



**NRL BAA Announcement
71-17-02**

ELASTO-ACOUSTIC (META) MATERIALS

The Acoustic Signal Processing and Systems Branch of the Naval Research Laboratory conducts basic and applied research in concepts in acoustic materials and metamaterials with the goal of constructing novel devices for use in aqueous, air, and elastic environments. This work seeks to both understand and develop the underlying physics of acoustic and elastic solid wave propagation in engineered and/or patterned materials from the micro constituent level in order to accurately predict the physical properties and geometries of constituent components required to create a desired wave propagation behavior in the bulk material. The work naturally seeks to explore the fabrication of devices using new and exotic materials as possible constituents to provide control over the bulk elasto-acoustic properties of a given material. Additional work involves the study of phonons in nanoscale materials, as well as novel uses of MEMS devices.

The Acoustic Signal Processing and Systems Branch is interested in receiving proposals for research related to the above research interests. Address White Papers (WP) to Code 7160, by email to NRL7160_BAA@nrl.navy.mil. Allow one month before requesting confirmation of receipt of WP, if confirmation is desired. Substantive contact should not take place prior to evaluation of a WP by NRL. If necessary, NRL will initiate substantive contact.