

AUSTIN TOOMBS

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Education

- May 2016 **Indiana University—Bloomington, IN**
Ph.D. Informatics, Human Computer Interaction Design
Minor: Inquiry Methodology
Dissertation: *Care and the Construction of Hacker Identities, Communities, and Society*
Co-chairs: Jeffrey Bardzell and Shaowen Bardzell
- May 2012 **Indiana University—Bloomington, IN**
M.S. Human Computer Interaction Design
- May 2010 **Ball State University—Muncie, IN**
B.S. Computer Science
Minor: Mathematics

Professional and Teaching Experience

- 2017—Present **Assistant Professor, Purdue University**
Department of Computer Graphics Technology, Purdue Polytechnic Institute
- 2016—2017 **Research Associate, Newcastle University**
Postdoctoral researcher at Open Lab
- 2016 **Adjunct Faculty, Indiana University—Purdue University Indianapolis (IUPUI)**
INFO-H564 Prototyping for Interactive Systems
- 2015 **Lecturer, Indiana University**
INFO-I310 Multimedia Arts and Technology
- 2011—2015 **Graduate Research Assistant, Indiana University**
Developed physical prototypes and data visualizations. Conducted interviews, focus groups, and a long-term ethnography. Created, organized, and led design and research workshops. Analyzed and coded qualitative data.
- 2010—2013 **Associate Instructor, Indiana University**
INFO-I494 Informatics Capstone
INFO-I542 Foundations of HCI
INFO-I590 Advanced Prototyping. Developed curriculum and taught physical computing concepts using Arduino, Intel Perceptual Camera, and Lilypad.
- Summer 2011 **Intern of Applied Research, LexisNexis**
Developed interactive and dynamic mockups for mobile versions of LexisNexis systems. Developed information visualization techniques to be used in analyzing user experience reports. Translated user experience reports into interaction design implications.
- 2010 **Teaching Assistant, Ball State University**
CS345 Human-Computer Interfaces
- Summer 2009 **Research Assistant, Ball State University**
Developed a curriculum visualization software application for use in higher education.
- Summer 2008 **Software Developer, Institute for Digital Entertainment and Education**
Developed commercial software for multi-media, interactive presentations and demonstrations.

Other Affiliations

- 2019—Present **External Research Collaborator, Facebook**
Research and consulting work for the Identity, Groups, and Community teams within Facebook

- 2017—Present **Guest Professor, Beijing Normal University**
Affiliated with the Beijing Normal University User Experience Program in the School of Applied Psychology
- 2017—Present **Visiting Researcher, Newcastle University**
Affiliated with Open Lab in the School of Computing

Journal Publications

- Gray, C. M., Parsons, P., **Toombs, A. L.**, Rasche, N., & Vorvoreanu, M. (2020). Designing an Aesthetic Learner Experience: UX, Instructional Design, and Design Pedagogy. *International Journal of Designs for Learning*, 11(1), 41-58.
- Lee, A., **Toombs, A. L.**, Erickson, I., Nemer, D., Ho, Y., Jo, E., Guo, Z. (2019). The Social Infrastructure of Co-Spaces: Home, Work, and Sociable Places for Digital Nomads. *Proceedings of the ACM on Human-Computer Interaction*, 3 (CSCW), 1-23.
- Bardzell, J., Bardzell, S. Lin, C., Lindtner, S., & **Toombs, A.** (2018). HCI's Making Agendas. *Foundations and Trends in Human-Computer Interaction*, vol. 11, no. 3, pp. 126–200, 2017. DOI: 10.1561/1100000066
- Kou, Y., Gray, C. M., **Toombs, A. L.**, & Adams, R. S. (2018). Understanding social roles in an online community of volatile practice: A study of user experience practitioners on reddit. *ACM Transactions on Social Computing*, 1(4), 1-22.
- Toombs, A. L.**, Gross, S., Bardzell, S., Bardzell, J. (2016). From Empathy to Care: A Feminist Care Ethics Perspective on Long-Term Researcher-Subject Relations. *Interacting with Computers: Special Issue "Ethics Matter(s)"* 29(1), 45-57. <https://doi.org/10.1093/iwc/iww010>
- Toombs, A. L.**, Bardzell, S., and Bardzell, J. (2014). Becoming Makers: Hackerspace Member Habits, Values, and Identities. *Journal of Peer Production*, 5.
- Gestwicki, P., Haddad, A., **Toombs, A. L.**, & Sun, F. (2009). An Experience Report and Analysis of Java Technologies in Undergraduate Game Programming Courses. *Journal of Computing Sciences in Colleges*, 25(1), 102-108.

