



Research Computer Scientist (DR-1550-II)

The 711th Human Performance Wing (711 HPW) leads the development, integration, and delivery of Airman-centric research, education, and consultation enabling the Air Force to achieve responsive and effective global vigilance, global reach, and global power now and in the future. The Airman Systems Directorate (RH) develops Airman-related technology for systems crucial to continued aerospace superiority. We work to transfer the same or similar technology to civilian applications when appropriate.

We are organized into three divisions: the airman's biosciences division (RHB), the Bioeffects Division (RHD), and the Warfighter Interactions & Readiness Division (RHW). The Bioeffects Division (RHD), located in San Antonio, Texas, provides leading research and subject matter expertise on the bioeffects of directed energy in the battlefield.

JOB SPECIFICS

- Develops computational models and integrates software libraries into large, distributed, diverse modeling and simulation architectures.
- Designs experiments to collect and analyze data, informing model development and further experimentation.
- Applies best practices in computer science to define requirements, architectures, designs, planning, development, and verification and validation of multidisciplinary probabilistic and deterministic models representing human behavioral and biological response to directed energy exposures.
- Prepares modeling and simulation products for verification, validation, and accreditation.
- Serves on interdisciplinary research teams utilizing multiple disciplines of computer science to include programming, probability and statistics, data analytics, and advanced computer simulation technologies.
- Software development in C++ within real-time distributed simulation, visualization, message-passing architectures, and other frameworks for modularized engineering, engagement, and mission-level simulations.
- Conducts data analysis and data visualization from experimental and simulation studies, including large data sets.
- Conducts simulations and exercises in distributed simulation environments.
- Conceptualizes and develops technical information, reports, data visualization products, and briefings on project planning, progress, evaluation, validation/verification, documentation, and underlying science.
- Works with senior scientists to review, evaluate and recommend modeling, simulation, and analysis resources to meet current and future needs.
- Works within a development team applying agile development principles to develop software and execute modeling and simulation tasks.
- Prepares research results and methodologies for presentations and publication in technical reports, briefings, and peer-reviewed journals.
- Authors proposals for new research and development tasks, reports, and manuscripts summarizing research findings.



- Promotes a culture where intellectual Property (IP) is developed, documented, protected and encouraged. Inherent in the technical publication review process is a thorough screening for potential IP.
- Scientific/engineering knowledge will be utilized to effectively assist in IP transfer, transition or commercialization.

Problem Solving

Develops or modifies new methods, approaches, or scientific knowledge to solve challenges. Efforts involve multiple technology areas or organizations. Applies knowledge of science/technology to analyze and resolve multifaceted issues/problems with minimal guidance. Develops comprehensive modifications to established methods and/or techniques. Uses judgment and originality in developing innovative approaches to define and resolve highly complex situations. Approaches to solving problems require initiative and resourcefulness in interpreting and applying scientific principles that are applicable but may be conflicting or not clearly understood. Consults appropriately to develop objectives, priorities, and deadlines. Plans and carries out work that is well aligned with organizational goals. Completed work is generally accepted upon review. Expertise is recognized internally and externally by academia, industry, or government peers.

Communication

Provides information to peers, senior technical leaders, and/or managers within and beyond own organization to influence decisions or recommend solutions. Exchanges information with established internal/external networks. Documents complex information, concepts, and ideas in a clear, concise, well-organized, and timely manner. Authors reports, documents, and presentations pertaining to area(s) of expertise. Presents complex information, concepts, and ideas in a clear, concise, well-organized, and timely manner. Actively listens to others' questions, ideas, and concerns and considers diverse viewpoints. Demonstrates effective speaking skills for advanced briefings, tailoring presentations to facilitate understanding. Reviews own communication products prior to submittal to peers, senior technical leaders, managers, and/or external contacts, resulting in minimal revision. May assist with the communications of others.

Technology Management

Collaborates with technical area stakeholders to develop strategies for effective execution within a particular technology area. Executes activities within and beyond own organization that ensure the technology mission. Recognizes opportunities and formulates plans within own organization. Generates key ideas and contributes technically to proposal preparation and marketing to establish new business opportunities. Identifies and advocates for resources necessary to support and contribute to mission requirements. Demonstrates knowledge of corporate processes by effective application of resources. Actively manages cost, schedule, and resource risks, seeking timely remedies. Engages others in using resources more efficiently and suggests innovative ideas to optimize available resources. Implements the development and transition/transfer of technology solutions, within or beyond own organization, based upon awareness of customer requirements. Evaluates and incorporates appropriate outside technology to support research and development.

Teamwork and Leadership

Performs work as a key team member or leads others to improve capability of a technology area or organization. Integrates efforts or works across disciplines. Provides consultation on complex issues. As



lead or key team member, makes significant contributions to meet team goals in support of the organizational goals. Works collaboratively with others in a dynamic environment, demonstrating respect for other people and alternative viewpoints. Recognizes when others need assistance and provides support. Assists in the development and training of internal/external team members. Works to develop/improve self in order to more effectively accomplish team goals. May recommend selection of team members. Receives general guidance in terms of established policies, objectives, and decisions from others. Discusses novel concepts and significant departures from previous practices with supervisor or team leader.

Location: Joint Base San Antonio (JBSA)-Sam Houston in San Antonio, Texas

Salary Range: \$79,647 – \$123,124