

2014 Anglo-French Physical Acoustics Conference Report

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The 13th Anglo-French Physical Acoustics Conference (AFPAC) was held at Selsdon Park Hotel, Croydon near London, United Kingdom, on 19-21 January 2014. The venue was an excellent location to exchange ideas, regardless whether this happened in the conference room, over lunch at the drinks reception in the conservatory, in the oak panelled bar after the conference dinner or in the local pub next door. Over 45 papers were presented at the conference. There were over 60 delegates from institutions covering four countries.

The invited speakers from the French side shared their knowledge about the generation of sound from supersonic jets (Prof Christophe Bailly, École Centrale de Lyon) and the application of ultrasonic microscopy in the nuclear industry (Prof Gilles Despau, Université de Montpellier). The UK invited speakers included Prof Malcolm Povey (University of Leeds), who talked about characterisation of the nucleation of crystals using ultrasound, and Prof Bruce Drinkwater (University of Bristol), who captured the audience by speaking about “ultrasonic lassos” and ultrasonic particle manipulation.

There was a strong representation of laser ultrasonics at the meeting with scientific considerations of problems and applications that range from the macro to the nanoscale. There were also numerous papers on the interaction of elastic and acoustic waves with complex materials and scattering of these waves by materials such as foams or cavitating liquids. Presentations on biomedical applications are increasingly being featured at AFPAC meetings. Talks this year covered topics such as imaging and high-intensity focused ultrasound for therapeutic applications. Finally, there were also several contributions from the field of Non-Destructive Evaluation (NDE) and Structural Health Monitoring (SHM) with talks ranging from the determination of the properties of *in vivo* wood to ultrasonic scattering techniques and tomographic reconstructions to recover the size and shape of defects in pipes and plates.

The UK organising committee was particularly happy to welcome the many French contributors that travelled to Croydon and would like to thank Alain Lhémery and the Société Française d'Acoustique (SFA) for publicising the event in France. We are happy to announce that many of the presented papers will be published in the conference proceedings in Journal of Physics: Conference Series. We would also like to draw the reader's attention to the upcoming 14th AFPAC conference that is scheduled to take place on 14-16 of January 2015 in Fréjus, France.