Conference Proceedings

Peer Reviewed Full Papers

- Jo, E., **Toombs, A. L.**, Gray, C. M., & Hong, H. (2020). Understanding Parenting Stress through Co-designed Self-Trackers. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20)*. ACM, New York, NY, USA.
- Toombs, A. L.**, Whitley, D., & Gray, C. M. (2020). Autono-preneurial Agents in the Community: Developing a Socially Aware API for Autonomous Entrepreneurial Lawn Mowers. In *Companion of the 2020 ACM International Conference on Supporting Group Work (GROUP '20)*. ACM, New York, NY, USA, 69-82. DOI: <https://doi.org/10.1145/3323994.3369900>
- Watkins, C. R., Gray, C. M., **Toombs, A. L.**, & Parsons, P. (2020). Tensions in Enacting a Design Philosophy in UX Practice. In *Proceedings of the 2020 ACM Designing Interactive Systems Conference* (pp. 2107-2118).
- Talhok, R., Balaam, M., **Toombs, A. L.**, Garbett, A., Akik, C., Ghattas, H., Araujo-Soares, V., Ahmad, B., & Montague, K. (2019, June). Involving Syrian refugees in design research: Lessons learnt from the field. In *Proceedings of the 2019 on Designing Interactive Systems Conference* (pp. 1583-1594).
- Gray, C. M., Kou, K., Battles, B., Hoggat, J., & **Toombs, A. L.** (2018). The Dark (Patterns) Side of UX Design. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)*. ACM, New York, NY, USA, Paper 534, 14 pages. DOI: <https://doi.org/10.1145/3173574.3174108>
- Kou, Y., Gray, C. M., **Toombs, A. L.**, & Adams, R. S. (2018). Knowledge Production and Social Roles in an Online Community of Emerging Occupation: A Study of User Experience Practitioners on Reddit. In *Proceedings of the*

Hawaii International Conference on Systems Sciences (HICSS) (pp. 2068-2077). Waikoloa Village, HI.
<http://hdl.handle.net/10125/50148>

Kou, Y. Gray, C. M., **Toombs, A. L.**, & Nardi, B. (2018). The Politics of Titling: The Representation of Countries in CHI Papers. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18)*. ACM, New York, NY, USA, Paper alt16, 10 pages. DOI: <https://doi.org/10.1145/3170427.3188409>

Strohmayr, A., Bellini, R., Meissner, J., Finnigan, S. M., Alabdulqader, E., **Toombs, A. L.**, & Balaam, M. (2018). #CHIiversity: Implications for Equality, Diversity, and Inclusion Campaigns. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18)*. ACM, New York, NY, USA, Paper alt03, 10 pages. DOI: <https://doi.org/10.1145/3170427.3188396>

Toombs, A. L., Morrissey, K., Simpson, E., Gray, C. M., Vines, J., & Balaam, M. (2018). Supporting the Complex Social Lives of New Parents. In *CHI'18: Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. New York, NY: ACM Press. <https://doi.org/10.1145/3173574.3173994>

Toombs, A. L., (2017). Hackerspace Tropes, Identities, and Community Values. In *DIS'17: Proceedings of the 2017 CHI Conference on Designing Interactive Systems*. (pp.1079-1091). New York, NY: ACM Press.
<https://doi.org/10.1145/3064663.3064760> [Awarded **Best Paper**, top 1%]

Gray, C. M., **Toombs, A. L.**, & McKay, C. (2016). Meaning Reconstruction as an Approach to Analyze Critical Dimensions of HCI Research. In *CHI EA '16: CHI'16 Extended Abstracts on Human Factors in Computing Systems* (pp. 328-340). New York, NY: ACM Press. <https://doi.org/10.1145/2851581.2892571>

Gray, C. M., **Toombs, A. L.**, & Gross, S. (2015). Flow of Competency in UX Design Practice. In *CHI'15: Proceedings of the 2015 CHI Conference on Human Factors in Computing Systems*. New York, NY: ACM Press.
<http://dx.doi.org/10.1145/2702123.2702579> [Received the SIGCHI **Best of CHI Honorable Mention Award**, top 5%]

