Postdoctoral/Post-graduate position opening at the U.S. Army Research Laboratory

Duty Location: Adelphi Laboratory Center, MD 20783

Subject: Post-doctoral or post-graduate position for Robotics Researcher opening at the United States Army Research Laboratory for Distributed and Reconfigurable Beamforming for Targeted Communications Team.

Position Description: The postdoctoral appointee will focus on research at the intersection of mobile autonomous systems and software defined radio. Responsibilities will heavily emphasize basic research along with publication, but there will also be integrative system development to meet system requirements. Research topics will likely include resource allocation, novel localization techniques, planning, model predictive control, and online channel modeling applying to networked teams of heterogeneous autonomous aerial and ground systems. This research will be validated in simulation and/or in physical experiments

Team Project: We are pursuing a novel technology which enables directional wireless communication with a distributed and reconfigurable beamformer. This system will be composed of autonomous mobile agents which coordinate antenna element phase offset to provide a directional communication link. Distributing the antenna elements across these mobile agents necessitates position and time synchronization for coordinated transmission and reception. By answering basic research questions about this system, we will pursue the ability to rapidly, reliably, and covertly establish a channel and provide localization information across different bands enabled by this distributed and reconfigurable beamformer.

Position Qualifications: The ideal candidate will be able to implement a system which integrates perception, planning, and control on mobile agents and software defined radio. Experience conducting physical experiments is a requirement. Additional preference will be given to those who have experience conducting localization or wireless communication experiments in physically complex environments. Other useful skills include coding in C/C++ and experience with the Robot Operating System (ROS) framework and USRP.

Application Process: The position is available immediately but will take time to process. Salary is highly competitive and commensurate with rank and qualifications. Applicants must provide a one page cover letter, a curriculum vitae including a list of publications and contact information for three references. ARL is a unique and ideal research environment for postdoctoral fellows and this position will allow researchers to engage with researchers across several different disciplines. US Citizenship is not required.

Please contact Jeff Twigg (jeffrey.n.twigg.civ@mail.mil) with any questions you have about this position.

Please send all materials to: Jeff Twigg (jeffrey.n.twigg.civ@mail.mil)