EMILY HASTINGS

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EDUCATION

University of Illinois, Urbana-Champaign, IL
Ph.D. in Computer Science **2016-2023**
M.S. in Computer Science **2016-2019**
Specialization: Human-Computer Interaction
Advisors: Brian Bailey, Karrie Karahalios
Research Interests: team formation, CS education, algorithm awareness, crowdsourcing
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

University of Wisconsin-Eau Claire, Eau Claire, WI
Assistant Professor **Fall 2023 – Present**
Conducting research in the areas of human-computer interaction and computer science education.

University of Illinois, Urbana-Champaign, IL
Research Assistant **Fall 2016 – Spring 2023**
Advisor: Brian Bailey
Worked individually and with a team to investigate issues concerning the use of algorithmic team formation tools.

National Institute of Standards and Technology, Gaithersburg, MD
Guest Researcher/GMSE Fellow **Summer 2018 – 2020**
Advisors: Michael Brundage, Rachael 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 Wisconsin-Eau Claire
Assistant Professor **2023-Present**
Responsible for courses CS 145 Programming for New Programmers, CS 146 The Big Picture in Computer Science, and CS 335 Algorithms.

University of Illinois
Teaching Assistant for "User Interface Design" **2021-2022**
Ran design studio sections, gave feedback on and evaluated course projects, developed exams, and held office hours. Ranked as Excellent by Students (evaluation: 4.49/5).

Certificate in Foundations of Teaching **2021**
Participated in eight hours of teaching development workshops; had an observation of, and reflected on, my teaching; explored literature on teaching; observed an experienced instructor; and wrote a teaching philosophy statement.

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, Vidushi Ojha, Benedict V. Austriaco, Karrie Karahalios, and Brian P. Bailey. 2023. Composing Team Compositions: An Examination of Instructors' Current Algorithmic Team Formation Practices. *Proc. ACM Hum.-Comput. Interact. 7*, CSCW2, Article 305 (October 2023), 24 pages. https://doi.org/10.1145/3610096

Emily M. Hastings, Sneha R. Krishna Kumaran, Karrie Karahalios, and Brian P. Bailey. 2022. A Learner-Centered Technique for Collectively Configuring Inputs for an Algorithmic Team Formation Tool. In *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education V. 1 (SIGCSE 2022).* Association for Computing Machinery, New York, NY, USA, 969–975. DOI:https://doi.org/10.1145/3478431.3499331.

Reslan, M., **Hastings, E.,** Brundage, M. P., & Sexton, T. (2021). A Data-Driven Framework for Team Formation for Maintenance Tasks. *IJPHM, 12*, 003.

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

Composing Team Compositions: An Examination of Instructors' Current Algorithmic Team Formation Practices
ACM Conference on Computer-Supported Cooperative Work **2023**

Supporting Instructor Decisions on Algorithmic Team Formation through Integrating Stakeholder Voices
Bradley University CSIS Colloquium **2022**

Supporting Instructor Decisions on Algorithmic Team Formation through Integrating Stakeholder Voices
University of Wisconsin-Eau Claire CS Colloquium **2022**

Supporting Instructor Decisions on Algorithmic Team Formation through Integrating Stakeholder Voices
Lawrence University MSCS Colloquium **2022**

Supporting Instructor Decisions on Algorithmic Team Formation through Integrating Stakeholder Voices
St. Olaf College MSCS Colloquium **2022**

A Learner-Centered Technique for Collectively Configuring Inputs for an Algorithmic Team Formation Tool
ACM Technical Symposium on Computer Science Education **2022**

LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation
Knox College Computer Science Colloquium **2021**

LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation (poster)
EECS Rising Stars **2020**

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

List of Teachers Ranked as Excellent, *University of Illinois* **2021, 2022**
Tau Beta Pi, *University of Illinois* **2021**
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, IntelliJ, 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

Learning management systems: Canvas, Blackboard Learn, Moodle

Writing and presenting reports

English (native language)

Elementary proficiency in French and Latin

SERVICE AND LEADERSHIP

Institute of Electrical and Electronics Engineers

Reviewer for IEEE EIT **2024-present**

Registration Co-chair for IEEE EIT 2024 **2023-2024**

Behaviour & Information Technology (Journal)

Reviewer **2020**

Association for Computing Machinery

Reviewer for ACM CHI **2020-present**

Reviewer for ACM CSCW **2019-present**

University of Illinois

CS STARS Research Mentor **2022**
Supervised undergraduate student research project.

Grad Academy Small Group Leader **2021**
Co-led a training session for new CS teaching assistants.

Girls Who Code Facilitator **2017**
Assisted 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

Association for Computing Machinery (ACM)
ACM Special Interest Group on Computer-Human Interaction
Phi Beta Kappa Honor Society
Tau Beta Pi Honor Society