Toombs, A. L., Bardzell, S., & Bardzell, J. (2015). The Proper Care and Feeding of Hackerspaces: Care Ethics and Cultures of Making. In *CHI'15: Proceedings of the 2015 CHI Conference on Human Factors in Computing Systems*. New York, NY: ACM Press. <https://doi.org/10.1145/2702123.2702522> [Received the SIGCHI **Best of CHI Honorable Mention Award**, top 5%]

Pace, T., **Toombs, A. L.**, Gross, S., Pattin, T., Bardzell, J., & Bardzell, S. (2013). A tribute to Mad Skill: Expert Amateur Visuality and World of Warcraft Machinima. In *CHI'13: Proceedings of the 2013 CHI Conference on Human Factors in Computing Systems* (pp. 2019-2028). New York, NY: ACM Press.

Bardzell, S., Gross, S., Wain, J., **Toombs, A. L.**, & Bardzell, J. (2011). The Significant Screwdriver: Care, Domestic Masculinity, and Interaction Design. In *Proceedings of the 25th BCS Conference on Human-Computer Interaction* (pp. 371-377). Swinton, UK: British Computer Society.

Peer Reviewed Short Papers and Posters

Clepper, G., Martinez, J. S., Farooq, A., Allred, A. M., McDonald, K., Carr, I., **Toombs, A. L.**, & Tan, H. Z. (2020). *Feeling Creepy: A Haptic Haunted House (Demo)*. IEEE.

Lee, A., & **Toombs, A. L.** (2020). Robots on Campus: Understanding Public Perception of Robots using Social Media. In *Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing* (pp. 305-309).

Parsons, P., Gray, C. M., Rasche, N. J., & **Toombs, A. L.** (2020). Vertical Integration in UX Design Studios. *2nd Annual ACM SIGCHI Symposium on HCI Education (EduCHI 2020)*.

Lee, A., **Toombs, A. L.**, & Erickson, I. (2019). Infrastructure vs. Community: Co-Spaces Confront Digital Nomads' Paradoxical Needs. In *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19)*. ACM, New York, NY, USA.

Murdoch-Kitt, K., Gray, C. M., Parsons, P., **Toombs, A. L.**, Louw, M., & Van Gent, E. (2019). Developing Students' Instrumental Judgment Capacity for Design Research Methods. *Dialogue: Proceedings of the AIGA Design Educators Community Conferences (Decipher, Vol. 1)* (pp. 108-115). doi: 10.3998/mpub.11688977.

Toombs, A. L., Davidge, M. A., Park, J., Sirko, G., & LaPeter, M. (2019, November). Algorithmically-Generated Communities: A Case Study. In *Conference Companion Publication of the 2019 on Computer Supported Cooperative Work and Social Computing* (pp. 387-391).

Toombs, A. L., Gray, C. M., Zhou, G., & Light, A. (2018). Appropriated or Inauthentic Care in Gig-Economy Platforms: A Psycho-linguistic Analysis of Uber and Lyft. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18)*. ACM, New York, NY, USA, Paper LBW532, 6 pages. DOI: <https://doi.org/10.1145/3170427.3188657>

Townshend, J., Hayes, L., Hails, S., **Toombs, A. L.**, & Balaam, M. (2018). Development of an online resource to support paediatric asthma management: www.beatasthma.co.uk. *European Respiratory Journal*, 52, PA3134. DOI: 10.1183/13993003.congress-2018.PA3134

Bardzell, J., Bardzell, S., & **Toombs, A. L.** (2014). "Now that's definitely a proper hack": Self-made Tools in Hackerspaces. In *CHI'14: Proceedings of the 2014 CHI Conference on Human Factors in Computing Systems* (pp. 473-476). New York, NY: ACM Press. <https://doi.org/10.1145/2556288.2557221> [Received the SIGCHI **Best of CHI Honorable Mention Award**, top 5%]

Invited or Juried

Gray, C. M., **Toombs, A. L.**, Light, A., & Vines, J. (2018). Ethics, Values, and Designer Responsibility. *Proceedings of the Design Research Society*, 1.

