

The UK Acoustics Network Newsletter August 2019

Dear Members

This Network is still growing and now it has 696 members (28 August 2019). We are now on a mission to achieve 1,000 members before November 2020. Feel free to invite your colleagues and friends who care about acoustics related research in the UK to join the Network to grow our numbers further. It is free to join and it provides support for individual members including travel funding. Please make this clear to any new PhD starters and PDRAs working on any acoustic related projects encouraging them to benefit from UKAN.

August events

A main event of August 2019 was the Summer School at Gregynog Hall, Wales (see photo below).



It has been a great success. Places were much in demand and it was a full house event. Attendees had the opportunity to learn from experts in Python programming and machine learning with acoustics applications. Specifically, participants were trained in: (i) writing machine learning methods from first principles in Python; (ii) data analysis with Python; (iii) training and testing a machine learning model for regression and classification for small datasets; (iv) designing kernels suited to features of different applications; (v) hyper-parameter tuning and cross-validation; (vi) the bias-variance trade-off, and (vii) non-parametric regression by using kernel ridge regression. Prasun Ray and Ramon Fuentes taught Python programming for machine learning and the mathematics of machine learning, respectively, while Nilesch Madhu provided training in audio and speech applications of machine learning.

Participants rated the event highly, saying that the most beneficial aspects of the event included the opportunities to work through exercises during the sessions, the stepwise approach to machine learning, and the speech signal recognition and processing examples. Several people mentioned

that they intended to use machine learning in their research work. Many said that they intended to participate in future UKAN events. One of the attendees, Sarah Marley, Lecturer in Marine Vertebrate Zoology, Institute of Marine Sciences, University of Portsmouth, has made the following comment about this workshop: " As well as generating ideas, the other great thing about this event was meeting people. All too often it is easy to get 'stuck' in your own research bubble, only speaking with or working alongside people in the same field. Whilst this can be a good thing, it is still good to step back every so often and look around – because that's how ideas are born! UKAN exists to support and facilitate networking – and that was a strong highlight of this week. Living with 30+ acousticians for five days means that you never know when an interesting conversation will arise: over the breakfast table; during a lunch break; whilst trying out some casual archery; building a cardboard tower in a competitive team-building exercise; on a hike through the grounds; in a subterranean prison surrounded by the ghosts of past inmates... (not even joking). There were lots of opportunities for networking, bonding, and discussions throughout the week. I think everyone went home with some new contacts and friends, several of which I will be following up with over coming months. " She also added: "I've really found the Network an amazing resource, especially for someone returning from overseas. And it is always

good to get people from different areas mixing - so many interesting people, projects, and ideas!" A great way to see the Summer School in action, see [Sarah Marley's blog article](#). More information about this Summer School is on Twitter, [#ukanss19 @EPSRC @acoustics_ac_uk](#) and <https://tinyurl.com/Future-of-Acoustics-Research>.

Upcoming events

Autumn 2019 is going to be a very busy for UKAN. Six events are planned for September alone. The details for these events are [here](#). A few training courses are also planned: (i) [Seiche Training Course in Applied Marine Acoustics with Practical Signal Processing](#) (10-12 September, Okehampton); (ii) [Intensive Courses on Applied Acoustics and Modal Analysis](#) (19-20 September, KU Leuven, Belgium); and (iii) [Short Course on Aircraft Noise](#) (1-2 October, Manchester). UKAN encourages our members to attend these courses and is happy to support the attendance at these courses financially.

2nd Year UKAN Anniversary Workshop

UKAN has set the date for its 2nd Year Anniversary Workshop. It will be held in Guild Hall, London, on Friday, 1st November 2019 (see photo below). This workshop will bring together members of the UK Acoustics Network, The City of London Council's staff and members of the Environmental Health and

Public Protection square mile team. The meeting will provide a forum for research collaboration and innovation in acoustics. Specifically, this meeting will facilitate: (i) in-depth discussions between acoustic practitioners and researchers – enabling access to skills and talent; (ii) discussions about the future acoustics network, its legacy and sources of funding to support its activities after November 2020; (iii) discussions about Network activities as a part of the International Year of Sound 2020; (iv) it will explore the latest research funding opportunities from InnovateUK, UKRI and KTN’s - how acoustics fits in the Industry Strategy.



