

Meeting of UKFN Executive Committee

**09:30-11:00, Thursday 17 January 2019
via Webex**

AGENDA

1. Agree the **Minutes** of last EC meeting (1/5/18).
2. Review **outstanding actions** from last EC meetings
3. Discuss **website**:
 - a. review current status
 - b. discuss planned developments
 - c. comments from Neil
4. Discuss **SIGs**:
 - a. review status of SIGs, including expenditure
 - b. comments from Matthew
5. Discuss **SRVs**:
 - a. review status of SRVs, including expenditure
 - b. comments from Yannis
6. Discuss **overall UKFN budget**:
 - c. overview of expenditure to date
 - d. proposals for expenditure over remainder of project
7. Discuss use of **supplementary fund** from project partners
 - a. review current use and discuss future use of supplementary fund
 - b. comments from Steve
8. Discuss UKFN **engagement with other organisations and activities**:
 - a. EPSRC
 - b. ERCOFTAC
 - c. ERCOFTAC Osborne Reynolds Day
 - d. UK Fluids Conference
 - e. JFM/Tom Crawford
 - f. Other
9. Discuss progress on **long-term plans for UKFN**
 - a. discuss which UKFN activities to continue
 - b. discuss options for future funding of these activities
10. Any other business
11. Next meeting

MPJ/NCD, 16/1/19

Item 2: Outstanding actions from previous EC meetings

There are no outstanding actions of note to discuss.

Current status

Home page (<https://fluids.ac.uk>): Additional items have been added to the carousel, including the winners from the last two competitions (25 items total, including 12 videos). The popularity of UKFN on Twitter (@UKFluidsNetwork) continues to grow steadily, with 1,131 followers (up from 768).

SRV page (<https://fluids.ac.uk/srv>): This is kept updated with the latest SRVs, so there are now 64 on the page, 36 with visit reports.

Resources page (<https://fluids.ac.uk/researcher-resources>): Each resource was assigned a fluids sub-discipline tag, and these are used to sort the resources, which are now arranged by subject. One resource has been added in recent months; there is a need to continue to identify new resources for inclusion, such as those coming out of the SIGs.

Directory page (<https://fluids.ac.uk/directory>): The map now shows numbers at each institution satisfying the Subject search criteria¹; selecting one or more institutions additionally refines the selection, highlighting the people at those institutions who satisfy the search criteria (with the institutions shown in red on map). This allows a 'geographical' search, to find researchers in the Directory who are near a given location.

GDPR: The adoption of the General Data Protection Regulation (GDPR), which took effect on 25 May 2018, required UKFN to obtain consent from everyone who had registered, i.e. submitted personal details, in order to use their data². It was therefore necessary to hide any users who had not explicitly given consent, meaning they would not appear in the Directory, or in any list of SIG members.

Obtaining consent retrospectively (including a number of reminders) was partially successful, in that currently 874 out of 1185 (74%) have given consent, but it means, for example, there are still a number of users who won't appear in any Directory searches. Consent from new users is now guaranteed, as it is part of the registration process.

The modifications also included adding a Cookies notice, which appears just once for any user, and a set of Terms of Use and Privacy & Cookie Policy (<https://fluids.ac.uk/terms>).

Planned developments

- The What's New column on the Home Page is under-utilised and no longer of great relevance, so it is planned to transform it into Network News, where specific authorised users from across the network can add directly items of news from their group, institution, etc.
- A new Gallery page is to be created, replacing the current Competition page (and including its content when required for competitions). This will focus on displaying the best competition entries.

¹ Any combination (.OR.) of the selected fluids sub-disciplines, application areas or SIGs.

² These data are: title, name, surname, email, institution, fluids sub-disciplines, application areas, techniques, facilities, ORCID iD and website, and if appropriate SIG membership. Email is never displayed unless user is SIG leader, co-leader or key personnel. ORCID iD is not currently displayed.

