

## DAGA 2021

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**Title:** Beamforming vs. Near-Field Acoustic Holography

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**Abstract:**

Both beamforming and near-field acoustic holography (NAH) are microphone array-based techniques that are used to estimate source locations and their strengths in various application areas. Although some of their acoustical fundamentals are the same, the ways the two methods and their variations approach the problem of source identification and quantification are unique. Hence, in practical applications it is necessary to have a very clear understanding of what to expect from each method. This paper describes the main variations of both approaches: the delay-and-sum beamforming and the Fourier-based planar acoustic holography, highlighting the differences and similarities between the two approaches and recommending their use for different situations. To illustrate their difference, known results from analytical equations of a baffled piston and a vibrating plate are used.