

FRANCESKA XHAKAJ

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EDUCATION

- 2015 - present **Ph.D. Human-Computer Interaction**
Human-Computer Interaction Institute, School of Computer Science
Carnegie Mellon University, Pittsburgh, PA
Advisors: Amy Ogan & Vincent Aleven
Research Interest: Using Personal Informatics to support teaching at the university level
- 2015 - 2017 **M.S. Human-Computer Interaction**
Human-Computer Interaction Institute, School of Computer Science
Carnegie Mellon University, Pittsburgh, PA
- 2015 - present **PIER Associate**
Program for Interdisciplinary Education Research funded by IES (Institute of Education Sciences)
- 2011 - 2015 **B.S. Computer Science**
GPA: 3.92/4.00 **Lafayette College**, Easton, PA
Minor in Mathematics
Summa Cum Laude, Honors in Computer Science
Thesis: Intelligent tutors and granularity: A new approach to Red Black Trees.
Advisor: Dr. Chun Wai Liew

RESEARCH EXPERIENCE

▲ Carnegie Mellon University

- 2018 *Project:* Improving Introductory Computer Programming Instruction by Supporting Conceptual Learning with an ITS
with Dr. Vincent Aleven
- 2015 - 2018 *Project:* Helping Teachers Help Students: Teacher's Use of ITS Analytics to Improve Learning
with Dr. Vincent Aleven and Dr. Bruce M. McLaren
- Summer 2015 *Project:* Integrating Errors into the Lynnette Cognitive Tutor
with Dr. Vincent Aleven
- Summer - Fall 2014 *Project:* Integrating Intelligent Tutoring Systems in MOOCs
Undergraduate Student Researcher with Dr. Vincent Aleven

▲ Other Research Experience

- Spring 2014 *Project:* Tutors to support geology field projects
EXCEL Student Researcher with Dr. Chun Wai Liew at **Lafayette College**
- January 2013 *Project:* Computational Modeling of Fish Evolution
EXCEL Student Researcher with Dr. Chun Wai Liew at **Lafayette College**
- Summer 2012 *Project:* Using HMM and the Viterbi Algorithm on the Iterated Diner's Dilemma game
EXCEL Student Researcher with Dr. Chun Wai Liew at **Lafayette College**
- Summer 2013 *Project:* Studying the dynamic behavior of JavaScript objects
Undergraduate Student Researcher with Dr. Barbara G. Ryder at **Virginia Tech**
PROLANGS@VT research group

CONFERENCE PUBLICATIONS

1. **Xhakaj, F.**, & Aleven, V. (2018). Towards Improving Introductory Computer Programming with an ITS for Conceptual Learning. In *International Conference on Artificial Intelligence in Education*, pp. 535-538.
2. Bodily, R., Kay, J., Aleven, V., Davis, D., Jivet, I., **Xhakaj, F** & Verbert, K. (2018) Open learner models and learning analytics dashboards: A systematic review. In *Proceedings of the International Conference on Learning Analytics and Knowledge*, pp. 41-50.
3. **Xhakaj, F.**, Aleven, V., McLaren, B.M. (2017). Effects of a Teacher Dashboard for an Intelligent Tutoring System on Teacher Knowledge, Lesson Planning, Lessons and Student Learning. In *Proceedings of the European Conference on Technology Enhanced Learning*, pp. 315-329.
4. **Xhakaj, F.**, Aleven, V., McLaren, B.M. (2017). Effects of a dashboard for an intelligent tutoring system on teacher knowledge, lesson plans and class sessions. In *Proceedings of the International Conference on Artificial Intelligence in Education*, pp. 582-585.
5. **Xhakaj, F.**, Aleven, V., McLaren, B.M. (2016). How teachers use data to help students learn: Contextual Inquiry for the design of a dashboard. In *Proceedings of the European Conference on Technology Enhanced Learning*, pp. 340-354.
6. Aleven, V., **Xhakaj, F.**, Holstein, K., & McLaren, B. M. (2016). Developing a teacher dashboard for use with intelligent tutoring systems. In *Proceedings of the International Workshop on Teaching Analytics at the European Conference On Technology Enhanced Learning*.
7. Holstein, K., **Xhakaj, F.**, Aleven, V., & McLaren, B. M. (2016). Luna: A dashboard for teachers using intelligent tutoring systems. In *Proceedings of the International Workshop on Teaching Analytics at the European Conference On Technology Enhanced Learning*.
8. Aleven, V., Sewall, J., Popescu, O., **Xhakaj, F.**, Chand, D., Baker, R. S., & Gasevic, D. (2015). The beginning of a beautiful friendship? Intelligent tutoring systems and MOOCs. In *Proceedings of the International Conference on Artificial Intelligence in Education*, pp. 525–528.
9. Liew, C. W., & **Xhakaj, F.** (2015). Teaching a complex process: Insertion in Red Black Trees. In *Proceedings of the International Conference on Artificial Intelligence in Education*, pp. 698–701.
10. **Xhakaj, F.**, & Liew, C. W. (2015). A new approach to teaching Red Black Trees. In *Proceedings of the Conference on Innovation and Technology in Computer Science Education, ITiCSE '15*, pp. 278–283.