- The Talks page (<https://fluids.ac.uk/talks>) may be dropped. There has been little response to requests for new RSS feeds. The recorded talks are still viewed occasionally, but so far any given talk has been viewed a maximum of around 40 times, down to around 5 views.
- The process for subscribing to the mailing list will be modified to reduce the number of spam subscriptions, which has been substantial in the past 3 months or so. Instead of entering their email address at the bottom of a page, a new subscriber will be taken through the `mailman` interface, the software underpinning the all@fluids.ac.uk mailing list.

Item 4: Special Interest Groups

Current status

Figure 1 shows the number of SIG meetings taking place each month, based on the SIG spending plans. Note some meetings in December 2018 have not been confirmed.

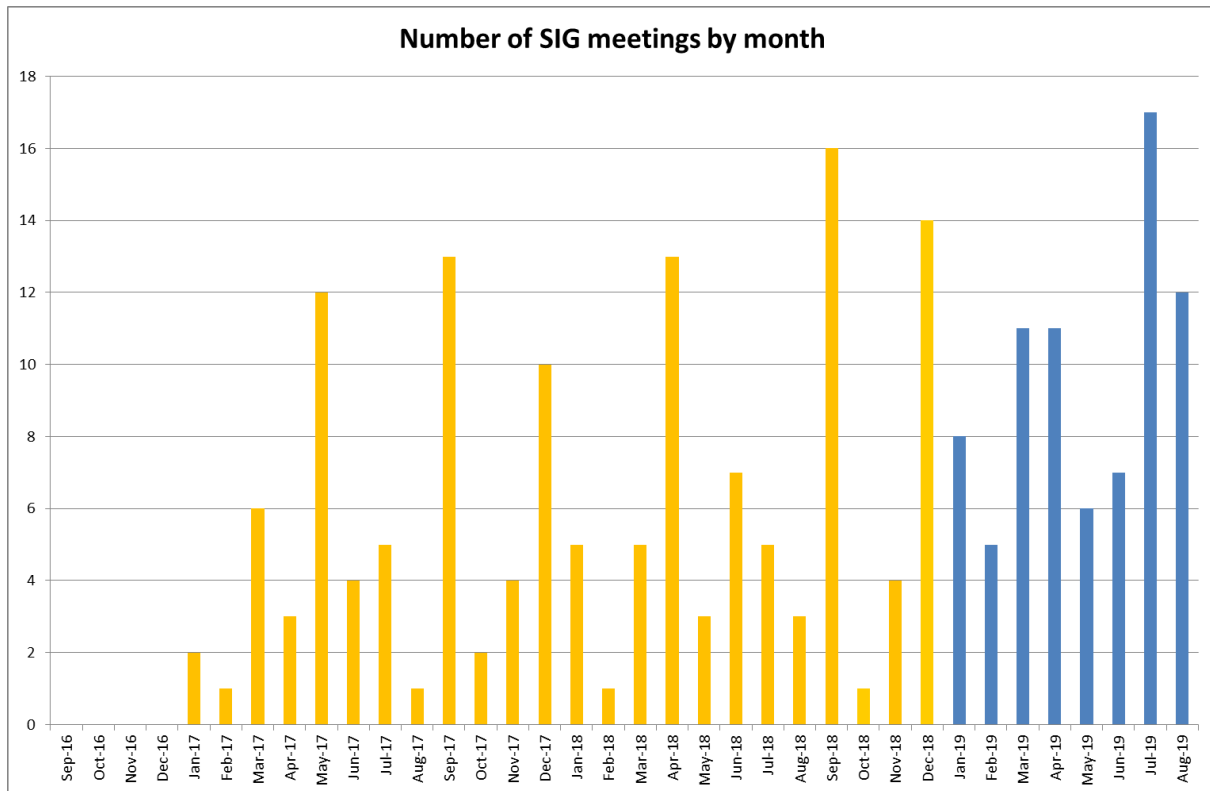


Figure 1: Number of SIG meetings completed (orange) and planned (blue) by month.

There has been a general pushing back of meetings, with the majority of SIGs having either 2 or 3 meetings still to complete before the end of the grant. This is evidenced by the accumulation of planned meetings (blue) in the figure. These timing of these meetings may be revised depending on whether a no-cost extension is forthcoming from EPSRC (see Item 8).

The 'Evolving interfaces in complex flows' SIG has wound up, releasing about 70% of their allocated funds.

