself would be a lasting physical legacy of UKFN;
 - On the negative side, spending on consumables can be tricky near end of grant;
 - ST suggested a simpler alternative could be to help MathsWorldUK with T&S support, and the EC agreed this should be investigated further.

Action: MJ/ND to ask Katie Chicot whether T&S support would help and how by 7/8/19.

- Additional suggestions:
 - Sandpits on Grand Challenges, possibly across SIGs, and possibly in conjunction with LIFD (see discussion of Grand Challenges under Item 12).
 - EC/SIG leaders' wrap-up event at end of project?

7. Supplementary funds

MJ reported there was a total of about £11K available going into 2020. If used solely for competition prizes, as it has thus far, it could last another 7-8 years. Continuation of the current schedule of competitions, with some amendments, was proposed as follows.

⁽²⁾ Already discussed with web developer, who pointed out the website uses the Laravel web framework, version 5.2; although not the latest version (5.8), it was adequate and does not need upgrading. Note the code is open source: <https://github.com/UkFluidsNetwork/ukfn>.

- Photo/video competition, reduced to every 6 months
- Student presentation prizes at UK Fluids Conference
- Fluids thesis prize - retain the cash prize for the winner, but phase out the presentation part because of the high cost of presenters' attendance, unless possibly they are already participating in the conference

The EC agreed that all three should be continued as proposed.

MJ raised the possibility of enquiring whether any institutional support might be available after the end of the grant. ST stated that Leeds was likely to be amenable, while NS thought Southampton's position was more uncertain, since the current financial environment is difficult.

8. Engagement with other organisations and activities

MJ summarised the activities relating to EPSRC, ERCOFTAC, ERCOFTAC Osborne Reynolds Day, UK Fluids Conference, Journal of Fluid Mechanics/Tom Crawford and MathsWorldUK

- EPSRC
 - Booklet on UKFN – CN commented that UKRI could be approached to promote it as well as EPSRC
 - SAT and Council members – the EC noted the former are typically relatively early in their career, in their 30s, while the latter is for senior people e.g. PVCs, Deans

Action: All to encourage colleagues involved with UKFN to put themselves forward, thereby increasing links with UKFN (ongoing).

9. Any other business

No further items were proposed for discussion.

10. Next meeting

The next meeting would be via Webex in October 2019.

Action: ND to organise Webex meeting for October 2019.

11. Group photo (for UKFN booklet)



B. Future activities of UKFN and role of Leeds Fluid Dynamics CDT/LIFD (Members of EC & Leeds CDT/LIFD)

12. Introduction/context

MJ gave a summary of the current to the Leeds attendees on the current plans to continue UKFN and its activities, while PJ/ST/CN gave the EC the background to the Leeds Fluids Dynamics CDT and Leeds Institute for Fluid Dynamics (LIFD).

LIFD and its relation with the Leeds Fluid Dynamics CDT

- LIFD was established to build on the previous Fluids CDT, independently of whether the new CDT was funded, with a separate budget
- ST is the Director, CN the Deputy Director
- There are 90 researchers in fluid dynamics, across multiple disciplines
- Aim: put fluid dynamics at the centre of the national agenda
- ST/CN liaise with RCs and UKRI, pushing fluids as a community
- ST/CN have already discussed LIFD with senior figures in UKRI, such as its Chief Executive, Mark Walport
- LIFD is developing a strategy for experimental facilities across University of Leeds, which could possibly develop to northern England or whole UK
- LIFD is making strategic appointments – research fellow in Fluid Dynamics
- It follows a similar model to international research schools and research units
- University of Leeds is supportive to achieve aims (also supportive of UKFN)

CN: How to leverage LIFD?

- Create a fluids institute à la Alan Turing Institute (data science/AI), NCAS (atmospheric science), Henry Royce Institute (materials)?
- Can the fluids community make a 'space' for fluids?
- Benefits for community might include:
 - If fluids big enough, there could be schemes to benefit the whole community, such as experimental facilities for all to use, avoiding repeating effort; similarly for computational facilities
 - Access to different streams of money

PJ: CDT could supply short-term and medium-term funding to develop these ideas through funding events – this benefits CDT but also has broader benefits and added value for the community and the discipline.

- First engage with Leeds, then raise profile of fluids on national/international stage
- Fluids is an underpinning discipline, with presence felt in all the RCs, so it is appropriate to involve UKRI to take an overview

MJ: Before the end of the grant, UKFN can assist with T&S contributions to any strategic developments that are relevant to both UKFN and LIFD

CN: How to interface with other disciplines?

PL: Grand Challenges (GCs) could be a useful framework for a strategy to develop LIFD

- Useful if LIFD were to encourage conversations on GCs, positive action to bring together the right group of people - proactive rather than reactive (as it tends to be currently)

- For example, sandpit around a couple of themes, invite key people including funders, but use UKFN to open up call, including ECRs
- Needs to be before February 2020

13. UK Acoustics Network

The UK Acoustics Network (<https://acoustics.ac.uk/>) is similar in scope to UKFN, and faces the same problem of how to continue after the end of their grant. They commissioned a report on the impact of acoustics on the UK economy, as a step towards publicising the importance of their subject (see <https://acoustics.ac.uk/?resources=acoustics-sound-economy-the-value-of-acoustics-report>). The possibility of commissioning a similar report for fluids was discussed.

PJ: It would be impressive, due to ubiquitous nature of fluids - where to draw the line?

Report showed 12 of the top 15 \$1bn companies use fluids.

