



IES Information

March 2023

The Institution of Engineers in Scotland A Multi-disciplinary Engineering Institution



Andy Pearson with club captain David McKay

William John MacQuorn Rankine

The first memorial in Glasgow celebrating William John MacQuorn Rankine has been installed by IES!

Past President, Dr Andy Pearson, whilst carrying out research, discovered that Rankine and his parents had lived for several years in the building which is now home to Haggs Castle Golf Club. Andy suggested the idea of installing a blue plaque at the club and on 17th February the plaque was unveiled..



In the pipeline...

James Watt Dinner – we have booked the Radisson Hotel (Argyle St, Glasgow) for Friday 6th October – please save the date!

2024 will be the 300th Anniversary of John Smeaton's birth, IES in collaboration with others are planning to hold an event to mark the occasion – further information will be available in due course

Work is underway for a sparkling lecture programme for 2023-2024, full details will be announced soon but will cover diverse topics such as infrastructure, marine robotics the Elizabeth Line and engineering ethics...

Groups.io

Groups.io allows an easy exchange of views between members. Several 'chat threads' have started, the ones which sparked the greatest discussions are listed below with a link. We regret this is only open to those prepared to use email:

- Securing Energy Storage – 40 contributions
- Scottish Energy Strategy – 18 contributions
- Engineering, The Law and Risk – 20 contributions

Please visit <https://groups.io/g/IESConversations>

If you would like to join or 'listen in to' the group, please let Laura know and she will send you joining details.

Cuppa 'n' Chat



Cuppa 'n' Chat – we have had two meetings this year, one on Hydrogen and one on Education for Engineers. We have changed how we organise the meetings slightly – the joining details are sent to all members in an email – no need to register. We will issue a reminder both 2 days and 2 hours before the event. The sessions are intentionally informal and friendly, it's a chance to meet members and make friends



We would like to bring attention to the work of the Profeng Group: this is quietly organised by David Watson – a very active IES member. David organises lectures at schools where prominent engineers explain their roles with the aim of encouraging pupils to consider engineering as a career. Engineers salaries are monitored.



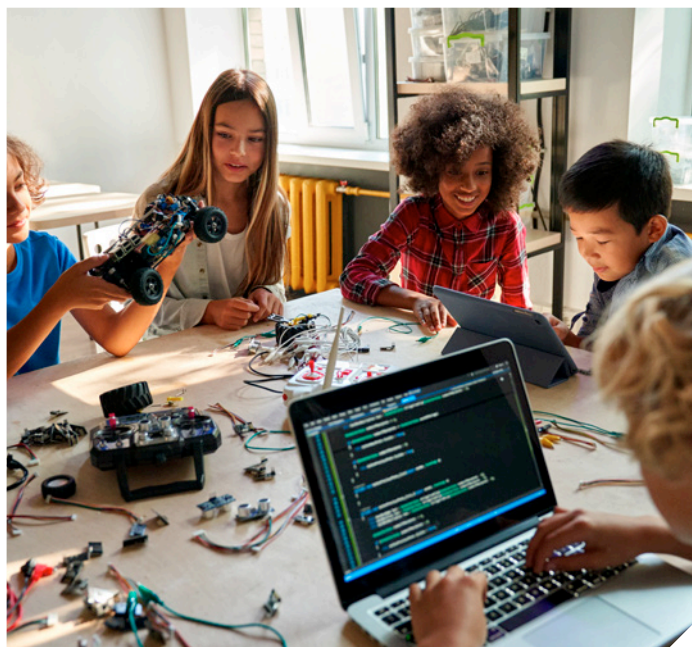
Members of the Energy Strategy Group and the IES-Consult Group are preparing a response to the Scottish Government's Draft Energy Strategy and Just Transition Plan – see: <https://www.gov.scot/publications/draft-energy-strategy-transition-plan/>

The deadline for submission is 6 April 2023. It is intended that a draft of the response will be made available to IES members before it is submitted

What the organisations IES supports do:

Primary Engineer: started in 2005. They encourage and inspire children to explore engineering as a career. They successfully link sponsoring companies with schools. They train teachers who are an important role model, especially if there is no parent or grandparent in engineering to then be able to do projects with their pupils in primary and secondary schools. The goal is to embed engineering into the fabric of every school, ensuring all children have the opportunity to engage with engineering from a young age. They get children to make things and, most important, they present certificates!

Some have described it as STEM by stealth! In the process of making something the pupils are required to use a little bit of practical maths and science as well as developing their creative problem solving skills.



FemEng: They link female engineering students within Glasgow Uni. And they reach out in activities at home and abroad – so far in 3 African countries; Malawi, Kenya and this year to Rwanda again. In Kenya they recruited 8 students from the University of Nairobi and with them ran workshops in basic computer programming, diagnostic biosensing, 3D printing etc.

They took schoolchildren and students to visit companies and organisations; one to a company that delivers medicines to remote parts by drone and another to a geothermal plant site.

We are sure the Glasgow Uni girls who do this work benefit as much as their pupils. Travel forces you to trust strangers and to lose sight of all that is familiar and comforting.



Recent survey

Thanks to all who completed the recent survey. Your answers have been very helpful and will give us a steer of what the membership would like.

I have summarised the answers below, the full survey results are available at <https://info.engineers.scot/survey2023>

Summary analysis of responses to the IES Questionnaire

1 The lecture programme

Q1 Are you satisfied with the range of lecture topics?

96% are either fairly satisfied or very satisfied with the lectures which Council will take as confirmation the present wide mix should continue. There are some interesting and helpful comments summarised below.

