Samuel James Bader

Device Physics, Electrical Engineering, and Scientific Software

Hillsboro OR
(919) 800 7773
samuel.james.bader@gmail.com

EXPERIENCE

Intel Components Research, Hillsboro, OR — *Research Eng.*

July 2020 - present
- Coordinated test-chips, built PDK collateral, designed test-structures and evaluation circuits, created electrical test infrastructure, performed device characterization, simulated and advocated for novel designs.
- Bridged between process integration teams and circuit designers to accelerate development of next-generation wide-bandgap technologies.

X Development (Google X), Mountain View, CA — *Resident*

Summer 2019
- Initiated and developed a confidential early-stage moonshot.

Jena-Xing Group (Cornell), Ithaca, NY — *Grad. Researcher*

August 2015 - May 2020
- Led a highly-collaborative and interdisciplinary research project.
- Executed fabrication and characterization, established a new simulation framework, coordinated experiments with other research groups.
- Authored multiple papers and conference presentations.
- Organized monthly reviews for corporate funders.

Analog Devices, Wilmington, MA — *Design Intern*

May 2014 - August 2015, Summer 2016
- Developed simulation infrastructure, characterization protocols, and design recommendations for the process development team.
- Established an internal database and software platform for monitoring and analyzing electrical characterization.

EDUCATION

Cornell University, Ithaca, NY — MS, PhD *Applied Physics*

August 2015 - present
- Performed both independent and collaborative experiments, authored publications and delivered numerous talks and funding reviews.
- Supported instruction, mentored students, maintained equipment.
- Held various managerial roles in Gamma Alpha Scientific Cooperative.

Massachusetts Inst. of Technology, Boston, MA — BS *Physics*

August 2010 - May 2014
- Excelled in coursework in physics and electrical engineering.
- Internships from materials to solar energy to quantum information
- Managed dorm intramural logistics and led a new collegiate dance team.

PUBLICATION HIGHLIGHTS

Contributor to numerous journals including *Electron Device Letters*, *Physical Review Letters,* and *Science.* Speaker at major conferences including International Workshop on Nitrides, GOMACTech, and International Electron Devices Meeting. Full list at http://sambader.net/works

SKILLS

Device Modeling
- Sentaurus TCAD
- nextnano
- my custom packages
  [sambader.net/pynitride]

Gallium Nitride Devices
- HEMT fabrication
- R&D/Novel designs
- p-channel devices

Software development
- Python 8+ years
- Prior experience with many other languages and platforms.

Leading new initiatives
- Proposed, advocated, designed, and ran many projects from scratch
- Presented to and took feedback routinely from the corporate stakeholders

Learning on the Job
- Success maneuvering through multiple fields from quantum computing to custom software to wide-gap materials.

PERSONAL DATA

Preferred name: Sam

Language: English

Hobbies:
Urban dance, etymology

Personal website:
Full CV and bio online:
http://sambader.net