JOURNAL PUBLICATIONS

1. Wei, Sh., **Xhakaj, F.**, & Ryder, B.G. (2015) Empirical Study of the Dynamic Behavior of JavaScript Objects. *Journal of Software: Practice and Experience*, 46, 7, 867–889.

UNPUBLISHED SENIOR THESIS

1. **Xhakaj, F.** (2015). Intelligent tutors and granularity: A new approach to Red Black Trees. Unpublished senior thesis, Department of Computer Science, Lafayette College, Easton, Pennsylvania. USA.

TEACHING AND MENTORING EXPERIENCE

▲ Carnegie Mellon University

Instructor	Principles of Computing (15-110) , Summer 2 2019
Head TA	User-Centered Research and Evaluation (UCRE) , Fall 2018 Took part in course and curriculum redesign including: deciding topics/concepts to cover during the course, creating learning goals for the projects and individual assignments, structuring projects and assignments over the semester. Created some assignments, projects and questions in the final exam and designed grading rubrics for assignments/the exam. Taught recitation of 20 students, supervised and graded individual and group student work, held office hours.
TA	Programming Usable Interfaces (PUI) , Spring 2018 Taught recitation of 20 students, designed some labs and homework assignments, created some quiz and exam questions, graded student work, held office hours.
Mentor	Undergraduate Independent Study , Fall 2018, Spring 2019 Mentored two undergraduate students in their Independent Study projects.
Guest Lecture	Programming Usable Interfaces (PUI) , Spring 2018 Lecture on some user-centered design methods and examples of their use in my own research.

- Mentor [LearnLab Summer School at CMU, ITS Track, Summer 2015 - 2018](#)
Mentored groups of students in developing Intelligent Tutoring Systems for various domains.
- Mentor **Research Experience for Undergraduates (REU), Summer 2016**
Mentored five students as they conducted research and software development over the summer.
- ▲ **Lafayette College**
- TA **Algorithms and Data Structures (CS150), 2013 - 2014**
Led and oversaw lab sessions, built some assignments and lab worksheets.

AWARDS AND HONORS

- 2015 Summa Cum Laude, Honors in Computer Science, Lafayette College
- 2014 Upsilon Pi Epsilon Scholarship Award, Lafayette College
- 2014 James P. Schwar Prize, Lafayette College
- 2011 - 2015 Walter Oechsle Scholarship, Lafayette College
- 2012, 2013 Grace Hopper Celebration of Women in Computing Scholarship, Grace Hopper Conference

LEADERSHIP AND SERVICE

- ▲ **Carnegie Mellon University**
- 2019 - present Director of Community Building for Teaching and CS Education at CMU
Working with Teaching Track faculty and students to build and develop a community at CMU for faculty and students who are interested in teaching and CS Education
- 2017 - present Women in SCS, organizing committee
- 2017 - 2018 SCS4All Initiative, organizing committee
- 2017 Opportunities for Undergraduate Research in Computer Science (OurCS) Organizer
- 2015, 2019 HCII Prospective Ph.D. Student Open House Organizer
- ▲ **Lafayette College**
- 2012-2015 Women in Computing, Founder and President
- 2014-2015 Upsilon Pi Epsilon Club, President

SKILLS

- Programming Languages Java, Python, JavaScript, HTML, CSS, C++, C, R, Jess, Intel IA32
- Tools CTAT, Django, Ajax, jQuery, Heroku, NodeJs, SQLite, LaTeX, Mathematica, WordPress, Sketch, InVision, Adobe: Photoshop, Flash Player, InDesign
- Research Methods Contextual Inquiry, Interpretation Sessions, Affinity Diagramming, Speed Dating, Storyboarding, Prototyping, Think Alouds, Classroom Studies
- Languages English, Albanian, Italian, French, Greek, Korean