

Steven E. Ferguson, Jr.

Oklahoma City, OK
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Education

University of Central Oklahoma, Edmond, OK

Master of Science in Engineering Physics – Mechanical Engineering May 2020
Thesis: Second Law Analysis of a Passive Micromixer with Flow Obstacles
GPA: 3.33

University of Oklahoma, Norman, OK

Bachelor of Science in Physics, Minor in Japanese May 2013
Bachelor of Science in Computer Science, Minor in Mathematics May 2010

Experience

University of Central Oklahoma, School of Engineering and Physics, Edmond, OK

Teaching Assistant August 2014-May 2020
Taught labs for University Physical Science, Physics for Scientists and Engineers 1 and 2, Intro to Engineering, Engineering Computing, and Thermal Engineering.

University of Oklahoma, Research Computing Services, Norman, OK

Student Technician February 2010-May 2015
Supported faculty, staff, and students in the College of Atmospheric and Geographic Sciences with desktop and laptop computers and printers. Assisted with troubleshooting involving audio/visual equipment for team, teleconference, and class rooms.

University of Oklahoma, Homer L. Dodge Department of Physics and Astronomy, Norman, OK

NSF Research Experience for Undergraduates Intern Summer 2012
Research topic: Searching for Eclipsing Binary White Dwarf Systems
Examined observational data of dozens of stars to analyze the light curves of those objects. Attempted to make determinations as to whether the curve might represent eclipsing star systems.

Dell, Inc., Oklahoma City, OK

Enterprise Technical Support Analyst January 2008-July 2009
Provided online chat-based warranty technical support for Dell PowerEdge branded servers and tape backup devices. Supported Basic, Silver, Gold, and Platinum warrantied customers. Worked extensively with Dell Technical Account Managers to ensure high customer satisfaction.

AES Basic Server Support Technician May 2007-December 2007

Provided phone-based warranty technical support for Dell PowerEdge servers. Supported Basic warrantied customers. Troubleshot problems to determine root cause and provided solutions or dispatched replacement parts as needed. Answered customer questions about Dell support policies and their warranty.

Skills

Coursework: Fluid Dynamics, Heat Transfer, Thermal Systems Design (HVAC), Multivariate Calculus, Differential Equations, Tensor Calculus, Physical Mechanics, Electricity and Magnetism, Quantum Mechanics, Galaxies and Cosmology, Stellar Astrophysics

Software: MS Office, MATLAB, Ansys Workbench and FLUENT, SOLIDWORKS, VisIt, MySQL, MS Visual Studio .NET, Adobe Acrobat Professional, Mathematica, puTTY, VNC

Programming: C, Python, Java, C++, SQL, HTML

Presentations and Papers

S. E. Ferguson, A. M. Gillispie, F. Abdulrahim, W. Duffie, and E. C. Lemley, “Research and Education Enabled by a High Performance Computing Cluster at a Predominately Undergraduate Institution.” Poster presented at: American Society for Engineering Education’s 124th Annual Conference & Exposition, Jun 2017.

S. E. Ferguson, E. C. Lemley, and M. R. Hossan, “Second Law Analysis of Passive Micro-Mixing in Rectangular Microchannels With Flow Obstacles,” ASME International Mechanical Engineering Congress and Exposition, vol. 7: Fluids Engineering, p. V007T09A056, Mar. 2017. Paper Presented at the International Mechanical Engineering Congress and Exposition, Nov 2016.

S. E. Ferguson, A. M. Gillispie, A. Dorety, E. C. Lemley, M. Benton, S. Riahinezhad, T. Olheiser, F. Abdulrahim, and T. W. Locke, “Embedding Computational Fluid Dynamics Industrial and Research-Scale Projects Using High-Performance Computing in an Upper-Level Engineering Physics Course.” Poster presented at: American Society for Engineering Education’s 123rd Annual Conference & Exposition, New Orleans, LA, Jun 2016.

Activities and Hobbies

Triangle Fraternity (Oklahoma Chapter President, 2006), video and tabletop games, creative writing