

Request for feedback on the idea of establishing a Forensic Acoustics Group within the Acoustical Society of America

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This is an idea which I originally had in response to the Acoustical Society of America (ASA) 2009 Innovative Project Competition <http://asa.aip.org/innovative.html> although I decided not to submit a proposal to that competition.

The popularity of TV shows such as *Law & Order* and *CSI* has led to a lot of public interest in forensic science, but in the scientific community there is concern over the reliability of many branches of forensic science and calls for more investment in research and infrastructure development.

In February 2009 the National Research Council (NRC) *Report to Congress on Strengthening Forensic Science in the United States* http://www.nap.edu/catalog.php?record_id=12589 found that:

- “[S]ome forensic disciplines are supported by little rigorous systematic research to validate the discipline’s basic premises and techniques. There is no evident reason why such research cannot be conducted” (p. 22).
- “The development of scientific research, training, technology, and databases associated with DNA analysis have resulted from substantial and steady federal support for both academic research and programs employing techniques for DNA analysis. Similar support must be given to all credible forensic science disciplines if they are to achieve the degrees of reliability needed to serve the goals of justice.” (p. 13)

My idea is to establish a Forensic Acoustics Group within the ASA which would help foster research leading to more reliable forensic analysis of acoustic data. This would potentially include research on forensic voice comparison, comparison of audio recording of gunshots, and accident investigation involving the acoustics and human perception of vehicles, machinery, and warning devices. In general the group’s scope would cover research on the analysis of any acoustic event or acoustic phenomenon which may be presented as expert evidence in a court case.

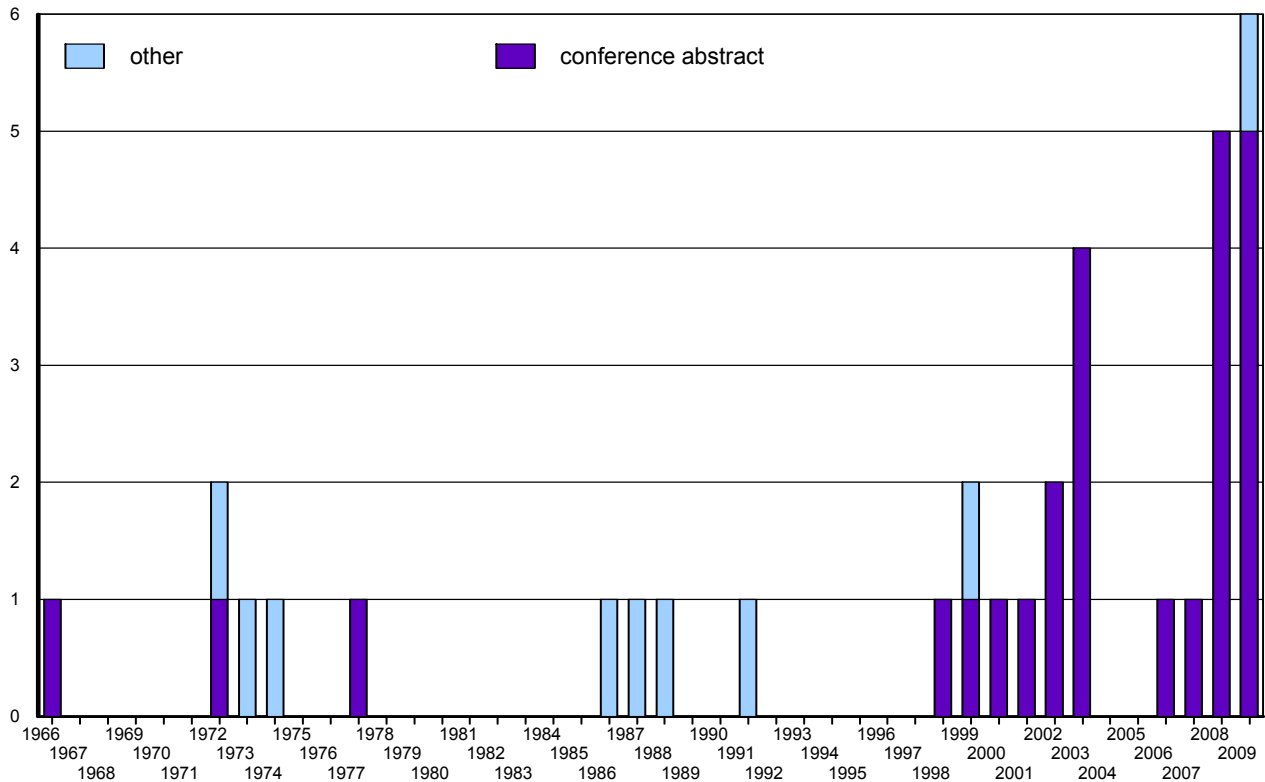
The proposed Forensic Acoustics Group would organize a special session on forensic acoustics at least once per year at an ASA Meeting. It would also encourage members to submit papers on forensic acoustics to the *Journal of the Acoustical Society of America* (JASA), and provide a pool of referees and potentially be able to provide an associate editor in this area. The proposed Forensic Acoustics Group could potentially attract new members to the ASA and raise the ASA’s public profile.

