

UK Acoustics Network (UKAN)
Noise SIG – 1st Meeting
 12:00 – 16:00, Monday 12 March 2018


Place: Hoare Lea Offices, Western Transit Shed, 12-13 Stable Street, N1C 4AB, London

Noise SIG leader & chair: Prof. Abigail Bristow (AB) A.L.Bristow@surrey.ac.uk

Attendees: Dani Fiumicelli (DF), Barry Jobling (BJ), Eulalia Peris (EP), Hillary Notley (HN), Kirill Horoshenkov (KVH), , Simon Shilton (SS), Suzana Zekic (SZ), Torsten Marquardt (TM) and Mike Lotinga (ML).

Apologies: Aedan Mansfield , Dr Dan O’Boy, Dr Mark Swift, Dr Rob Pheasant, Jack Harvie-Clark, James Hill, Jonathan Sims, Nick Treby, Paul Lepper, Seth Roberts, David Waddington, Dr Laurent Galbrun, Benjamin Piper, Kevin Bilton, Ben Fenech, Dr Luis Gomez Agustina, and Matthew Cand.

Noise SIG co-ordinator & minute taker: Dr Anna Romanova (AR) A.Romanova@gre.ac.uk

	Actions arising in order discussed not in order of priority [red - top; amber - medium; green - ongoing]	To be completed by person and date:	Actioned 
1	Update SIG participant mailing list on the website.	KVH - 30/3	In progress
2	Visit regularly ‘Events page’ on UKAN website for updated information.	Network members	
3	Update the personal profile on the UKAN website indicating personal interests and industrial and/or social challenges.	Network members 30/3	Done
4	Survey group members: on challenges and issues. Identify group’s priorities.	AB/AR commence by end April	
5	Arrange for a workshop to explore bigger ideas.	AB/AR	
6	Arrange for a smaller workshop groups to meet following the large workshop to explore ideas in depth.	AB/AR	
7	Facilitate conversations with industry to identify their problems.	?	
8	Set-up a speed dating event for academics and industry.	?	
9	Develop a portfolio of available material for schools & apprenticeships.	SZ / ML	
10	After the broad workshop identify people who would want to lead specific sub-groups.	AB/KVH	
11	Develop outreach material for UKAN	KVH/ML/SZ	In progress
12	Date and Venue of next meeting	TBC	

Minutes of the meeting

1. Welcome by group leader AB

Introduction to the Network structure, vision, aims and objectives by KVH (slides attached).

2. Group member’s introduction

Apologies noted by AB.

AB: Has a background and interest in Transportation and Economics of Noise. Visions to promote interdisciplinary research in acoustics & engineering through Research Councils by targeting industrial and social challenges.

SZ: Acoustics & Mechanical Engineer, Imtech Engineering Service, contracting company working on residential and commercial projects, where the company provides installation design by someone else. Her role is to insure that the proposed acoustical performance will work on site (not just on paper). She is looking to see if testing of a plastic ducts of vent system can be performed as currently there is no reliable performance data.

HN: Defra - Noise Policy Statement for England and Noise Nuisance Policy. Undertakes coordinators role with rest of the Government to make sure all policies are in agreement. Is a member of evidence team that help support policy decisions and ensure that political aspirations are backed up by science. Equally, as research funding is reduced, informed decision should be made on the best ways of spending the remaining funding.

BJ: Undertakes co-ordination of interdisciplinary work, Mechanical & Electrical as well as Economics in acoustics. Works with designers, architects, and engineers. Has research interests in soundscaping and how this sits with the design of cities from all ends Design, Architecture and Engineering. Visions that this forum can bring together the partners from above disciplines.

KVH: Network principal Investigator. He is interested in outdoor sound propagation and propagation of noise in porous media. Also, acoustic sensing of buried services – sewer pipes. Currently is an editor of J. of Acoustic Society of America.

SS: Independent Acoustic Consultant. Interested in outdoor sound propagation. Is wary of current National Calculation System (which is 30 year old). Has interest in noise mapping and noise modelling, including noise from railways and is willing to see re-established research in the area of noise modelling. Also works on ISO 9613-2 standard review.

DF: Technical Director of Noise & Vibration, where his interest primary relate to Acoustics Noise and Vibration (but not limited to). Is willing to establish methods to predict noise impact of developments & infrastructure in proposed projects. As well as how these can be evaluated. He recognises that to date, there are substantial gaps in knowledge. The policy currently is changing focusing on 'prevention', 'mitigation', and 'avoidance', however this is not linked to the so valuable responses from the public (and remains subjective). The company, has an innovation fund which might facilitate work with the network.

ML: Works for consulting engineers WSP, where they have 60 people in acoustic field (UK), and large amount of field measurement equipment. As a company they have researched: Wind turbine acoustics and effects on human response, railway vibration, & low frequency electrical noise control. ML is in ICBEN Team 6: Community response to Noise (and willing to act as a link between ICBEN and UKAN). They currently fund a PhD in Cambridge - structural dynamics and vibration. Main purpose in joining UKAN is to identify opportunities for research partners in academia, and to challenge the corporate perception that research partnerships mainly benefit academia, which can lead to inertia in decision makers. They are interested in innovative noise control, noise and vibration health impacts and policy, groundborne n+v, psychoacoustical measures and soundscapes, as well as simulation of virtual reality world - auralisation with 3D visualisation.