Toombs, A. L. (2015). Enacting Care Through Collaboration in Communities of Makers. In *Proceedings of the 18th ACM Conference Companion on Computer Supported Cooperative Work & Social Computing (CSCW'15 Companion, Doctoral Consortium paper)* (pp. 81-84). New York, NY: ACM Press. doi:10.1145/2685553.2699326

Gross, S., **Toombs, A. L.**, Wain, J., & Walorski, K. (2011). Foodmunity: Designing Community Interactions Over Food. In *CHI '11 Extended Abstracts on Human Factors in Computing Systems* (pp. 1019-1024). New York, NY: ACM Press.

Trade Publications

Gray, C. M., **Toombs, A. L.**, Owczarzak, M., & Watkins, C. (2019). Digital civics goes abroad. *Interactions*, 26(2), 74-77.

Toombs, A. L., Ferri, G., Grimme, S., Gross, S., Stallings, M. D., Bardzell, J., and Bardzell, S. (2016). Making a critical playshop. *interactions* 24, 1 (December 2016), 34-37. DOI: <https://doi.org/10.1145/3019006>

Peer Reviewed Conference Presentations

Nemer, D., & **Toombs, A. L.** (2019). Care and Emotional Labor in the Gig Economy. *Power Struggles in the Digital Economy*. Panel Discussion at Society for Social Studies of Science (4S). New Orleans, LA.

Gray, C. M., & **Toombs, A. L.** (2018, April). Forming a Design Identity in Computing Education Through Reflection and Peer Interaction. Paper Session at the 2018 AERA Annual Meeting, San Antonio, TX.

Book Chapters

Gray, C. M., Parsons, P., & **Toombs, A. L.** (2020). Building a holistic design identity through integrated studio education. In *Educational Technology Beyond Content* (pp. 43-55). Springer, Cham.

Toombs, A. L., Bardzell, S., and Bardzell, J. (2014). Becoming Makers: Hackerspace Member Habits, Values, and Identities. In J. Söderberg & Maxigas (Eds.) *Book of Peer Production: Special FSCONS Edition* (pp. 36-45). Aarhus, DK: NSU Press. [Invited from Special Issue of Journal of Peer Production]

Workshops Convened

Gray, C. M., Chivukula, S. S., **Toombs, A. L.**, & Light, A. (2018). Visualizing Values to Analyze Designers' Ethical Responsibility. *Design Research Society*. Limerick, Ireland.

Toombs, A. L., Devendorf, L., Shih, P., Kaziunas, E., Nemer, D., Mentis, H., & Forlano, L. (2018). Sociotechnical Systems of Care. In *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing* (pp. 479-485).

Toombs, A. L., Dow, A., Vines, J., Gray, C. M., Dennis, B., Clarke, R., & Light, A. (2018). Designing for Everyday Care in Communities. In *Proceedings of the 2018 ACM Conference Companion Publication on Designing Interactive Systems (DIS '18 Companion)*. ACM, New York, NY, USA, 391-394. DOI: <https://doi.org/10.1145/3197391.3197394>

Lazar, A., **Toombs, A. L.**, Morrissey, K., Kenning, G., Boger, J., & Brankaert, R. (2018). HClxDementia Workshop: Engaging People Living with Dementia. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18)*. ACM, New York, NY, USA, Paper W01, 7 pages. DOI: <https://doi.org/10.1145/3170427.3170613>

Morrissey, K., **Toombs, A. L.**, Lazar, A., and Boger, J. (2017). HClxDementia: The Role of Technology & Design in Dementia. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '17)*. New York, NY: ACM Press. <https://doi.org/10.1145/3027063.3027083>

Invited Talks and Presentations

2021, March 26. **Toombs, A. L.** *Unpacking Parent Experiences with Family-Focused Digital Communities and Social Tools*. Human Development and Family Studies department and Military Family Research Institute.

2020, June 9. **Toombs, A. L.**, "Faculty Panel: Design Thinking in the Polytechnic (UX)," Purdue Polytechnic Institute.

2020, May 13. **Toombs, A. L.**, Connecting in the community: Digital technology and built environment approaches to preventing mental health problems, "we're so much more than the in-game clan": how a game session scheduling platform created hundreds of online communities," Loneliness and Social Isolation in Mental Health Research Network, London, United Kingdom.