SIG collaborations

A SIG Leaders Workshop was held on 4 September 2018, immediately before the UK Fluids Conference in Manchester. There was an impressive turnout, with over three-quarters of the SIGs represented. Through a mixture of short presentations on different themes

- Workshops, summer schools, etc
- Training material, benchmarks, databases, best practice guidelines
- Engaging with industry
- Writing joint grant proposals

along with generous time for discussion, there was a lively exchange of information and ideas. MJ produced some notes on the workshop, which are reproduced here in an Annex.

There have also been some recent technical collaborations between SIGs:

- (i) A joint meeting between the 'Low-energy ventilation' and 'Urban fluid mechanics' SIGs in Cambridge
- (ii) An ECR event organised by and held at Cardiff University, jointly involving the 'Droplet and flow interactions with bio-inspired and smart surfaces' and 'Multi-scale and non-continuum flows' SIGs.

There are more of these planned before the end of the grant (for example, a follow-up event to (ii) will take place on 8 April 2019 at Nottingham Trent University).

Expenditure

Following the previous EC meeting, it was clear there would be an underspend on the SIG budget, so in order to ascertain more clearly the size of this underspend each SIG was contacted to clarify its spending plans and agree a new spending cap, i.e. an update of the original sum requested in its proposal.

In most cases, the new spending cap was less than the original one. However, for some SIGs an increase in the spending cap was agreed, for example for SIGs with a large membership, or where the initial request was small. In all cases, the cap slightly exceeds the SIG's spending plan total to allow a small contingency for each SIG – across all SIGs this comes to £17,600 over and above the spending plan total.

The cumulative total expenditure is shown in Figure 2, and plots the total SIG spending, combining actual funds already spent with projected spending from the SIG spending plans.

