Eric Wait

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EDUCATION

PHD COMPUTER ENG.
Drexel University
2019 | Philadelphia, PA

MS COMPUTER SCIENCE
University of Wisconsin
2012 | Milwaukee, WI

BS COMPUTER SCIENCE
University of Wisconsin
2010 | Milwaukee, WI

RESEARCH

COMPUTATIONAL IMAGING
GPU-Acc. • 5-D Microscopy
- 6 peer-reviewed papers
- 4 invited talks
Published in: Nature, Nature Comm, JCS

COMPUTER VISION
Seg./Tracking • Quant. Analysis • Vis.
- 5 peer-reviewed papers
- 3 invited talks
Published in: JCB, Bioinformatics

SCIENTIFIC SOFTWARE ENG.
HPC • Cross-Platform Systems
- 4 peer-reviewed papers
- Multiple deployments across research labs
Published in: BOE, NAR

HONORS

2015 | Koerner Family Fellowship
2014&19 | Meritorious Service, USAF
2012 | Academic Excellence Award

PATENTS

2019 | Finger-worn Device, US
2019 | Wearable Robotic Devices, US
2016 | Parallel Processing, US

LANGUAGES

C/C++/C# • Python • MATLAB
Mathematica • Java • LISP • Perl • SQL
CUDA • DirectX • OpenGL • LaTeX

LINKS

Code — github.com/ericwait
Pubs — ericwait.com/pubs
In — linkedin.com/in/ericwaitinfo

EXPERIENCE

PRINCIPAL DATA SCIENTIST | Elephas Biosciences
2021–2025 | Madison, WI

- Led development of advanced imaging systems and analysis workflows, delivering faster, more reliable results for research and field use.
- Applied high-performance computing and automation to streamline microscopy data processing, reducing analysis time by 90%.
- Guided interdisciplinary teams in turning complex research needs into practical, scalable solutions adopted across multiple laboratory sites.
- Devised novel approaches to align and interpret results from different imaging modalities, revealing insights that would be missed by any single technique.

DATA SCIENTIST | HHMI, Janelia Research Campus
2017–2021 | Ashburn, VA

- Applied advanced programming, GPU optimization, and signal processing to massive time-lapse microscopy datasets, enabling faster, higher-quality analysis.
- Developed visualization and analysis workflows for state-of-the-art imaging, improving clarity and interpretability in large-scale biological studies.
- Created robust tracking and feature-extraction methods for terabyte-scale data, increasing accuracy and reliability of research findings.
- Partnered with scientists to design experiments that fully leveraged cutting-edge imaging systems for maximum scientific impact.

HPC CONSULTANT | Winter Wait Consulting LLC
2015–2019 | Sterling, VA

- Delivered high-efficiency computing solutions for large-scale transportation and logistics models, cutting runtimes from days to hours.
- Applied advanced optimization in C/C++ and Python to improve solver performance and accuracy.
- Advised leadership on system architecture and HPC resource allocation.

COMMAND POST SUPERINTENDENT | Air National Guard
1998–2019 | Minneapolis, MN

- Held **Top Secret** clearance; led mission-critical communication and coordination during wartime and humanitarian operations.
- Supervised and trained personnel in Command and Control protocols; developed Air Force-wide training systems.
- Streamlined classified information workflows under high-pressure conditions.

SELECTED PUBLICATIONS

- Liu C., **Wait E.**, et al., *Assessing cell viability with dynamic optical coherence microscopy*, Biomed. Opt. Express, 2024.
- Paul M., **Wait E.**, et al., *Mobility at DNA damage sites*, Nucleic Acids Res., 2024.
- Hari-Gupta Y., **Wait E.**, et al., *Myosin VI regulates spatial organisation of mammalian transcription initiation*, Nat. Commun., 2022.
- **Wait E.**, et al., *Hypothesis-driven quant. fluorescence microscopy*, J. Cell Biol., 2019.
- **Wait E.**, et al., *Hydra image processor: 5-D GPU analysis*, Bioinformatics, 2019.
- Valm A., **Wait E.**, et al., *Organelle interactome via spectral imaging*, Nature, 2017.