

DWAYNE CHRISTIAN BROWN, JR. (“CHRIS”)

ASSISTANT PROFESSOR | DEPARTMENT OF COMPUTER SCIENCE | VIRGINIA TECH

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EDUCATION

North Carolina State University 2015 - 2021

Ph.D. in Computer Science

Dissertation: *Digital Nudges for Encouraging Developer Actions*

Advised by Dr. Chris Parnin

North Carolina State University 2015 - 2017

M.S. in Computer Science

Duke University 2009 - 2013

B.S. in Computer Science, with Distinction

Minor in African and African American Studies

ADDITIONAL EDUCATION

North Carolina State University 2019 - 2021

Teaching and Communication Graduate Certificate

EMPLOYMENT HISTORY

Virginia Polytechnic Institute and State University (Virginia Tech) Blacksburg, VA

Assistant Professor, Fall 2021 - present

North Carolina State University (NC State) Raleigh, NC

Research Assistant, Fall 2016 - Spring 2021

Teaching Assistant, Fall 2015 - Spring 2016

Red Hat Raleigh, NC

Quality Engineering Intern, Summer 2018

Quality Engineering Intern, Summer 2017

Blackbaud Charleston, SC

Software Quality Engineer Intern, Summer 2016

Bank of America Charlotte, NC

Python Developer, July 2013 - July 2015

PUBLICATIONS

(My name is bolded and italicized. Underlined names are students directly supervised by me.)

Journal Publications

[J1] Peipei Wang, ***Chris Brown***, Jamie A. Jennings, Kathryn T. Stolee. *Demystifying Regular Expression Bugs: A comprehensive study on regular expression bug causes, fixes, and testing*. Empirical Software Engineering (EMSE 2022). <https://doi.org/10.1007/s10664-021-10033-1>

Conference Publications

[C1] ***Chris Brown***, Chris Parnin. *Understanding the Impact of GitHub Suggested Changes on Recommendations Between Developers*. Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020). <https://doi.org/10.1145/3368089.3409722>

[C2] Peipei Wang, ***Chris Brown***, Jamie A. Jennings, Kathryn T. Stolee. *An Empirical Study on Regular Expression Bugs*. International Conference on Mining Software Repositories (MSR 2020). <https://doi.org/10.1145/3379597.3387464>

- [C3] Peng Sun, **Chris Brown**, Ivan Beschastnikh, Kathryn T. Stolee. *Mining Specifications from Documentation Using a Crowd*. International Conference on Software Analysis, Evolution and Reengineering (SANER 2019). <https://doi.org/10.1109/SANER.2019.8668025>
- [C4] **Chris Brown**, Justin Middleton, Esha Sharma, Emerson Murphy-Hill. *How Software Users Recommend Tools to Each Other*. Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2017). <https://doi.org/10.1109/VLHCC.2017.8103460>
- [C5] Justin Smith, **Chris Brown**, Emerson Murphy-Hill. *Flower: Navigating Program Flow in the IDE*. Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2017). <https://doi.org/10.1109/VLHCC.2017.8103445>
- [C6] Susan H. Rodger, **Dwayne Brown**, Michael Hoyle, Daniel MacDonald, Michael Marion, Elizabeth Onstwedder, Bella Onwumbiko, Edwin Ward. *Weaving Computing into all Middle School Disciplines*. Innovation and Technology in Computer Science Education (ITiCSE 2014). <https://doi.org/10.1145/2591708.2591754>