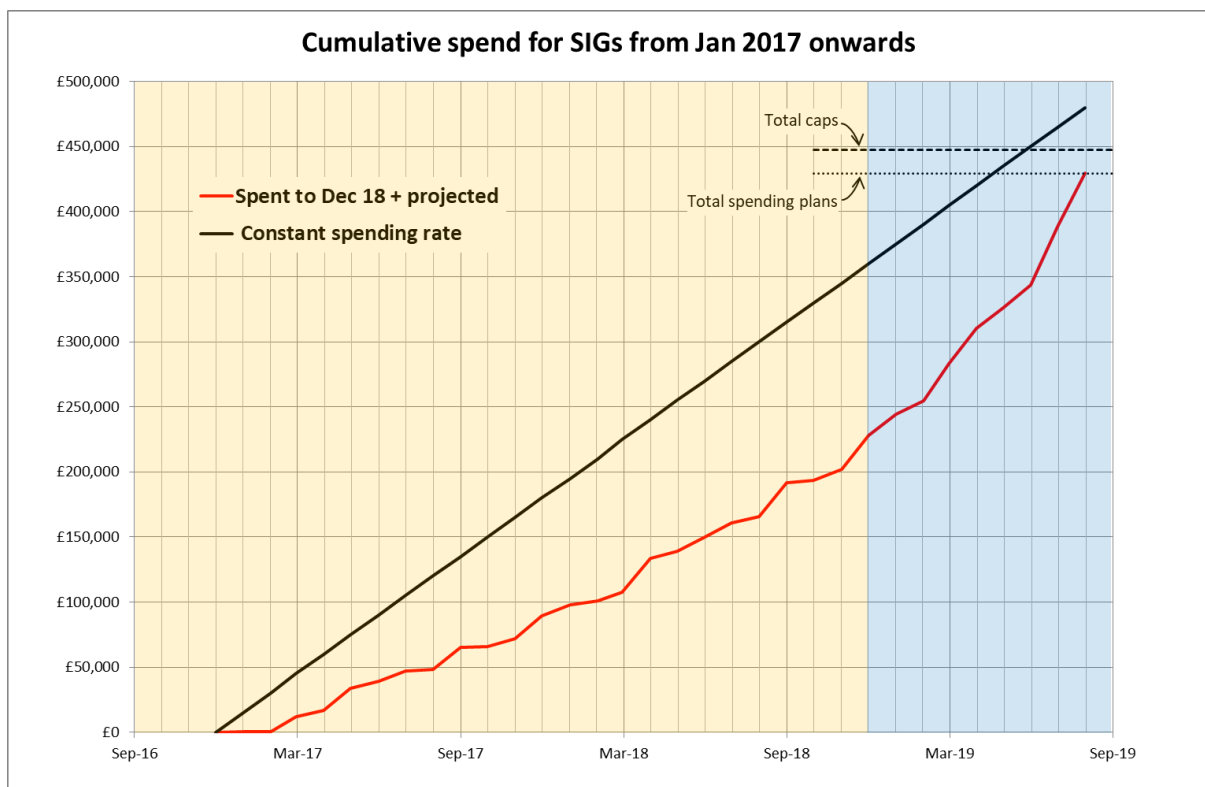


Figure 2: Cumulative spend by SIGs from January 2017 to August 2019.

There is currently a projected underspend of £50,416, based on spending plans, or £32,816, based on spending caps.

Discussion of utilising this underspend is covered in Item 6.

Item 5: Short Research Visits

Current status

There have been 8 batches funded, totalling 64 SRVs:

- (a) Call ending 31/1/17: 5 SRVs allocated, all 5 complete
- (b) Call ending 31/5/17: 6 SRVs allocated, all 6 complete
- (c) Call ending 30/9/17: 5 SRVs allocated, with 4 complete, 1 yet to start
- (d) Call ending 31/1/18: 13 SRVs allocated, with 12 complete, 1 ongoing
- (e) Call ending 31/3/18: 7 SRVs allocated, with 6 complete, 1 ongoing
- (f) Call ending 31/5/18: 12 SRVs allocated, with 7 complete, 4 ongoing, 1 yet to start
- (g) Call ending 31/7/18: 6 SRVs allocated, with 3 complete, 3 ongoing, 1 yet to start
- (h) Call ending 30/9/18: 10 SRVs allocated, with 4 complete, 5 ongoing, 1 yet to start

The next call ends 31 January 2019, and will require completion of SRVs by 31 July 2019. There could be an additional call, ending 31 May 2019, subject to discussion (see below).

