Jacob Scott Laurel

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EDUCATION

Aug. 2017 - present

Ph.D. in Computer Science

University of Illinois at Urbana-Champaign

Advisor: Sasa Misailovic

Research area: Probabilistic Programming Languages and Approximate Computing

Aug. 2012 - May 2017

B.S. in Mathematics (summa cum laude)

University of Alabama at Birmingham

B.S.E.E in Electrical Engineering (summa cum laude)

WORK EXPERIENCE

May 2019 - Aug. 2019

Ph.D. Research Intern

NASA Langley Research Center

Mentors: Cesar Munoz and Aaron Dutle

Applied Program Analysis to quantify floating point error in probabilistic programs

May 2016 - Aug. 2016

Undergraduate Research Intern

University of Central Florida

Helped develop a novel video summarization technique using LSTM Deep Neural Networks. Work published in CVPR 2017

PUBLICATIONS

CONFERENCE AND JOURNAL PUBLICATIONS

- Jacob Laurel, Sasa Misailovic. Continualization of Probabilistic Programs with Correction. In Proceedings of the 29th European Symposium on Programming (ESOP 2020).
- 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

3. **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 UAB School of Engineering Dean's Scholarship

2015

Inducted into Tau Beta Pi

SKILLS

 $Programming \ languages: {\tt C/C++}, {\tt Python}, {\tt JavaScript}$

Software: Linux, LLVM, Pyro, Isabelle/HOL

Jacob Scott Laurel Curriculum Vitæ

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

OTHER EXPERIENCES

Summer 2018 Attended Oregon Programming Languages Summer School (OPLSS)

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