

curriculum vitae of
Jacob Scott Laurel

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EDUCATION

Aug. 2017 – present	Ph.D. in Computer Science Advisor: Sasa Misailovic Research area: Probabilistic Programming Languages and Approximate Computing	UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
Aug. 2012 – May 2017	B.S. in Mathematics (summa cum laude) B.S.E.E in Electrical Engineering (summa cum laude)	UNIVERSITY OF ALABAMA AT BIRMINGHAM

WORK EXPERIENCE

May 2019 – Aug. 2019	Ph.D. Research Intern Mentors: Cesar Munoz and Aaron Dutle Applied Program Analysis to quantify floating point error in probabilistic programs	NASA LANGLEY RESEARCH CENTER
May 2016 – Aug. 2016	Undergraduate Research Intern Helped develop a novel video summarization technique using LSTM Deep Neural Networks. Work published in CVPR 2017	UNIVERSITY OF CENTRAL FLORIDA

PUBLICATIONS

CONFERENCE AND JOURNAL PUBLICATIONS

1. Vimuth Fernando, Keyur Joshi, **Jacob Laurel**, Sasa Misailovic. Diamont: Dynamic Monitoring of Uncertainty for Distributed Asynchronous Programs. In *21st International Conference on Runtime Verification (RV 2021)*.
2. **Jacob Laurel**, Rem Yang, Atharva Seghal, Shubham Ugare, Sasa Misailovic. Statheros: A Compiler for Efficient Low-Precision Probabilistic Programming. In *58th Design Automation Conference (DAC 2021)*.
3. **Jacob Laurel**, Sasa Misailovic. Continualization of Probabilistic Programs with Correction. In *Proceedings of the 29th European Symposium on Programming (ESOP 2020)*.
4. Aidean Sharghi, **Jacob Laurel**, Boqing Gong. Query-Focused Video Summarization: Dataset, Evaluation, and A Memory Network Based Approach. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017)*.

PRESENTATIONS

5. **Jacob Laurel**. Exact Quantification of Continuity Correction Error in Probabilistic Programs. Poster presented at *1st International Conference on Probabilistic Programming (PROBPROG 2018)*.

HONORS

2020-Present	UIUC FLIP Fellow
2017-Present	UIUC Sloan UCEM Fellowship
2012-2016	UAB Presidential Scholarship as National Hispanic Recognition Program Scholar
2015	UAB School of Engineering Undergraduate Research Award for Honors Research
2015	UAB School of Engineering Dean's Scholarship
2013	Inducted into Tau Beta Pi

SKILLS

Programming languages: C/C++, Python, Java, JavaScript/WebPPL
Software: Linux, LLVM, Pyro, Isabelle/HOL

TEACHING

Spring 2018	CS 374 Algorithms and Models of Computation
Fall 2018	CS 173 Discrete Structures
Spring 2019	CS 126 Software Design Studio
Fall 2019	CS 421 Programming Languages and Compilers

UNDERGRADUATE MENTORING

Feb. 2020-present	Rem Yang - Co-author on (2)
Mar. 2020-May 2021	Atharva Seghal - Co-author on (2)
May. 2021-present	Robert Nagel

OTHER EXPERIENCES

Summer 2018	Attended Oregon Programming Languages Summer School (<i>OPLSS</i>)
Fall 2019	Organized UIUC Software Engineering Seminar
Fall 2019	Attended Midwest PL Summit at Purdue University
Fall 2019	Attended Sloan Institute on Teaching and Mentoring Conference in Atlanta, GA
December 2020	Attended Microsoft Research Ph.D. Summit as UIUC FLIP Fellow