Expenditure

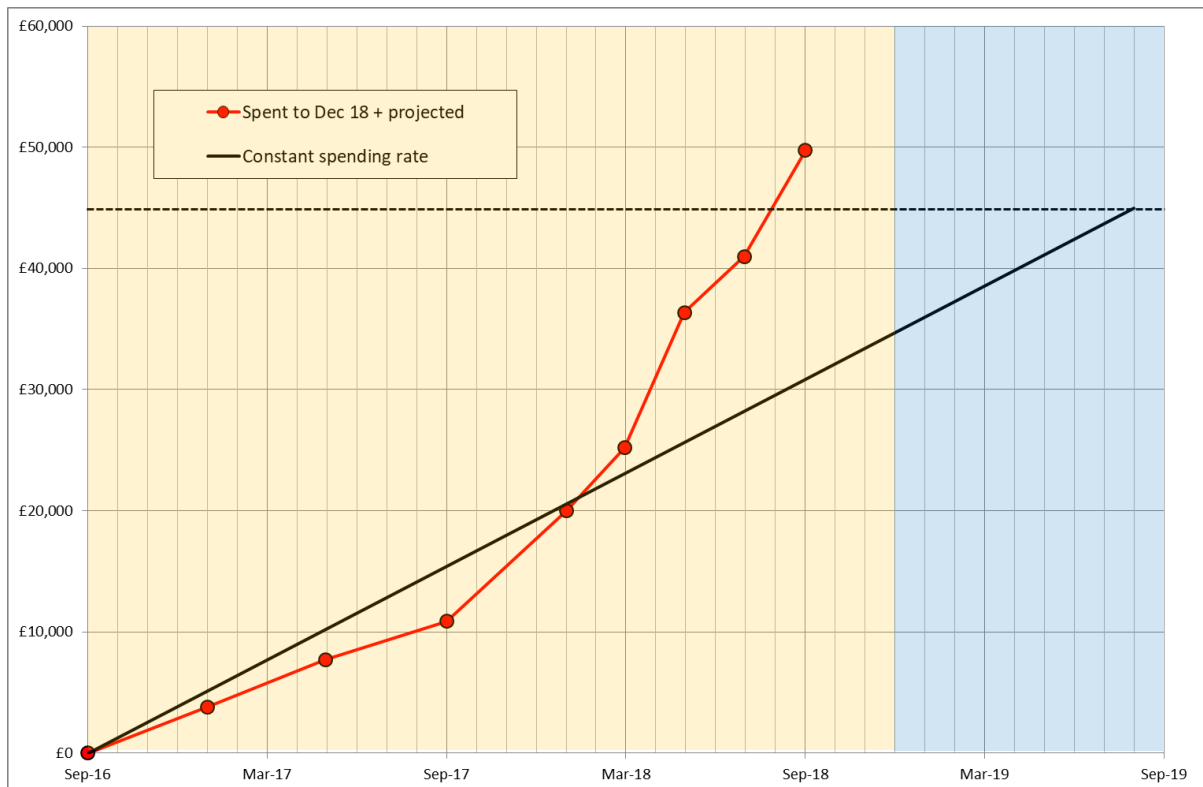


Figure 3: Cumulative spend on SRVs, by batch, from January 2017 to August 2019.

The total of funds spent for completed SRVs and committed for incomplete SRVs, up to the call ending 30 September 2018, is £49,741. This exceeds the £45,000 earmarked for SRVs in the grant proposal, but the overspend is being covered by reallocation of unspent SIG funds and other travel and subsistence money (see Item 6).

Proposals received in the current active call (ending 31 January 2019) have so far requested an additional £6,040.

Item 6: Overall budget

The expenditure for SIGs and SRVs was reviewed in Items 4 and 5, respectively. This showed that the grant allocation for SIGs was currently underspent by £50,416, while that for SRVs had overspent by £4,741.

All the above are travel and subsistence (T&S) costs. Combining them with the other T&S allocations in the grant, and allowing for other completed meeting and event costs (2016 launch event, 2017 and 2018 SIG leaders events, other outreach) gives an overall net underspend of around £46K.

Some part of this, yet to be precisely determined, is earmarked for

- Contingency to cover additional SIG spending (the difference between the spending plans and caps, discussed earlier), say up to £16K
- The next round of SRVs, deadline 31 January 2019, say £10K-£15K

This would leave around £15K-£20K for other activities. For example

- Another, final round of SRVs in May 2019
- One or more SIG-related events, similar to the SIG leaders workshop in September 2018
- Additional outreach activities

Would the EC discuss the options for utilising this underspend.

Item 7: Supplementary funds

The supplementary funds contributed by UK institutions for Years 1 and 2 have currently £7,460 remaining. If all Year 3 contributions are forthcoming, an additional £5,000 can be anticipated, making a total of £12,460.

Options for using this money include the following, all of which are related to competitions run by UKFN.

Option (i): UKFN photo/video competitions

Cost: £400 per competition (£200 each to the winning photo and video)

This has been successful in gathering a collection of attractive and interesting photos and videos, which we continue to use on the website and in other publicity and outreach material.

Option (ii): Student presentation prizes at the next UK Fluids Conference

Cost: £300 (£150 each to the winning oral and poster presentations)

These have been popular with students attending the two previous conferences.

Option (iii): Thesis prize

Cost: £500 to winner plus expenses for winner and 2 runners-up to attend the UK Fluids Conference to present.

This year one of the runners-up had moved abroad, so that the expenses were significant. The talks should if possible have a plenary session at the UK Fluids Conference.

Would the EC discuss the merits of the above uses and, if appropriate, suggest new ones.

Item 8: Engagement with other organisations and activities

EPSRC

The main activities related to EPSRC are as follows.

(i) No-cost extension

MJ has recently filed an application for a 6-month no-cost extension (NCE), and we are awaiting the outcome. If successful, this NCE will allow a number of SIGs to hold their full complement of meetings and should avoid much of the projected underspend arising from the SIG component of the budget. Another beneficial side-effect would be to allow one or more additional rounds of SRVs.