2019, March 13. **Toombs, A. L.**, NORTH Lab Talks, "Ideas in progress: What can HCI and CSCW scholars learn from algorithmically defined communities?," Northumbria University, Newcastle upon Tyne, United Kingdom.

2018, June 4. Gray, C. M., Parsons, P., **Toombs, A. L.**, Polytechnic Summit, "The Integrated Design Studio as an Approach to Transdisciplinary Design Learning," UTEC, Lima, Peru.

2018, January 26. **Toombs, A. L.**, SIS Talks, "From Hackerspaces to Parent Groups: Everyday Care in Sociotechnical Communities," University of Kentucky, Lexington, KY.

2017, July 17. Gray C. M., & **Toombs, A. L.** *Qualitative Inquiry: Thematic Analysis, Meaning Reconstruction, and Data Management*. Open Lab, Newcastle University, Newcastle upon Tyne, United Kingdom.

2016, November 18. Gray, C. M., & **Toombs, A. L.** *Tracing Meaning-Making Through Reconstructive Analysis*. Participatory Information Technology Colloquium, Aarhus University, Aarhus, Denmark.

2013, October 8. Guest Lecturer, INFO-I310: Media, Arts, and Technology. *Expert Amateur Visual Practices in WoW Machinima*. Indiana University, Bloomington, IN.

2013, October 7, 14, & 21. Guest Lecturer, INFO-I590: Advanced Prototyping. *Interactive Prototyping with Sensors*. Indiana University, Bloomington, IN.

2013, October 3. Invited Speaker, IU Makes Lecture Series. *Self-Made Tools in Hackerspaces*. Bloomington, IN.

Invited Research Institute

2015. *Summer Institute*, Consortium for the Science of Sociotechnical Systems (CSST). Florissant, CO.

Awards

2021. Corps of Engagement Award for Families Tackling Tough Times Together program, Steering Committee member, Purdue University.

2021. Faculty Engagement Award for Families Tackling Tough Times Together program, Steering Committee member, College of Health and Human Sciences.
2021. Outstanding Design Case Award, AERA SIG Design and Technology.
2019. Recognition for Contribution to Diversity and Inclusion, DIS I C&C Diversity and Accessibility Co-Chairs.
2017. Best Paper Award, ACM DIS Conference on Designing Interactive Systems.
2015. 2 x Best Paper Award Nominations, ACM SIGCHI Conference on Human Factors in Computing Systems.
2014. Best Paper Award Nomination, ACM SIGCHI Conference on Human Factors in Computing Systems.

Professional Service

Reviews

2018. Reviewer for Human-Computer Interaction, for NordiCHI, for CHI, for DIS, for CSCW, and for alt.chi.
2017. Reviewer for IJHCS, for Transactions on Computer-Human Interaction (ToCHI), for CHI, for DIS, for CSCW, for DIS Pictorials, for C&C, and for alt.chi.
2016. Reviewer for CHI, for DIS, for CSCW, for alt.chi, for IxD&A's special issue on making, for Polity books, for the HCI journal, and for Science Technology and Human Values (ST&HV).
2015. Reviewer for CHI, for DIS, for CSCW, and for alt.chi.
2014. Reviewer for CHI, for DIS, for CSCW, for C&C, and for alt.chi.
2013. Reviewer for Journal of Peer Production.

Associate Chair

2018. Associate Chair for Designing Interactive Systems (DIS).
2017. Associate Chair for the Late Breaking Work track of ACM SIGCHI 2017.

Track Chair

2018. Track Organizer for Design Research Society (DRS).

Session Chair

2018. Session Chair for Designing Interactive Systems (DIS).
2017. Session Chair for DIS and for CHI.

Other

- 2014-2016. Student Volunteer for ACM SIGCHI conference.
2014. Volunteer for Making Subjects Conference. Indiana University Bloomington. Technical Volunteer for Clyde, Arduino, XBee Integration session.

Community Service

- 2012-2014. Bloominglabs. Making, hacking, and tinkering workshops; event organization.

Media Coverage

- 2014, January 18. Featured post on Instructables.
<http://www.instructables.com/id/The-Pee-Timer-Connecting-the-Arduino-the-Intel-Per/>

Professional Affiliations

- Association for Computing Machinery (ACM)