Jamil H. Stafford

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Education

Virginia Polytechnic Institute & State University (Virginia Tech)
- M. S. Aerospace Engineering, *2022*
- B. S. Physics, *2018*

Research experience

- Using multi-physics computational models to study spacecraft propulsion and fusion energy concepts
- Using the FLASH radiation hydrodynamics code base to study laser-driven plasma jet physics
- Verification and validation of the FLASH code against other experimental and simulation data
- Developing and programming high-performance computational fluid and plasma
- Utilizing many different mathematical methods to solve partial differential equations
- Reduced-order modeling of fluid simulations to drastically reduce computation time
- Parallelized, distributed, and GPU accelerated programming
- Utilizing the Julia programming language to develop easy to read, robust, and extremely high-performance computational models

Relevant Studies

Computational Fluid Dynamics, Computational Plasma Dynamics, Plasma Physics, Electrodynamics, General Relativity, Statistical Mechanics, Thermodynamics, Verification and Validation of Scientific Computing, Numerical Analysis (Finite Element and Finite Volume Methods), Functional Analysis, Principle Component Analysis, Technical Writing, and Nuclear and Particle Physics

Computer Skills

Julia, Python, C/C++, FORTRAN, MATLAB, Wolfram Mathematica, PowerShell and Bash scripting, Java, Linux, CAD, Docker, Git, LaTeX, Jira/Atlassian, HPE/Clustering

Work Experience

Torc Robotics – Computer Systems Specialist – *October 2021-Current*
- Developing and supporting computer systems that power autonomous drive systems and simulations
- Troubleshooting computer, network, server, cluster, and security incidents
- Logistics and interdepartmental collaborations
- System architect and administrator
- Software development: building software integrations, APIs, automations, and databases for numerous systems
- Technical writing and process documentation
- Working with a wide variety of engineering teams to find solutions to difficult problems and limitations
- Using Jira/Atlassian toolsets to work in an Agile and Scrum environment

Virginia Tech Office of VP for Finance – Computer Support Specialist – *June 2018-May 2021*
- Troubleshooting computer, network, server, and security issues
- Logistics and interdepartmental relations

- System Administrator
- Web Development: Building and managing departmental webpages, databases, and documentation

<u>Virginia Tech Biocomplexity Institute</u> – Expert Technician – *February 2018-June 2018*
- Troubleshooting computer, network, server, cluster, and security issues

<u>Virginia Tech Division of IT</u> – Level III Expert Technician – *July 2014-June 2018*
- Troubleshooting computer, network, server, and security issues
- Serving as top-tier support staff to aid and guide others through problem differential and diagnosis
- Developing training curriculum, processes, and documentation for both students, staff, and faculty across the university
- Training, organizing, and managing other IT Helpdesk employees
- Web Development: Building and managing departmental webpages, databases, and documentation
- Logistics and university-wide interdepartmental relations
- Public outreach and communications

Volunteer Experience

Montgomery County Animal Care and Adoption Center,
Friends of Animal Care and Control (FACC)
- Provider of enrichment and exercise for homeless and at-risk pets in the local community
- Assist with risk assessment and behavioral training, as well as training new volunteers
- Organizing adoptions, events, and fundraisers