(ii) New SIG booklet

MJ and ND are currently working on a new booklet about the SIGs, focusing on the achievements so far and, in particular, the notable contributions of each SIG. This is intended to provide a showcase for UKFN's impact, suitable for promotion by EPSRC (as well as UKFN itself).

Around half the SIGs have contributed. In addition, a small selection of SRVs will be featured, illustrating the diversity of the visits and the resulting benefits, plus a gallery of the best images from the UKFN competitions. The plan is to engage professional help in producing the final booklet, which MJ/ND are actively seeking.

EPSRC's communications team have indicated they may be able to promote the booklet as an example of the impact of EPSRC-funded projects, and MJ/ND are pursuing this.

(iii) SIGs and 2018 CDT bids

Following the publication by EPSRC of a list of outline CDT bids invited to submit full proposals, MJ/ND approached each SIG with a list of potentially relevant CDT bids, and encouraged them to contact the bid leader to explore ways their SIG could be featured in the proposal. A number of the SIGs did pursue this further, although it is not known how many CDT bids finally included a component to support SIG involvement, or whether any of these were funded. The funding decision will be made public soon.

ERCOFTAC

MJ/ND are pursuing details on how to apply to set up a new ERCOFTAC SIG. Once this has been clarified, UKFN SIGs will be approached to submit proposals, which will be discussed at the next ERCOFTAC Spring Festival, which will take place in April 2019 (to be confirmed).

ERCOFTAC Osborne Reynolds Day

The 2018 Osborne Reynolds Day took place at University of Manchester on 3 September. As UK Pilot Centre for ERCOFTAC, UKFN was responsible for seeking sponsorship to cover the prize money and winners' plaques. ANSYS and BAE Systems generously supported the event. MJ attended the event, gave a presentation about ERCOFTAC and presented prizes. The winner was selected for the da Vinci competition (Warsaw, October 2018).

UK Fluids Conference

UKFN continues to have a significant presence at the UK Fluids Conference. At the 2018 conference at the University of Manchester (4-6 September) there were competitions for the best student oral

and poster presentations, and a semi-plenary session dedicated to the UKFN fluids thesis prize. UKFN also funded the welcome lunch for the conference, providing an opportunity for conference attendees to meet the SIG Leaders, who were there for their Workshop immediately beforehand.

JFM/Tom Crawford

Tom Crawford (TC) and Nicole Sharpe (FY Fluid Dynamics) interviewed around 50 researchers at the 2017 APS-DFD conference in Denver, Colorado, and over 2018 they have turned these into a series of 11 engaging 3-minute videos, published on YouTube³.

Having provided funding to attend the conference, UKFN is now supporting TC to attend the AIAA SciTech Forum in San Diego, California (7-11 January 2019). The aim this time is to produce shorter, 1-minute videos that can be more easily disseminated via social media, such as Twitter and Facebook.

Other

- CCPEngSci
UKFN has assisted CCPEngSci, the 'High Performance Computing in Engineering' CCP⁴, with gathering information on the use of HPC software and models via selected SIGs, namely those most closely aligned with CCPEngSci. MJ/ND recently met with the Chair, Mark Savill, who commended the SIGs and UKFN for their valuable input, and offered to contribute to the new booklet outlined above.

³ https://www.youtube.com/playlist?list=PLeMcs_6ekd586uRs34jE8aD8pF26nPvPi

⁴ EPSRC's Collaborative Computational Projects.

Item 9: Long-term plans for UKFN

Recall that at the previous EC meeting, the main UKFN activities for consideration, which were also confirmed as most relevant by the member consultation, are, in no particular order

- Website
- SIGs
- SRVs
- Outreach and publicity, such as the newsletter

Long-term maintenance

EPSRC have indicated informally that they would be very unlikely to support a second, similar project. Thus other options would need to be explored to find long-term support for these activities.

Activities that are primarily information services, such as the newsletter and possibly the website, could conceivably be devolved, for example to a suitable fluids-related CDT.

Regarding the SIGs, their primary activity post-grant would be to hold workshops in their specialist areas: they represent groups of experts in a diverse range of fluids subjects, making them attractive focal points in their respective fields. To achieve this, there are the following options to consider.

