

EMILY HASTINGS

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EDUCATION

University of Illinois, Urbana-Champaign, IL

Ph.D. in Computer Science (in progress, expected graduation 2023) **2016-Present**

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

Area: Human-Computer Interaction

Dissertation Title: Supporting Instructor Decisions on Algorithmic Team Formation through Integrating Stakeholder Voices

Advisors: Brian Bailey, Karrie Karahalios

Knox College, Galesburg, IL

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

Independent Minor: Renaissance and Medieval Studies

SELECTED 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

Advisor: Jaime Spacco

Worked with a team to develop Knoxel (<https://github.com/knoxcraft>), a system that allows students to use Java/Python code to build structures in the game Minecraft.

Summer 2015 – 2016

Knox College, Galesburg, IL

Research Assistant

Advisor: David Bunde

Worked with a team to develop materials to help teach parallel programming at Knox and other institutions.

Summer 2014

Knox College, Galesburg, IL

Research Assistant

Advisor: David Bunde

Worked with a team to investigate task mapping and cabling methods for the Dragonfly interconnect topology.

Summer 2013

SELECTED TEACHING EXPERIENCE

University of Illinois

Teaching Assistant for “User Interface Design”

Teach design studio sections, mentor students on course projects, develop exams, and hold office hours. Ranked as Excellent by Students (evaluation: 4.47/5).

2021-Present

Certificate in Foundations of Teaching

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.

2021

Knox College

Teaching Assistant for “Introduction to Computer Science” and “Program Design and Methodology”

Assisted professors during lab sessions; graded homework, lab assignments, and quizzes; and held office hours.

2014-2016

Teaching Assistant in the Costume Shop

Built garments for college theatrical shows, mentored students on individual projects, and presented costume research to classes.

2013-2014

PUBLICATIONS AND PAPERS

- Hastings, E. M.**, Krishna Kumaran, S. R., Karahalios, K., & Bailey, B. P. (2022, February). 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* (pp. 969-975).
- Reslan, M., **Hastings, E. M.**, Brundage, M. P., & Sexton, T. (2021). A Data-Driven Framework for Team Formation for Maintenance Tasks. *International Journal of Prognostics and Health Management*, 12(1).
- Hastings, E. M.**, Alamri, A., Kuznetsov, A., Pisarczyk, C., Karahalios, K., Marinov, D., & Bailey, B. P. (2020, April). LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-13).
- Hastings, E. M.**, Sexton, T., Brundage, M. P., & Hodkiewicz, M. (2019, September). Agreement Behavior of Isolated Annotators for Maintenance Work-Order Data Mining. In *Proc. of the Annual Conference of the Prognostics and Health Management Society* (pp. 1-7).
- Hastings, E. M.**, Jahanbakhsh, F., Karahalios, K., Marinov, D., & Bailey, B. P. (2018). Structure or Nurture? The Effects of Team-building Activities and Team Composition on Team Outcomes. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW), 1-21.
- Hastings, E.**, Rincon-Cruz, D., Spehlmann, M., Meyers, S., Xu, A., Bunde, D. P., & Leung, V. J. (2015, September). Comparing Global Link Arrangements for Dragonfly Networks. In *2015 IEEE International Conference on Cluster Computing* (pp. 361-370). IEEE.

PRESENTATIONS AND POSTERS

- 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)
Rising Stars in EECS Workshop **2020**
- LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation*
ACM CHI Conference on Human Factors in Computing Systems **2020**

<i>Structure or Nurture? The Effects of Team-Building Activities and Team Composition on Team Outcomes</i>	ACM Conference on Computer-Supported Cooperative Work	2018
<i>The History and Construction of Elizabethan English Costume</i>	Knox College Presentation of Independent Study Research	2016
<i>Knoxcraft: Teaching Introductory Programming with Minecraft</i> (poster)	Knox College Horizons Celebration of Student Research	2016
<i>Knoxcraft: Teaching Introductory Programming with Minecraft</i>	Knox College Summer Science Seminar Series	2015
<i>Adventures in Parallel Programming</i> (poster)	Knox College Horizons Celebration of Student Research	2015
<i>Adventures in Parallel Programming</i> (Best Student Seminar Award)	Knox College Summer Science Seminar Series	2014
<i>The History and Construction of Elizabethan English Costume</i> (poster)	Knox College Horizons Celebration of Student Research	2014
<i>Dragonfly Interconnect Topology</i> (poster)	Knox College Horizons Celebration of Student Research	2014
<i>Dragonfly Interconnect Topology</i>	Knox College Summer Science Seminar Series	2013
<i>The History and Construction of Elizabethan English Costume</i>	Knox College Presentation of Independent Study Research	2013

AWARDS AND HONORS

List of Teachers Ranked as Excellent, <i>University of Illinois</i>	2021
Tau Beta Pi, <i>University of Illinois</i>	2021
Invited participant to EECS Rising Stars 2020, <i>UC Berkeley</i>	2020
Mavis Future Faculty Fellowship, <i>University of Illinois</i>	2020-2021
Graduate Measurement Science and Engineering Fellowship, <i>NIST/GFSD</i>	2018-2020
Phi Beta Kappa, <i>Knox College</i>	2016
E. Inman Fox Prize, <i>Knox College</i>	2016
Paul's Prize in Computer Science, <i>Knox College</i>	2016
Howard A. Wilson Prize in Literary Criticism (2nd Place), <i>Knox College</i>	2016
ASSET Scholar, <i>Knox College</i>	2015-2016
Thalia Manganari Papavas '50 Research Award, <i>Knox College</i>	2015
Ron Asplund Memorial Research Award, <i>Knox College</i>	2014
National Merit Scholar, <i>Knox College</i>	2012-2016

SKILLS

Knowledge of research methodologies

Knowledge of statistical analysis techniques, R

Programming languages (high proficiency): Java

Programming languages (some experience): Python, C/C#, SQL, HTML/CSS, Javascript, PHP

Some experience with Android app development, game development in Unity/Blender

Microsoft Office, Google App Suite, Windows, Github

Learning management systems: Canvas, Blackboard Learn, Moodle

Citation management software: Endnote, Mendeley

Rapid prototyping tools: Balsamiq, Figma

Writing and presenting reports

Languages: English (native language), French (elementary)

SELECTED 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**

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 (SIGCHI)

Phi Beta Kappa Honor Society

UIUC Graduate Society of Women Engineers (GradSWE)

Tau Beta Pi Honor Society (Active Member)