EMILY HASTINGS

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EDUCATION

University of Illinois, Urbana-Champaign, IL

Ph.D. in Computer Science (in progress, expected graduation 2022) **2016-Present**

M.S. in Computer Science **2016-2019**

Specialization: Human-Computer Interaction

Advisor: Brian Bailey

Research Interests: team formation, crowdsourcing, algorithm awareness, CS education

Courses included: user interface design, human-computer interaction, experimental methods, educational technology, social media and signals, models of cognitive processes, data mining, educational game design

Knox College, Galesburg, IL

B.A. in Computer Science, *summa cum laude* **2012-2016**

Independent Minor: Renaissance and Medieval Studies

Courses included: data structures, hardware organization, information management, algorithm design, graphics, parallel programming, software engineering, networking, operating systems, artificial intelligence

RESEARCH EXPERIENCE

Current Project:

University of Illinois, Urbana-Champaign, IL

Research Assistant **Fall 2016 – Present**

Advisor: Brian Bailey

Working individually and with a team to investigate issues concerning the use of algorithmic team formation tools.

Previous Projects:

National Institute of Standards and Technology, Gaithersburg, MD

Guest Researcher/GMSE Fellow **Summer 2018 – 2020**

Advisors: Michael Brundage, Thurston Sexton

Worked with Knowledge Extraction Application team in Engineering Laboratory toward quantifying human skill level from historical data and improving team formation for maintenance.

University of Illinois, Urbana-Champaign, IL
Beyond the Black Box Research Team Member **2018 – 2019**
Advisors: Karrie Karahalios (UIUC), Christian Sandvig (UMich)
Worked with a team across multiple universities to conduct a large-scale study on algorithmic literacy and awareness.

Knox College, Galesburg, IL
Research Assistant **Summer 2015**
Advisor: Jaime Spacco
Worked with a team to develop Knoxcraft (https://github.com/knoxcraft), a system that allows students to use Java/Python code to build structures in the game Minecraft.

Knox College, Galesburg, IL
Research Assistant **Summer 2014**
Advisor: David Bunde
Worked with a team to develop materials to help teach parallel programming at Knox and other institutions.

Knox College, Galesburg, IL
Research Assistant **Summer 2013**
Advisor: David Bunde
Worked with a team to investigate task mapping and cabling methods for the Dragonfly interconnect topology.

TEACHING EXPERIENCE

University of Illinois
Teaching Assistant for "User Interface Design" **2021**
Ran design studio sections, gave feedback on and evaluated course projects, developed exams, and held office hours.

Knox College
Teaching Assistant for "Introduction to Computer Science" and "Program Design and Methodology" **2014-2016**
Assisted professors during lab sessions, graded homework, lab assignments, and quizzes, and held office hours.

Teaching Assistant in the Costume Shop **2013-2014**
Built garments for college theatrical shows, mentored students on individual projects, and presented costume research to classes.

PUBLICATIONS AND PAPERS

Emily M. Hastings, Albatool Alamri, Andrew Kuznetsov, Christine Pisarczyk, Karrie Karahalios, Darko Marinov, and Brian P. Bailey. 2020. LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation. In *Proceedings of the 2020 CHI Conference on*

Human Factors in Computing Systems (*CHI '20*). Association for Computing Machinery, New York, NY, USA, 1–13. https://doi.org/10.1145/3313831.3376797

Hastings, E., Sexton, T., Brundage, M. P., & Hodkiewicz, M. (2019). Agreement Behavior of Isolated Annotators for Maintenance Work-Order Data Mining. *Proceedings of the Annual Conference of the PHM Society, 11*(1). https://doi.org/10.36001/phmconf.2019.v11i1.791

Emily M. Hastings, Farnaz Jahanbakhsh, Karrie Karahalios, Darko Marinov, and Brian P. Bailey. 2018. Structure or Nurture? The Effects of Team-Building Activities and Team Composition on Team Outcomes. *Proc. ACM Hum.-Comput. Interact*. 2, CSCW, Article 68 (November 2018), 21 pages. https://doi.org/10.1145/3274337

E. Hastings, D. Rincon-Cruz, M. Spehlmann, S. Meyers, A. Xu, D. P. Bunde, and V. J. Leung, "Comparing global link arrangements for dragonfly networks," in *2015 IEEE International Conference on Cluster Computing*, Sept 2015, pp. 361–370.

PRESENTATIONS AND POSTERS

LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation
ACM CHI Conference on Human Factors in Computing Systems **2020**

Structure or Nurture? The Effects of Team-Building Activities and Team Composition on Team Outcomes
ACM Conference on Computer-Supported Cooperative Work **2018**

The History and Construction of Elizabethan English Costume
Knox College Presentation of Independent Study Research **2016**

Knoxcraft: Teaching Introductory Programming with Minecraft (poster)
Knox College Horizons Celebration of Student Research **2016**

Knoxcraft: Teaching Introductory Programming with Minecraft
Knox College Summer Science Seminar Series **2015**

Adventures in Parallel Programming (poster)
Knox College Horizons Celebration of Student Research **2015**

Adventures in Parallel Programming (Best Student Seminar Award)
Knox College Summer Science Seminar Series **2014**

The History and Construction of Elizabethan English Costume (poster)
Knox College Horizons Celebration of Student Research **2014**

Dragonfly Interconnect Topology (poster)
Knox College Horizons Celebration of Student Research **2014**

Dragonfly Interconnect Topology
Knox College Summer Science Seminar Series **2013**

AWARDS AND HONORS

Invited participant to EECS Rising Stars 2020, *UC Berkeley* **2020**
Mavis Future Faculty Fellowship, *University of Illinois* **2020-2021**
Graduate Measurement Science and Engineering Fellowship, *NIST/GFSD* **2018-2020**
Phi Beta Kappa, *Knox College* **2016**
E. Inman Fox Prize, *Knox College* **2016**
Paul's Prize in Computer Science, *Knox College* **2016**
Howard A. Wilson Prize in Literary Criticism (2nd Place), *Knox College* **2016**
ASSET Scholar, *Knox College* **2015-2016**
Ron Asplund Memorial Research Award, *Knox College* **2014**
National Merit Scholar, *Knox College* **2012-2016**

SKILLS

Microsoft Office, Google App Suite, Windows, Eclipse, Github

Programming languages (high proficiency): Java

Programming languages (some experience): Python, C/C#, SQL, HTML/CSS, Javascript/JQuery, PHP, Android development, game development in Unity

Knowledge of research methodologies

Knowledge of statistical analysis techniques, R

Writing and presenting reports

English (native language)

Elementary proficiency in French and Latin

SERVICE AND LEADERSHIP

Association for Computing Machinery
Reviewer for ACM CHI **2020-present**

Behaviour & Information Technology (Journal)
Reviewer **2020-present**

Association for Computing Machinery
Reviewer for ACM CSCW **2019-present**

University of Illinois
Girls Who Code Facilitator **2017**
Assisting students during weekly club meetings.

Engineers Volunteering in STEM Education (ENVISION) **2016-2017**
Led school age children in STEM-related activities.

Knox College
Teaching Assistant for Knox College 4 Kids **2011-2013**
Assisted teachers for three summers teaching knitting, crochet, weaving, French, and Harry Potter classes to school-age children.

MEMBERSHIPS

Student member of the Association for Computing Machinery (ACM)
Student member of ACM Special Interest Group on Human-Computer Interaction
Phi Beta Kappa Honor Society
UIUC Graduate Society of Women Engineers