Workshop Publications

- [W1] **Chris Brown**, Chris Parnin. *Dark Patterns for Influencing Developer Behavior*. What Can CHI Do About Dark Patterns? Workshop in conjunction with CHI (Dark Patterns 2021).
- [W2] **Chris Brown**, Chris Parnin. *Nudging Students Toward Better Software Engineering Behaviors*. International Workshop on Bots in Software Engineering in conjunction with ICSE (BotSE 2021).
- [W3] **Chris Brown**, Chris Parnin. *Comparing Different Developer Behavior Recommendation Styles*. International Workshop on Cooperative and Human Aspects of Software Engineering in conjunction with ICSE (CHASE 2021). <https://doi.org/10.1145/3387940.3391481>
- [W4] **Chris Brown**, Chris Parnin. *Sorry to Bother You Again: Developer Recommendation Choice Architectures for Designing Effective Bots*. International Workshop on Bots in Software Engineering in conjunction with ICSE (BotSE 2020). <https://doi.org/10.1145/3387940.3391506>
- [W5] **Chris Brown**, Chris Parnin. *Sorry to Bother You: Designing Bots for Effective Recommendations*. International Workshop on Bots in Software Engineering in conjunction with ICSE (BotSE 2019). <https://doi.org/10.1109/BotSE.2019.00021>
- [W6] Susan H. Rodger, Steve Cooper, Wanda Dann, **Dwayne C. Brown**, Jacobo Carrasquel. *Experimenting with and Integrating Alice 2.3 into many disciplines (abstract only)*. Special Interest Group on Computer Science Education (SIGCSE 2013). <https://doi.org/10.1145/2445196.2445513>

Doctoral Symposia

- [DS1] **Chris Brown**. *Nudges for Encouraging Developer Actions*. International Conference on Software Engineering: Companion Proceedings (ICSE 2019). <https://doi.org/10.1109/ICSE-Companion.2019.00082>

Poster Publications

- [P1] Susan H. Rodger, **Dwayne C. Brown**, Michael Hoyle, Michael Marion. *Integrating Computer Science into Middle School Mathematics*. Special Interest Group on Computer Science Education (SIGCSE 2013). <https://doi.org/10.1145/2445196.2445424>

TEACHING

(I am the instructor of record unless otherwise specified.)

Virginia Tech

Spring 2022 CS 5704: Software Engineering

NC State

Summer 2020 CSC116: Introduction to Computing - Java*
Spring 2016 CSC216: Java Programming Concepts (TA)
Fall 2015 CSC326: Software Engineering (TA)

MISCELLANEOUS

The Coding School

Python Instructor

Summer 2019

Virtual

- Tutored a high school student through the codeConnects teaching and mentorship summer program for underrepresented minorities in STEM.

SERVICE

External Service

Research Journals

Reviewer, PeerJ Computer Science 2021
Reviewer, IEEE Transactions on Software Engineering (TSE) 2021

Program Committees

International Workshop on Bots in Software Engineering (BotSE) 2021, 2022

Internal Service

Department of Computer Science

Member, PhD Qualifying Exam Committee 2022

Virginia Tech

Member, Future Faculty Diversity Program (2020 Cohort)
Member, Black Faculty Caucus

PRESENTATIONS

Invited Talks

- [T1] *Sorry to Bother You! Effective OSS Recommendations*. DevConf.US Open Source Community Conference, August 17, 2019. Boston, MA.
- [T2] *How to Improve Software Tool Discovery and Usage*. Red Hat QECampX, October 10, 2018. Raleigh, NC.
- [T3] *How Software Users Recommend Tools to Each Other*. Laboratory for Analytic Sciences (LAS) Wednesday Research Meeting, November 29, 2017. Raleigh, NC.

Panels

- [P1] *VT Academic Jobs Panel*. Virginia Tech CS Grad Council, December 2, 2021. Blacksburg, VA.
- [P2] *NC State Career Retreat: Success Stories*. NC State Graduate School Professional Development Team, July 16, 2021. Virtual.*
- [P3] *Undergraduate Research Conference Panel*. North Carolina Louis Stokes Alliance for Minority Participation (NC-LSAMP) conference. November 11, 2017. Raleigh, NC.

ADVISING

Thesis Advisory Committees

- Alex Hicks (PhD)
- Ming Chen (MS)
- Divyansh Mishra (MS)
- Mahir Asef Kabir (PhD)
- Miles Frantz (PhD)

PhD Advisees

Shawal Kahlid Spring 2022 - present

MS Advisees

Sean Gruber Fall 2021 - present

Nivishree Palvannan Fall 2021 - present

Undergraduate Researchers

Grace Govan Fall 2021 - present

* Virtual due to COVID-19