(i) Funding as part of a CDT

As noted under Item 8, a number of SIGs were in contact with CDT bidders to explore including their SIG in the CDT proposal as a provider of specialist workshops to CDT students within the teaching programme. However, it is not known yet whether any were successful in gaining such support.

(ii) Direct funding by participants

There are two main models for this: Subscription and Pay-as-you-go (PAYG).

- The Subscription model would entail a substantial administrative overhead, which may well require employing someone to do this, e.g. ERCOFTAC and to some extent the JM Burgerscentrum. These costs would pull funds away from the workshops themselves.
- The alternative, PAYG model would require minimal administration for setting up and running the workshops, in particular if attendees pay for their own travel and accommodation. Each workshop would have a modest registration fee that would cover room hire (although rooms are likely to be free at many institutions) and catering, as well as an invited speaker. Setting up and running the workshops could be further simplified by holding all workshops at just one or two locations, so that the process becomes streamlined and efficient.

■ Would the EC discuss these options.

ACTIVITIES AT MEETINGS

- Bidding workshop. Write and discuss a 1 page outline research proposal (McHale)
- Surgery (Landel). PhD students present a 1 slide problem to the group, which then discusses possible approaches to the problem for 5-30 minutes. Best practice and 'how not to do it' can be shared
- Fluid Olympics (Fu) demonstration event for public/school outreach

SUMMER SCHOOLS

- CISM (<http://www.cism.it>) will organise a summer school for you in Udine Italy. You provide the speakers and content, and aim to get 40 attendees. They charge the attendees and do all the admin (Linden/Juniper)

ENGAGING WITH INDUSTRY

- Study Groups over 1 week (Jensen). A tried and tested way to engage with industry, with proven success over the short, medium, and long term
- Meeting at industry site (Aleksandrova) including facility tours
- Involving industry can make people less willing to reveal problems (Bruce)
- For panel discussions it helps to have EPSRC / government included (He)

WRITING JOINT RESEARCH PROPOSAL

- Pick (i) small scale and (ii) grand challenge proposals (Burrige). Then pre-select topics and have an invitation-only workshop (Burrige)
- Multi-institution bids with industry partners seem to be more successful (Hwang)...
- ...but industry participation is not always required (Juel)

TIMINGS

- Lunch to lunch workshops work well for academics (Landel)
- 11:00 - 16:00 workshops work well for industrialists (Aleksandrova)

TRAINING MATERIALS and DATABASES

- We should aim to contribute to the ERCOFTAC knowledge-based wiki (Juniper), which contains carefully curated test cases of fluid flows
- Include 'what didn't work' in Best practice guidelines (Bruce)

FUNDING

- It is possible to run a SIG event for £150 registration (or less) for a 3 day event, with attendees paying their own T&S (Rogers). This is probably cheap enough and would avoid the subscription problem
- Can we go to EPSRC with a new idea to obtain a lower level of SIG funding over another 3 years (Linden/Juniper)
- Ask each SIG what it wants to do for funding in the future. Perhaps offer some models (ERCOFTAC / subscription / industry) (Choi)

ERCOFTAC SIGs

- ERCOFTAC will suit some SIGs but not all (Hawkes)
- Any SIG wanting to convert to an ERCOFTAC SIG should bid in time for the March/April 2019 meeting (Choi)

OUTREACH

- Advertise the UKFN abroad, e.g. at APS, IoP meetings
- Link to UKFN from other websites in the sector (IAHR etc.) (Rogers)
- Make generic UKFN material for SIG leaders to distribute

WEBSITE

- Find out how many views each recorded talk has (Linden)
- The SPH ERCOFTAC website's most visited pages are (i) events and activities, (ii) Jobs, (iii) Benchmark test cases (Rogers). We could create separate pages for 'events and activities' and 'jobs' and run 'benchmarks' through the SIG pages.
- A 'problem-sharing' area of the website might work (Longshaw)

FUTURE SIG LEADERS WORKSHOP

- Could we see research outputs from SIGs if we have another meeting (Sazhin)
- Can we cross-pollinate topics between SIGs (Longshaw)