Q2 Summary of Comments on lectures:

1. Lectures on Zoom should continue. Council aim to do this; the means by which non-members contribute to IES costs is to be determined.
2. Further steps are in progress to solve the microphone problems.
3. There are requests for more lectures on 'marine topics.' Please note a/ IES is a multidisciplinary society and b/ Each year 2 of the normally 7 lectures are held jointly lectures with RINA and IMarEst !
4. More civil engineering topics were suggested. Point taken! Speakers have been arranged for a major infrastructure topic along with a lecture on Façade Engineering for our 2023-24 session.
5. We will endeavour to find a speaker on software engineering which has been neglected.

Q3 Suggested lecture topics:

We are truly grateful for the range of suggestions and ask you to suggest speakers for some of the topics!

Topics suggested include: accessing difficult parts of large bridges, hydro schemes, helicopter/rotorcraft flight, new developments in nuclear power, acoustics of new Edinburgh concert hall, company spin-outs from universities, electric vehicles, hydrogen, education of engineers, how engineers and not just economists should relate to government... and many more. Thank you all.

We don't plan to cover wave power. We might revisit tidal power in the 2024-25 session.

2 IES Journal

Q: Do you read the IES Journal?

94% of responders do read the journal. We believe we should continue with this in paper as well as electronic form until the next review.

Comments on Journal articles:

It is extremely difficult to get engineers to put pen to paper! It used to be the case that speakers for our lectures (who tend to be non-members) would automatically also produce their talk as a paper for the Journal; most speakers now refuse to do this. Recordings of lectures are made and we need to improve access to these.

We will certainly take more opportunities to remind all members that we would love them to suggest and write articles for the Journal. At present the Journal is too dependent on articles from the same 3 suspects!

Q: Do you look up articles in past issues of the Journal on the website?

63% of respondents do not look up articles in previous Journals. The task of making all Journals back to 1857 available on-line is now complete and we will shortly explain this plus how to search a particular topic.

3. Support for other organisations?

There was a seemingly reluctant 86% 'YES' to this question and it is clear that we should explain again what it is that Primary Engineer, Prof Eng and FemEng do, hence the explanations opposite. There were no suggestions for other organisations we should support.

4. IES Website

Q: Do you click on the IES website for information?

61% do use the IES website for information. 70% of that 61% only do so once per month. Obviously such a crude question can only produce a flavour but we must conclude there are other sources that website users go to in preference to IES. We believe the website is both necessary (e.g. when potential lecture speakers are approached they have invariably not heard of IES and their first action will be to refer to the website) and much improved, but the 'flavour' from responses indicates we should maybe keep the website 'looking alive' rather than attempt to place items there on a daily basis.

In slight contradiction to this a majority of the minority who use the website more than once appreciate the News items and news of lectures by other Institutions. We will continue to publicise other events in the hope that other institutions will publicise ours!

Comments on the website from those who use the website:

Comments were generally favourable. Some have commented that access is difficult and we need to understand why this is so.

One suggested the website should be used as an on-line forum. We point out that the e mail based IES Conversations is such a forum. >50 members have joined and there have been some extremely interesting exchanges. Our website explains how to join IES Conversations

Comments on the website from those who don't use it:

Comments are largely understandable – there are websites which have a far greater source of information and IES is not able to compete. Others have website fatigue which is also understandable!

5. Should we continue to arrange site visits?

96% of respondents say we should continue with site visits. This is a clear signal. Many companies have been reluctant to have any more additional visits to their site than is strictly necessary for their business, due to Covid. Watch this space!

Suggested visits were to 'marine facilities,' (BAe, Fergusons,) but also recommendations to visit the new Clyde River Heat Pump, Leonardo (in Edinburgh?), Thales, AFRC at Inchinnan (this is being discussed).

6. Have you attended any 'Cuppa and Chat' meetings?

Only 16% of respondents have joined a Cuppa and Chat. From the comments those that have joined have very much appreciated them. The exchanges have been extremely friendly and nobody should be put off from joining in. The last Cuppa and Chat attracted 12 participants and covered a pre-announced topic – Hydrogen. There is consensus that announcing a topic beforehand is a good idea.

It is a development that tends to attract the same 'suspects' each time. We will do more to publicise the nature of the meetings.

The timing of the meetings was mentioned as a difficulty by ¼ of respondents. In answer to what time is best for the sessions the most popular time was, narrowly, to move it to 17.00 but the median response suggests that we should try and move the 60 minutes session to an 18.15 start. We will try this again for the next session.

7. What branch(es) of engineering (if any) are/were you in?

The broad 'church' of IES was reflected. Of the 49 responses 3 careers were directly marine related.

8. Would you be interested in commenting on areas of public concern through the IESConsult process?

47% of respondents indicated they would be willing to contribute to commenting on areas of public concern that are called for by the government. A current consultation is on the Draft of the Government's Energy Strategy where comments are to be made on specific forms by April 6th 2023. We have learned what should really have been expected from a multi-disciplinary institution like IES; there are a lot of different opinions on how to respond and the best manner that response should take!

On a subject like a change back to use of imperial, as opposed to keeping SI, units a consensus can be achieved. For energy that is not the case. Council are reviewing the process which we are anxious to continue in some form as it should help to both raise the profile of IES and allow experienced engineers (and not just economists) to get their opinions into the public domain. We are considering that we should respond as members of IES, but not on behalf of IES. In that way IES should become recognised as a source of wise advice.

9. Further comments on any issues not addressed in the questions?

Comments will be shown in full on the website <https://info.engineers.scot/survey2023>

We have reviewed the question of IES becoming able to award professional qualifications etc over the years and have concluded each time there is a/ too much competition (from IMeche, ICE, RINA etc) b/ that it would not fit easily with a multidisciplinary organisation like IES and c/ it would require a significant investment in staff, facilities etc