DB-0850/1310/1313/1520-02/04 (Research Interdisciplinary)

RF Researcher (AT40; electromagnetic propagation / RF comms)

Performs basic and applied research in the areas of electromagnetics and radio frequency physics to include emission, propagation, and interaction with natural and anthropogenic environments. Develops numerical, experimental and/or theoretical methods of characterizing and exploiting electromagnetics and/or RF channels existing within complex environments. Specifically, develops geospatially aware electromagnetic and/or radio frequency propagation models and integrates them with military programs of interest in the modeling of signal propagation and sensing phenomenology (e.g., Camouflage, Concealment and Deception). In addition, the incumbent will apply professional knowledge and experience to the development of visualization tools that enable the military to understand electromagnetic and radio frequency propagation within the battlespace. The incumbent will also physically verify CRREL signature physics models implemented through computer model development. The incumbent will perform background research on related topics, prepare written summaries and reports, prepare and orate visual presentations, conduct a broad range of material and signals analyses using relevant laboratory equipment, numerical models and programming languages. The incumbent maintains customer relationships, develops proposals for new and additional work, and publishes findings in reports, peer-reviewed publications, and scientific presentations.

DB-0850/0854/1310/1520-02/04 (Research Interdisciplinary)

Geophysics Researcher / Coder (AT40; AT41 RAPIDS; AT42 EASEE)

Supports basic and applied research in physics and mathematically-based modeling of sensor performance. Develops and delivers new physics and mathematically-based software containing algorithms and models that support the diagnostics of sensor performance and optimal sensor placement. Implements and tests new methodologies for characterizing terrain influences on sensor performance and sensor placement in geospatial information systems. The work involves military programs such as Real-time Adaptation, Prediction, and Informatics for Dynamic Military Noise Environments (RAPIDS) and Environmental Awareness for Sensor and Emitter Employment (EASEE) that have multiple complex features, which require highly original solutions. The position requires professional knowledge and research experience in numerical modeling, algorithm development, basic and applied research experiment development, software design, high performance computing, applied statistics, and data mining. The position requires that the individual be highly independent with the ability to lead large teams focused on delivering new capabilities of weather and terrain information with the prediction of sensor performance and optimal sensor placement. Issues studied are those in which very limited previous work has been accomplished and require original methods of

experimentation and analyses. The incumbent maintains customer relationships, develops proposals for new and additional work, and clearly communicates research goals and methods orally and in writing through published reports, peer-reviewed publications, and scientific presentations.

DB-0850/0854/1310/1520-02/04 (Research Interdisciplinary) - programmer

Computer Modeler / Coder (AT40; RF applications)

Supports computer programming in the areas of radio wave propagation, radio frequency physics and coupled antennae and local terrain behavior (e.g., dielectric properties, conductivity, improvised ground planes, etc). Specifically, develops geospatially aware radio frequency propagation models and integrates them with military programs of interest in the modeling of signal propagation and sensing phenomenology (e.g., Camouflage, Concealment and Deception). The incumbent will apply professional programming knowledge and experience to complex software development that allows the military to understand radio frequency propagation in battlespace, perform background research on related topics, prepare written summaries and reports, prepare and orate visual presentations, and conduct a broad range of material and signals analysis using relevant laboratory equipment, numerical models and programming languages. The incumbent will setup, conduct and oversee programming concerning a variety of topics that involve signature physics (including radio frequencies). The incumbents will also implement CRREL signature physics models and provide model response feedback to the RF researcher regarding model efficacy, critical environmental parameters to improve model performance, etc. The incumbent maintains customer relationships, develops proposals for new and additional work, and publishes findings in reports, peer review publications, and scientific presentations.

DB-0850/0854/1310/1313/1520-02/04 (Research Interdisciplinary)

Data Processing Geophysics (AT40; ISR)

The incumbent serves as a research geophysicist in the areas of geophysics and geotechnical engineering to conduct geophysics-related advanced signal processing. Specifically, conducts a broad range of geophysical-data analyses leading to the resolution of tunnels, improvised explosive devices, and other near-surface geophysical and geotechnical engineering problems (e.g., concealment). The incumbent will apply professional knowledge and experience in geophysics to plan, conduct, analyze, and interpret numerical model data using advanced signal processing methods and applied statistics, perform background research on related topics, prepare written summaries and reports, prepare and orate visual presentations, and conduct a broad range of signals analyses using relevant laboratory equipment, numerical models and programming languages. The incumbent will analyze targets and

associated environmental clutter effects on stand-off intelligence, surveillance and reconnaissance systems through the development of new processing methods that incorporate clutter and target models in target detection algorithms. The incumbent maintains customer relationships and responds to existing Direct program needs and future anticipated needs within ASA(AL&T), COCOMs and others. The incumbent will develop proposals for work acceptance, work execution and technology transfer through scientific report writing, peer review publications and scientific presentations.

If Interested in any of these positions contact:

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