David Wamai

Resume

University of South Carolina
Columbia, SC
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Education

2020 - 2024 **B.S.**, Computer Science, University of South Carolina Columbia.

Research Experience

Research Assistant **Adaptive Real-Time Systems Laboratory**, University of South Carolina Columbia.

- Conducted research on real-time systems with a focus on embedded platforms and adaptive algorithms.
- Developed and tested prototypes to evaluate system performance under varying constraints.
- Collaborated with faculty and peers to publish research findings and present at academic conferences.
- Utilized various embedded hardware and software tools to implement real-time processing tasks.

Non-Academic Experience

2024 - Present **Embedded Systems Engineer**, Inventions Unlimited, LLC. Columbia, SC.

- Designed and developed embedded systems for commercial and consumer applications.
- Worked closely with cross-functional teams to integrate hardware and software solutions.
- Implemented firmware for microcontrollers and FPGAs, optimizing for low power consumption and real-time processing.
- Conducted thorough testing and debugging to ensure system stability and functionality.

Awards and Honors

May, 2023 NASA South Carolina Space Grant Consortium Undergraduate Student Research Award
May, 2023 National Science Foundation, United States Grant Number 2152896
September, 2023 National Science Foundation, United States Grant Number 2237696
April, 2024 National Science Foundation, United States Grant Number 2344357
May, 2024 McNAIR Junior Fellowship Program

Conference Proceedings

[2] Ryan Yount, Joud N. Satme, David P. Wamai, and Austin R. J. Downey. Edge processing for frequency identification on drone-deployed structural health monitoring sensor nodes. In Hoa G. Nguyen, Paul L. Muench, and Robert Diltz, editors, *Unmanned Systems Technology XXVI*, volume 13055, page 130550L. International Society for Optics and Photonics, SPIE, 2024. doi:10.1117/12.3013712

[1] AQM Zohuruzzaman, David P. Wamai, Weicong Feng, Sadik Khan, Austin R. J. Downey, Jie Wei, Erik Blasch, and Paul T. Schrader. Highway slope monitoring using 3D laser scanning at different seasons. In Kannappan Palaniappan and Gunasekaran Seetharaman, editors, *Geospatial Informatics XIV*, volume 13037, page 1303706. International Society for Optics and Photonics, SPIE, 2024. doi:10.1117/12.3016172

Posters

[4] David Wamai, Jason D. Bakos, and Austin R. J. Downey. Hardware development for a nmr signal processing instrument. pdf. URL: https://cse.sc.edu/~adowney2/publications/Posters/Wamai2024HardwareDevelopmentNmr.pdf

[3] David Wamai, Jackie Wang, Jason D. Bakos, and Austin R.J. Downey. Excitation signal generation for a compact nuclear magnetic response sensor. pdf. URL: https://cse.sc.edu/~adowney2/publications/Posters/Wang2024ExcitationSignalGeneration.pdf

[2] Jackie Wang, David Wamai, Jason D. Bakos, and Austin R.J. Downey. Development of an fpga-based signal processing system for a compact nmr measurement system part-i. pdf. URL: https://cse.sc.edu/~adowney2/publications/Posters/Wang2022DevelopmentFpgaBased.pdf

[1] David Wamai, Jackie Wang, Jason D. Bakos, and Austin R.J. Downey. Development of an fpga-based signal processing system for a compact nmr measurement system part-ii. pdf. URL: https://cse.sc.edu/~adowney2/publications/Posters/Wamai2023DevelopmentFpgaBased.pdf

Open Source Hardware

[2] ARTS-Lab. Signal processing instrument for nmr (SPIN). GitHub. URL: https://github.com/ARTS-Laboratory/signal-processing-instrument-for-NMR

[1] David Wamai, Hasan Borke Birgin, Austin Downey, and Joud Satme. Biphasic data acquisition system. GitHub. URL: https://github.com/ARTS-Laboratory/Biphasic-data-acquisition-system

Last updated on September 18, 2024