At the 146th Meeting of the ASA in November 2003 in Austin, Texas, a Special Session on Forensic Acoustics consisted of eleven oral papers. This special session was jointly sponsored by the Architectural Acoustics, Noise, and Speech Communication TCs.

A Tutorial and a Special Session on Forensic Voice Comparison and Forensic Acoustics <http://cancun2010.forensic-voice-comparison.net/> are scheduled for the 2nd Pan-American/Iberian Meeting on Acoustics (160th Meeting of the ASA), 15–19 November, Cancún, Mexico. The special session is jointly sponsored by the ASA’s Speech Communication and Signal Processing in Acoustics TCs, and will consist of six oral papers and a poster session.

The figure below provides a bar graph of conference abstracts and other publications in JASA obtained via a search of the term “forensic*” in abstracts, titles, and keywords.

Forensic Publications in JASA



There are at least three other organisations whose areas of interest overlap with the proposed ASA Forensic Acoustics Group, but I do not believe that their existence precludes the formation of the proposed ASA Forensic Acoustics Group. The International Association for Forensic Phonetics and Acoustics (IAPFA) <http://www.iafpa.net/> organizes an annual conference and has the *International Journal of Speech, Language and the Law* (IJSLL) as its official journal. The majority of its members are phoneticians based in Europe (16 of its 18 conferences so far have been held in Europe). The International Speech Communication Association (ISCA) <http://www.isca-speech.org/> had a Tutorial, a Keynote Address, and a Special Session on Forensic Voice Comparison at its Interspeech Conference in Brisbane, Australia, in September 2008. Research on forensic voice comparison is also regularly presented at its biannual Odyssey Speaker and Language Recognition Workshop, although most of the research presented at these workshops is not focussed on forensic applications. The Audio Engineering Society (AES) <http://www.aes.org/> held a conference on Audio Forensics in Denver, Colorado, in July 2005, and will hold another in Hillerød, Denmark, in June 2009.

There are two types of technical groups which can officially be established within the ASA: *Technical Speciality Groups* (TSGs), and *Interdisciplinary Technical Groups* (ITGs), see Rules of the ASA (22 May 2009) sections 18 and 19. A TSG is a stand-alone group, whereas an ITG operates under the auspices of two or more Technical Committees (TCs). An ITG is appropriate where the scope of the group partially overlaps that of two or more TCs and the group will increase cooperation among the TCs. A TSG may be established via a petition to the ASA Executive Council signed by at least 50 persons at least 25 of whom are members of the ASA. An ITG may be established via a petition to the ASA Executive Council signed by at least 50 members of the ASA, or via a majority vote of the voting members each of the sponsoring TCs. If feedback is favourable, I would aim to collect the required signatures or request a vote of sponsoring TCs at the November 2010 meeting in Cancún.

I would request your feedback on whether you believe the formation of a Forensic Acoustics Group within the ASA is warranted, and if so whether a TSG or an ITG would be more appropriate.

If there are less than 50 potential members for the proposed Forensic Acoustics Group then its formation would not be warranted.

If forensic acoustics is already covered within the scope of a single TC then the formation of a Forensic Acoustics Group would not be warranted.

If the scope of the proposed Forensic Acoustics Group is already covered within the combined scope of two or more existing TCs, then a TSG would not be warranted but an ITG may be.

Please e-mail me any positive or negative feedback.

If you would be interested in being a member of the proposed Forensic Acoustics Group, and especially if you would be interested in helping to organize the group, please send me an e-mail.

Please pass on this document to anyone you think may wish to express an opinion.