



Australian Acoustical  
Society  
Queensland Division

# Technical Meeting

## 6:30pm Tuesday May 9, 2017

**Date:** Tuesday 9<sup>th</sup> May 2017

**Time:** 6:30pm to 8:00pm

**Venue:** The Greek Club  
29 Edmondstone Street  
South Brisbane QLD 4101  
[www.thegreekclub.com.au](http://www.thegreekclub.com.au)

**Title:** “Acoustic Design of the Ukaria Cultural Centre Concert Hall”

**Presenter:** Cameron Hough

**Presenter Bio:** Cameron is a Senior Acoustic and Theatre Consultant with Arup and the leader of the Brisbane team.

He specialises in architectural acoustics design and has over ten years’ experience over a wide variety of project types including office, residential, educational, healthcare, community and performing arts buildings. He has particular experience in performing arts acoustic design, drawing on his background as a classically-trained orchestral musician (violin and viola) and freelance music critic. Cameron continues to play regularly with orchestras and chamber ensembles, including as the concertmaster of the Brisbane Philharmonic Orchestra. This experience enhances his critical listening skills and allows Cameron to undertake holistic acoustic design for venues incorporating both artistic and technical factors.

**Summary:** The recently-opened Ukaria Concert Hall (formerly Ngeringa Concert Hall) is an intimate chamber music recital space located at the Ngeringa Winery near Mount Barker in the Adelaide Hills. Arup was engaged by the client, Ngeringa Arts, to conduct the acoustic design of the hall, which faced the challenge of achieving good acoustics for chamber music within an overall-concave architectural room form, while providing comparable acoustic quality to historical European precedent venues. A key component of the room design was the shaping of the room surfaces to reduce focussing, provide high clarity and provide a strong sense of immersion as per a traditional rectangular hall. Key design features include the provision of



additional lateral reflection paths above the audience area and a highly-diffusive reciprocal-frame ceiling. The design of sound scattering surfaces in the room was done using Boundary Element Modelling (BEM) to create room elements that were inherently part of the room aesthetic but also were functional acoustically. The resulting hall has high subjective reverberance, clarity and immersion despite its relatively-small size and seating capacity and has been acclaimed by both musicians and audiences.



**Cost:** Free to current financial members of the Australian Acoustical Society. Non-members of the Society will be charged \$25 (correct amount in cash required) at the door for which a tax receipt will subsequently be issued.

**RSVP:** By close of business Monday 8<sup>th</sup> May 2017 to Richard Devereux  
[rdevereux@acran.com.au](mailto:rdevereux@acran.com.au)