CN: Preparatory work for LIFD found 12% of Leeds' portfolio could be attributable to fluids. It was possible Leeds might pay for the wider report.

Action: CN to investigate whether Leeds would be willing to pay for such a report, by 30/8/19.

14. UKFN future activities, responsibilities and funding

Specific activities

The discussion moved on to how UKFN and LIFD/Leeds CDT could collaborate in future under a number of specific headings.

(a) Newsletter

This was the most popular UKFN activity in a previous survey of the membership.

PJ: Given CDT is in fluids, it should be acceptable for CDT/LIFD to put together the UKFN newsletter

CN: Did the newsletter contact address receive many other enquiries? ND: These had been very infrequent, and were normally straightforward to answer.

MJ: Conclusion is to begin transition by dovetailing ND and Leeds towards the end of 2019.

(b) Website

MJ: Cambridge would take over maintaining web account and website functionality; LIFD to update What's On at the same time as the newsletter. As a background activity, it should be established which SIGs are active and must therefore be maintained on the website after the end of the grant.

Action: MJ/ND to find out which SIGs will continue after the end of the grant by 31/12/19.

(c) SIGs

MJ: Do the potential SIG meeting hubs (Leeds, Manchester, London, etc) have same (convenient) online sales set-up available at Cambridge?

- All: there was no obvious equivalent to Cambridge eSales at other institutions
- Leeds: their system may charge; Eventbrite is sometimes used, but only for free events

Action: Leeds to check on situation and report back by 31/8/19.

- Manchester: uses Eventbrite; a meeting room would be available for free all year round (Maths Department)
- London? It was very likely to be expensive

(d) Competitions

MJ: Could initiate a competition to come up with new Grand Challenges

CN: 'Visualise the future': what are the Grand Challenges in 100 years' time?

(e) Outreach

PL: CUP appear to be keen to continue collaboration with Tom Crawford, hence may be scope for further videos if support can be found

PJ: If Leeds contributed to funding, who would own videos? MJ: Competition videos are available under Creative Commons, but will check with TC regarding the videos he has produced for CUP/UKFN.

Action: ND/MJ to check status of TC videos, by 7/8/19.

What do Leeds CDT/LIFD do regarding Outreach?

CN: Students encouraged via various activities, including: 'Be Curious' festival; interaction with schools; MathsWorldUK.

MJ: Prof Mark Warner of University of Cambridge is Co-director of the Isaac Physics Programme (IPP, <https://isaacphysics.org/>), which provides resources to A-level physics students, and it could be useful to discuss with him how one might create fluids projects that would fit into an A-level curriculum (see also Item 16).

Action: MJ/ND to discuss outreach with IPP, by 31/8/19.

Letter of Support from UKFN to Leeds CDT

MJ: The letter outlines several activities where UKFN would work alongside the Leeds CDT.

- (a) Dissemination of CDT learning materials – this would be via UKFN website, if CDT decided they wanted it
- (b) Specialist training by a SIG on a topic aligned with the CDT curriculum – UKFN would liaise with SIGs selected by Leeds
- (c) Industry study groups – as (b), but for SIGs with industrial connections
- (d) Study challenges – probably a lower priority (unsuitable for 1st year students)
- (e) Equality, Diversity & Inclusivity plan - see Item 16

PJ: Priority order would be (b), (c), (d); align activities with LIFD

CN: Could also align activities with Grand Challenges; 2-day back-to-back meetings – Day 1, involve ECRs, with brainstorming for GCs, followed on Day 2 by how to take forward Leeds' strategy.

15. Discuss the possibility of seeking additional funding for UKFN as a whole after the end of the grant

This was not discussed formally, but there was informal agreement after the meeting, as decided in previous EC meeting, not to have a subscription model.

C. Diversity issues (Members of EC & Leeds CDT/LIFD)

16. How could UKFN help improve diversity in the UK fluids community?

CN: There are currently more men than women in STEM and it is a priority in both universities and in industry to change this. In Leeds, female participation varies over successive educational stages - around 20% undergraduates, rising to 35% PhDs, but then falling to minimum after postdocs. Leeds Engineering has around 20% female PhD, but an even lower percentage in fluids. Engagement at school has the potential to boost numbers before university and therefore start from a higher baseline.

AJ: High school period is important - could encourage interest in fluids by competition to carry out project. Some students at Manchester, from Poland and France, having participated in their home countries in such project competitions, show greater maturity as a result when undergraduates/PhD students. High school studies touch on many different aspects of fluids; some of these, such as climate, environmental, biological, are often attractive to female students.

CN: It would be useful to find out whether there are competitions already on offer.

Action: CN to investigate existing relevant competitions for schools, and the subjects they would relate to, by 30/9/19.

Action: MJ/ND to liaise with the Isaac Physics Programme (see Item 14).

CN: UKFN could help with Diversity by means of the following.

- (i) Carrying out a survey – What are the challenges? What is current status? ... – via the UKFN mailing list.

Action: CN to provide Survey questions, by 31/8/19.

- (ii) Setting up a group/committee of people interested at national level in Diversity and related issues. Possibly aim for first meeting Autumn 2019. Begin with notice in UKFN newsletter to canvass support.

AJ: Group could help identify where environment is good for women so they do well, and identify factors that may have contributed to this

MJ: T&S from UKFN (including unspent Low-Energy Ventilation SIG funds) could help with arranging meetings

Action: CN to provide notice to appear in UKFN newsletter about setting up group, by 31/8/19.

- (iii) Hosting best practice guidelines/code of conduct on the UKFN website, which discusses how to make events more inclusive and welcoming to all.