

Francis Sabado

Cato Springs Research Center, Fayetteville AR 72701

(479) 221-5334 | fsabado@email.uark.edu

www.fsabado.com | [Linkedin.com/in/fsabado](https://www.linkedin.com/in/fsabado)

EDUCATION

University of Arkansas – Ph.D. Computer Engineering

- GPA: 4.0 | July 2017 (Expected)
- Doctoral Academy Fellowship

University of Arkansas – M.S. Computer Engineering

- GPA: 4.0 | Dec 2015

University of Arkansas – B.S. Computer Engineering (Highest Distinction)

- GPA: 3.95 | May 2012 | Minor: Mathematics
- Dean's List, Chancellor's List, Governor Scholarship, Chancellor Scholarship

WORK EXPERIENCE

University of Arkansas Research Lab: Fayetteville, AR

Graduate Research Assistant, August 2012 – Present

- Developed software tools for designing asynchronous circuits and 3D circuits.
- Designed digital circuits and systems for ultra-low power design, asynchronous logic, and 3D ICs.
- Research Lab System Administrator, May 2014 – Present

Hewlett-Packard: Houston, TX

Software Engineer Intern, June 2015 – August 2015

- Worked on a critical infrastructure tool used by 6 internal HP teams.
- Incorporated build configurations for Jenkins for automatic build and test process.
- Developed a password manager application to support 65,000 HP Inc. employees.

University of Arkansas: Fayetteville, AR

Undergraduate Researcher, Jan 2011 – May 2012

- Research Fellowship: Analysis of Digital Circuits under Extreme Temperatures
- Android Development: SmartDrive – Cloud Enabled Mobile System for Safe Driving
- Angry Prims: Interfacing with the Virtual World via Microsoft Kinect and SecondLife

RESEARCH PROJECTS

Asynchronous Three-Dimensional Integrated Circuits (2016) – Team Lead

- Developed software tool flow for designing asynchronous 3D circuits and cell libraries.

Asynchronous Fused Floating Point Complex Multiplier (2016)

- Developed for low power applications: Radix-8 Encoded, Multi-staged/Pipelined.

MSP430 Tape-out IBM 90nm CMOS (2015)

- Led the physical design of the synchronous MSP430 circuit from RTL to GDSII.

Adaptive Hexacopter (2014)

- Fault-tolerant hexa-copter implemented using ardupilot and Nexys 4 FPGA.

Differential Power Analysis Attack and Mitigation on AES (2013)

- Hardware Security – Side channel attack using power correlation on 128-Bit AES.

More Projects @ www.fsabado.com

PUBLICATIONS

- **Francis Sabado.** "3D IC Integration," Technical Report. University of Arkansas, Dec. 2016.
- Habimana J., **Sabado, F.**, and Jia Di, "Multi-Threshold Dual-spacer Dual-rail Delay-insensitive Logic: An Improved IC Design Methodology for Side Channel Attack Mitigation". IEEE International Symposium on Circuits & Systems 2016. 11 August 2016.
- **Francis Sabado.** "Asynchronous Fused Floating Point Complex Multiplier," Technical Report, University of Arkansas, April 2015.
- Caley, L., Chien-Wei Lo, **Sabado, F.**, Jia Di, "A comparative analysis of 3D-IC partitioning schemes for asynchronous circuits," IC Design & Technology (ICICDT), 2014 IEEE International Conference on, pp.1,4, 28-30 May 2014.
- **Sabado F.** and Jia Di, "Comparison of Asynchronous and Synchronous Digital Circuits under Extreme Temperatures." State Undergraduate Research Fellowship (SURF). May 2011.

OBJECTIVE

Experienced software engineer/researcher looking for a full-time position in software engineering/research related role.

SKILLS

- **Proficient:** Java, Python, C++, VHDL, Verilog, SQL

AWARDS

- Arkansas Challenge Scholarship (2008-2012)
- Engineering Freshmen of the Year Finalist (2008)
- National Merit Corporation Scholar: Rheem (2008)
- Governor's Award for Musical Excellence (2008)
- Phillip Murray-USWA Scholar (2008)
- Asian and Pacific Islander Scholar : Wal-Mart (2008)

HONOR SOCIETY

Tau Beta Pi, Eta Kappa Nu, Phi Kappa Phi, IEEE Student Member, ACM Member

TEACHING EXPERIENCE

- Programming Foundations – Summer, Spring 2013
- Digital Design – Fall 2012

MEMBERSHIPS

- Filipino Students Organization: Secretary (2016), Treasurer (2015)
- Game Development Club: Vice President (2011)
- Hall Senator: Senator (2008-2009), Representative (2009-2012)

SELECTED COURSES

- **Graduate:** System Level Design, Integrated Circuit Design, Hardware Security, Low Power System Design, VLSI Design
- **Undergraduate:** Software Engineering, Embedded Systems, Mobile System Programming