TM: UCL. Has a background in Electroacoustic Engineering and Human Health. Now looks into psychology of acoustics - low frequency perception where infrasound finite element model was created (worked on a grant). Is interested to see what noise causes complains and which does not - link to physiology interest in research.

EP: Works as Noise & Health Scientist at Public Health England (PHE). The main aim of PHE is to improve the nation's health and wellbeing. Noise is an environmental factor that can affect health and well-being. The noise team at PHE advises the Government and other stakeholders on issues related to noise & health. They also contribute to advisory boards of research projects related to noise and health. The noise team at PHE is interested to participate in the Noise SIG to: (1) Contribute to future research related to noise and health; (2) advice the group on government priorities and how to link those with the Noise SIG activities;

AR: Is a Senior Lecturer at the University of Greenwich and has interest in Living Green Walls utilisation as noise control measure in urban areas. Currently is looking and undertaking test to define the absorption coefficient of Living Green Walls.

Sum-up from AB: There seems to be common themes emerging as: (i) Modelling of noise levels (ii) Defining and quantifying impacts of noise (iii) considering the perception of society/public of noise (iv) helping / informing to review standards and policies. As it stands now in the research and industry communities, we do not have sufficient knowledge of how much noise is being generated and how it can be effectively managed.

3. **AB/KVH have shown the slide on the budget (attached)**

Suggested that the Network Grant can be used to facilitate travelling and workshops which would showcase to the Government the ideas and areas where the research can be undertaken.

Discussion

White paper: An aim of the SIG should be the creation of the white paper, which would identify the need in certain research to help the industries make better decisions and grow. Environmental noise is quite high on the agenda and this first workshop should be used to discuss how this paper can propose solve the global problems. The paper should explain why the work should be undertaken by members of UKAN Noise SIG.

The following research questions have been raised:

- What is the value that can be offered?
- What are the methods to monetise impact?
- What are current law/policy limits in application?
- What concerns are raised by the public?
- What are the problems that surround industry?
- What are the gaps in knowledge we could fix working together with industry?
- What are the obstacles in relation to improving the environment?

Policy: Group research papers / white papers may be more effective if targeted to specific governmental department, i.e. Health Impacts, Economics, Transportation, Environment, etc. The group should set-up a framework to fit all and relate to the noise policy linking back to the government, developers and general public where possible. In this exercise attention should be given to how to interpret physics, engineering and science knowledge to the benefit of the policy (easy to utilise) & law. The research we are to undertake will enable us to have England/UK specific guidelines in the areas where we cannot rely on EU/International recommendations.

Health & Quality: Many of research conclusions on Health & Quality of life are derived from Germany, France and Sweden based research, however there is no or

limited data for UK. Even in areas where the public are not bothered by the proximity of the airport and plane noise. The question remains as to whether they and their health are still affected?

Local problems to UK:

- Heathrow expansion
- New railway developments (e.g. HS2, etc.)
- Housing Policy / density / proximity to rail
- Urban area noise

Cost-Analysis: The group could develop a WebTAG style tool kit for Cost-Benefit Analysis, so that small companies can take it off the shelf and make informed decisions.

Industry & communities: It is important to bring people on board from other sectors and industry to help solve the problems, and hence it will be necessary to reach out to other communities to take part, as Policy Makers, Architects, Manufacturers and Product Designers (but probably after the white paper is drafted). Representation of the network at other conferences and organisations is highly required and should be carried out by all members.

Measurements, Metrics, Models (3M): Quality research exists but it is not linked to the application and how this may be used and turned into policies. This should be addressed by the network. There is a document on Industrial & Commercial noise that is not based on research and on the contrary is based on the assumption of few men. This needs to be changed.

Bids and grants: Members of the group can jointly address National needs and bid for funding from Research Councils addressing, for example the EPSRC prosperity outcomes: Productive, Connected, Healthy and Resilient Nation. Network can address both large and discrete projects. Large ones - will set up a landmark of research in the area. Discrete ones (small) - is a case for PhD's and Early Career Researchers (ECR). Generally, each group should: Select grand topics, funnel ideas and determine one or few research priorities / pathways that could be addressed as a group and actioned. These should focus around: Research needs, research capabilities and importance to the industry and society.

Training: A UKAN summer school workshop in Wales in 2018 is open to PhD's and ECR. There could be a competition based around identifying group research priorities advertised for ECR with a £250-500 prize fund. Also, each group can define specialist training required for their members, which could be: new analytical techniques, experimental methods, acoustics theory, software use, policy, research funding training. The last could address the following: advice on writing/structure/aim a bid to particular funder, what calls are around, how industry could engage, what are the terms of funding bodies.

STEM and public education: Special teaching & Learning kits can be obtained from a number of organisations (CIBSE, Tomorrow's Engineers, Alistair Summerwell leading on Scottish ISO) and our own can be created to facilitate awareness of the subject in schools and local communities. Network can foster promotions and preparation of such material (packages for schools). Royal Society also has

competitive small grants to engage the children in science.

4. Date and Venue of next meeting

TBC

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