AIAD #10840

Research Opportunity: Cadet

ORGANIZATION/PROJECT SPONSOR

Organization: ARL-ARO
Organization POC: Dr. Dev Palmer
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Location of Sponsoring Directorate or Division: Research Triangle Park NC

PROJECT

Title: Field Test Of A Direct Antenna Modulation (DAM) Transmitter

Description: The goal of this research is to investigate direct antenna modulation (DAM) as a technique to increase the operating bandwidth and radiation efficiency while simultaneously reducing the size and signature of tactical antennas for Army mobile wireless communications. Primary task will be field test, data collection, and analysis of the performance of a DAM transmitter developed previously. Tasks may also include construction and test of a BPSK modulator/demodulator circuit, construction and test of a microwave transistor amplifier, and/or design, fabrication, and testing an electrically-small antenna, depending on candidate's interests and abilities. Research will be conducted at Duke University in Durham, NC. POC at Duke University is Professor William T. Joines, Electrical and Computer Engineering, wtj@duke.edu, phone: 919 660-5281, fax: 919 660-5280.

ARL/Army Benefit: Improved antennas for Army ground mobile radio systems.

Background Required: General knowledge of electrical engineering principles, hands-on radio experience (e.g. Amateur Radio licensure) preferred but not required.

Security clearance required: None

Capacity: One

Duration: Three weeks

Block Preference: All dates are available