

UKAN SIG-VA: Meeting 2 – 09/04/2019

Attendees

Name	From
B. Gibbs	Uni. Of Liverpool
S. Jackson	Uni. Of Bristol
A. Priyadarshi	Oxford Brookes Uni.
J. Zhang	Uni. Of Bristol
M. McNulty	Hoare Lea
J. Meggitt	Uni. of Salford
D. Thompson	ISVR
E. Ntotsios	ISVR
J. Richardson	KBR
S. Krstulovic	Audio Analytic LTD
S. Graetzer	Uni. of Salford
A. Dell	Uni. of Sheffield
H. Begum	Uni. of Sheffield
S. Demiryurek	Uni. of Sheffield
S. Park	Uni. of Liverpool
A. Cicirello	Uni. of Oxford
A. Ricci	Dyson

Agenda

- 1) 15.30: Welcome and introductions around the room.
- 2) Review of progress since 1st meeting of SIGVA.
- 3) Current collaborative research activities.
- 4) Candidate collaborative research proposals and appropriate funding.
- 5) 3rd Meeting of SIGVA in Cambridge on 1st May 2019.
- 6) Roundup and way forward.
- 7) Date of next meeting (TBC).

Minutes of the meeting

- 1) Introduction – Barry Gibbs:
 - a. Vibro-acoustics suffers by being at the interface of vibration and acoustics.
 - b. In industry there is typically a greater understanding of airborne issues than structure-borne ones
 - c. Shortfall in vibro-acoustics as a discipline
- 2) Summary from first meeting – Barry Gibbs:
 - a. Vibro-acoustics is broader than we thought
 - b. Uncertainty: need to recognise it in industry and allow for it
 - c. Industry are typically hesitant to discuss problems openly due to IP (difference between industry and academia). Can we strip problem away from application and open up more collaborative discussions?
 - d. Knowledge resource: there is a lack of education resources. Where are the courses?

- 3) Review of progress – Barry Gibbs
 - a. Following previous UKAN meeting Carl Hopkins (ARU Liverpool) and Andrew Bullmore (Hoare Lea) submitted a proposal based on the virtual prototyping of prefabricated housing, as part of the '[Transforming construction network plus. Round 1: call for small projects \(up to £100k\)](#)'

- 4) Open discussion - All
 - a. How can we get vibro-acoustics recognised as a discipline?
 - i. Through conferences? Specific sessions, satellite workshops, etc.
 - b. Courses on vibro-acoustics: demand exists but people don't realise it?
 - i. One day course is more appealing to industry, less effort to organize as no overnight stay.
 - ii. Interest from PhD students: want master class / course to retrain in acoustics
 - iii. Possible topics: first principles; new standard methods; emerging/advanced methods
 - iv. Also R&D groups in large companies: upskilling from another starting point.
 - c. Organise a session at the IOA acoustics conference in 2020?
 - i. Could be separate event tied to conference?
 - ii. Host regional IOA meetings?

- 5) Future of UKAN – All
 - a. UKAN able to cover travel expenses for events
 - b. Funding finishes 5th November 2020

Actions

- 1) Joshua Meggitt – look into admin and venue costs with the intention of organizing a vibro-acoustics masterclass in early 2020.

Next meeting

A one-day [workshop](#) has been organized by the University of Cambridge and the University of Salford to disseminate some recent work undertaken as part of the EPSRC project [EMBED](#). This workshop will coincide with the 3rd meeting of the UKAN SIG-VA. Further details are given below:

Aim: the aim of the workshop is to introduce state of the art methods for the prediction of noise and vibration developed during recent EPSRC-funded research. Numerical and experimental methods will be presented in a tutorial style. New ways of integrating experimental and numerical vibro-acoustic models will be described and illustrated by practical case studies including an industrial case study to be presented by Dyson.

Applications: vibro-acoustic modelling and design, product design, building acoustics and vibration. Who should attend: consultants, acoustic and vibration engineers, researcher in vibro-acoustic measurement and modelling. The techniques presented are relevant for applications including automotive, aerospace, buildings, domestic appliances, marine, offshore and others.

Programme (to be finalised):

09:30 Arrival/ coffee

10:00 Welcome/ introduction – Andy Moorhouse
10:05 Experimental methods for vibro-acoustics – Andy Moorhouse
10:35 FEM, SEA and the Hybrid Method – Robin Langley
11:05 Coffee
11:30 Embedding measured data in a Hybrid model – Arnau Clot
12:00 Discussion
12:30 Lunch
13:30 Idealised case study – Andy Elliott
14:00 Dealing with uncertainties – Josh Meggitt
14:30 Coffee
15:00 Dyson Case Study Salford/ Cambridge/Guy Banwell
15:30 Discussion/ questions All
16:00 Close

Any Other Business

None.

Date and venue of next meeting SIGVA4

TBD.

Close