# Dossier: Applied Research In Acoustics LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $138,697.00

**Award Date:** 2024-09-09

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Applied Research In Acoustics LLC (ARIA) is a US-based company specializing in advanced acoustic and vibration solutions primarily for the defense, aerospace, and industrial sectors. Their core mission is to provide innovative, high-performance sensing and signal processing solutions that enhance situational awareness, improve system reliability, and reduce operational costs. ARIA addresses challenges related to structural health monitoring, noise control, acoustic intelligence gathering, and advanced sensor development for harsh environments. Their unique value proposition lies in combining deep theoretical expertise in acoustics and signal processing with practical engineering experience, allowing them to deliver custom-tailored solutions that are not readily available from off-the-shelf products or services.

**Technology Focus:**

* Development of advanced acoustic sensors and sensor networks for structural health monitoring (SHM) in aerospace and defense applications. This includes novel sensor designs capable of operating in extreme temperature and vibration environments, with a focus on wireless, battery-less sensing solutions using energy harvesting techniques.
* Signal processing algorithms and software tools for acoustic emission analysis, active noise control, and acoustic localization. Their expertise lies in developing robust algorithms that can extract meaningful information from noisy and complex acoustic data, even in challenging operational environments.

**Recent Developments & Traction:**

* Awarded a Phase II Small Business Innovation Research (SBIR) contract from the US Air Force in late 2022 to develop advanced acoustic sensing technologies for improved structural health monitoring of aircraft.
* Partnered with a major aerospace OEM (details undisclosed) in early 2023 to integrate their acoustic sensor technology into a new aircraft platform for real-time monitoring of critical components.

**Leadership & Team:**

Information publicly available is limited. Key leaders include Dr. Richard Campbell (likely Founder/President/Principal), with apparent expertise in acoustics and signal processing. Information on the complete team is not readily available through public sources.

**Competitive Landscape:**

Primary competitors include PCB Piezotronics and Brüel & Kjær. ARIA differentiates itself through its focus on highly customized solutions tailored to specific customer needs and its expertise in developing advanced signal processing algorithms for extracting valuable information from noisy acoustic data, as well as its focus on battery-less sensors.

**Sources:**

1. [https://www.arallc.com/](https://www.arallc.com/)

2. [https://www.sbir.gov/](https://www.sbir.gov/) (Used to find SBIR awards to ARIA)