We anticipate a lively meeting with over 100 delegates. The full agenda for this workshop will be send around to our members in early September.

Registration is open through [this IoA website](#).

Industry challenge pitches wanted for an Integrative Acoustics Think Tank

The University of Exeter would like to run an Integrative Acoustics Think Tank in early spring 2020 and we would like to invite industry representatives who are interested in attending this event. This is a great opportunity for you and your business to address a complex R&D problem in acoustics, or to help explore the feasibility of an idea or new approach. We will work with you to define your problem, understand what expertise might be needed, and bring together groups of PhD students, postdocs and academics from UK universities who will jointly work on identifying pathways towards your desired outcome. The event is part of the 2-year EPSRC research project, [Reimaging recruitment](#), funded by the Inclusion Matters Scheme and led by the University of Bath. They have invited the team at Exeter to draw on their long-standing experience with such [think tanks](#) and to expand the track record of successful HEI-industry engagement events that yield pathways towards tangible outputs. For example, this can be achieved through PhD projects, research grants, consultancy, and contract research. Alongside this pathway development the workshop aims to change the culture of recruitment by showing people that diverse teams produce better

research. The EPSRC UK Acoustics Network will cover the travel, accommodation and workshop costs for Acoustics think tank participants. Please contact [Dr Anja Roeding](#) (Phone: 01392724132) at the University of Exeter to register your interest in pitching a challenge or if you have any questions.

Ingleborough Soundscape Outreach Project

Ingleborough Soundscape Outreach Project by Rob Pheasant and his team is gaining momentum. This work is supported by [Noise and Soundscape SIG](#). It is now extended to a range of organisations which include [MammalWeb](#), Yorkshire Dales National Park, [Brackenhall Countryside Centre](#), Indigo Star and Natural England/Defra. A copy of the report and plan produced by Dr. Pheasant in August can be found [here](#). If you would like to engage with our outreach activities, please get in touch with Rob r.j.pheasant@outlook.com.

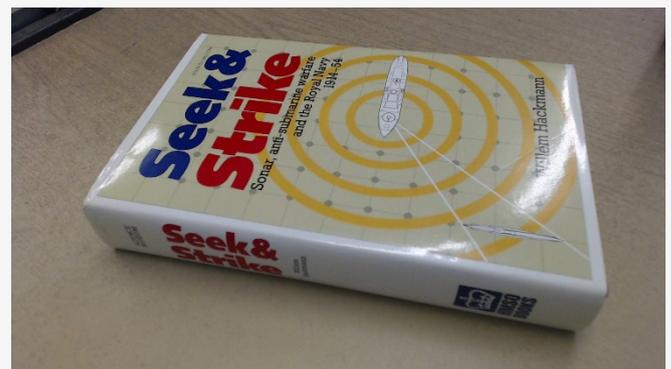
ASA application deadlines fast approaching from 9 to 30 September. Apply now!

We remind our members that September 2019 application deadlines for Acoustical Society of America (ASA) Fellowships, Prizes, Awards, and Grants are approaching. Please consider applying for these yourself, and nominate or encourage your students, junior colleagues, and others to apply, as appropriate. The link to the page with further

information is [here](#).

Sonar Interview tapes

UKAN have arranged to digitise over 40 C90 cassette tapes with interviews taken by [Willem Hackmann](#) 40 years ago with key people who developed sonar technology in the UK. The list of tapes and copies of the audio files are now available [here](#) for you to listen and to comment.



UKAN live depository

Finally, we would still like to hear your views on whether or not the UKAN website should have a live depository for data and software. This fair question was asked by the EPSRC because all the EPSRC funded work should comply with their policy framework on research data. This policy suggests that publicly funded research data should generally be made as widely and freely available in a timely and responsible manner. In this respect it seems fair to suggest that the UKAN website is a good

focal point for sharing data, software and publications. We would like our members to express their views on whether or not they would be happy to share the results of their work through our website. We also encourage our members to update their profiles and add links to any open source data/software which may be of interest to a larger acoustics community.

Yours sincerely,

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