AIAD #10858

Research Opportunity: Both

ORGANIZATION/PROJECT SPONSOR

Organization: Human Research and Engineering Directorate, Simulation & Training Technology Center
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Location of Sponsoring Directorate or Division (City, State): Orlando, Florida and Playa Vista, California

PROJECT

Title: Simulation & Training Research

Description: Cadets will participate in basic research, applied research, or advanced development projects at one of two locations (the Simulation & Training Technology Center in Orlando, Florida or at the Institute for Creative Technologies in Playa Vista, California). Cadets will have the opportunity to work with simulation professionals on projects ranging from advanced graphics, sound, and artificial intelligence to applications for dismounted and ground simulations, medical training, and virtual worlds. The STTC will work with each cadet and their department to customize an experience that balances their personal interests and academic goals with project needs. Work involves development of best practices, simulation usability, testing, feedback, and analysis of training prototypes.

USMA faculty is invited to participate in a focused research project in adaptive tutoring. This project includes evaluation of sensory methods to acquire trainee data, evaluation of trainee state using predictive methods (e.g. machine learning), and the optimal selection of instructional strategies based on the trainee's state.

ARL/Army Benefit: ARL and the Army will benefit from cadet and faculty participation in simulation and training research programs. The future Army officer population is represented by the USMA cadet corps and insights gained from interaction with this population will enhance training methods and simulation technologies. In turn, cadets will gain an improved perspective on the role of science and technology in the Army.

Backgroud Required: Multi-disciplinary positions available include EE, CS, Engineering Psychology, Behavioral Sciences, and Systems Engineering. Basic understanding of the scientific method is required. Understanding of the system engineering processes is a plus. Only rising juniors and seniors are qualified.

Sophomores will be selected. Foreign cadets are not accommodated.

Security clearance required: Fundamental research is unclassified, but a secret clearance is required for unescorted building and network access. Foreign cadets are not accommodated.

Capacity: A maximum of ten cadets will be selected to be evenly split between Orlando and Playa Vista locations. One to two faculty members will be selected based on potential contribution to the adaptive tutoring project.

Duration: For faculty the duration is two to three weeks. For cadets the minimum duration is three weeks per assignment, but may be extended upon discussion with their department.

Block Preference: Block II is preferred, but some flexibility can be accommodated.