Jeff Ginger | Curriculum Vitae, May 2026

Work experience

Research Scientist, Adjunct Faculty

College of Education (Educational Psychology)
Illinois Informatics (iSchool)
University of Illinois at Urbana-Champaign

2020 - present

(1) Supporting Personnel for the NSF National AI Institute for Inclusive Intelligent Technologies for Education (INVITE):
‣ Current projects include working implementing AI support tools to promote Persistence, Academic Resilience and Collaboration (PaRC) into the VEXcode VR programming environment, reviewing AIED literature and interviewing teachers about their perspectives on the benefits, concerns and learning environment needs surrounding GenAI in Education, assisting with a pedagogical agent toolkit and school partnerships / broadening participation efforts
‣ Assistance with website and media development, evaluation, and the creation of a super cute, beginner-friendly learn-to-code robot in Minecraft (Barrelbot), including data collection via workshops and summer camps

(2) Lecturer for INFO 333: User Experience in Action, a large online course focused on introducing students to the artistic, technical and social science components of design and information studies. Primary instructor for INFO 490: User Experience Design with AI, a studio course exploring the use of AI tools at all stages of the Human Centered Design process.

(3) Core Personnel for Project WHIMC (continuing as "QRF"), a series of long-term, large-scale NSF-funded grant projects:
‣ Multipurpose role included project management and leadership, design and development, curriculum and instruction, media production, as well as technical social science research
‣ Oversight of several teams for content creation, research, technical systems, university classes and special projects
‣ Technical work involving IT systems deployment and upkeep, automation, use analysis, content creation and interaction design focused on improving UX and science realism, updating code (Java) for data collection and dataset curation for AI-based education agents (natural language, image analysis, path-finding)
‣ Worked to establish partnerships and coordinate summer or after-school camps and workshops (data collection) for kids grades 5-8 with numerous planetariums, museums, schools, youth service centers in several states in urban, suburban and rural settings
‣ Collaboration with the Ateneo Laboratory for Learning Sciences in the Philippines to create a mirror of our project as well as variations making use of Minecraft Education Edition

‣ Assisted in creation of a companion Planetarium show and exhibit, as well as associated programming for workshops, events and post-show activities
‣ Feedback, testing and user referral system as well as interactive exhibit for PBS Nova Exoplanet lab
‣ Initiated and orchestrated an Exoplanet World Building Competition in collaboration with Planet Minecraft and Astronomers and scientists from several notable institutions
‣ Similar types of assistance with a STEM-C project, a related NSF-funded grant on fostering computational creativity, data science literacy and teaching kids how to program for STEM applications – this work also included assisting in the design of a code comparison tool

Creative Technology Coordinator

Jefferson County Public Library
West of Denver, Colorado

2020

‣ Assisted in planning, research and development for capacities to enable new technology-related services
‣ Implementation of resources for AV recording, digitization and assistive technologies
‣ Created curriculum and videos to carry out workshops for in-person and online creative technology training
‣ Pushed for stronger and more collaborative security, asset and information management practices

Director

CU Community Fab Lab
University of Illinois at Urbana-Champaign

2014 - 2020

‣ Oversight and guidance of all operations and project teams at both the main fab lab and all remote fab lab locations in CU as well as handling of local and international PR
‣Established the core mission to include education, research and art-entrepreneurship
‣ Leveraged a range of local, state and federal resources to grow staff from three to over twenty, amplified funding 10-fold and increased building space allocation by 3 times; quadrupled total level of programming
‣ Continual "lead from the front" style involvement with many operational aspects of the lab, including community engagement, instruction, IT, media, etc
‣ Development and coordination of several Fab Lab research teams and multiple courses, events and grant collaborations
‣ Coordinated summer camp operations since 2014, personally leading and developing several and seeding others; 40+ unique offerings in total, reaching hundreds of youth over the years

Program Coordinator and Adjunct Faculty

Illinois Informatics
School of Information Sciences
(formerly GSLIS)
University of Illinois at Urbana-Champaign

2011 - 2020

‣ Proposal, development, execution and evaluation for state and nationally-funded grants (see list below)
‣ Assist with administration and event coordination (such as CU Make and Playful by Design) and student mentoring
‣ Membership in multiple faculty working groups, including Prairie Futures, TIER ED and Playful by Design, with a focus on promoting design thinking and digital literacy education at UIUC
‣ Over 8 years experience developing and teaching numerous Informatics, Information Science and Art Education studio courses on user experience, rapid prototyping and community engagement; directed several independent studies; one or more per semester

Operations Lead and Community Outreach

CU Community Fab Lab
University of Illinois at Urbana-Champaign

2012 - 2014

Helped to transition the Fab Lab from a small-scale all-volunteer operation to a hybrid staff-volunteer community-engagement network
Much like running a small non-profit, this job entailed many tasks: (1) program implementation and curriculum development, (2) recruiting and managing staff and volunteers, (3) community engagement and media production, (4) equipment acquisition, upgrades and maintenance and (5) research, evaluation, grant writing and publishing

Research Assistant

School of Information Sciences (formerly GSLIS)
University of Illinois at Urbana-Champaign

2008 - 2009, 2012

Assisted with web development and graphic design as well as program development, execution and evaluation with several grants for both the Center for Digital Inclusion and Community Informatics Initiative

Teaching Assistant

Graduate School of Library and Information Science
Illinois Informatics Institute
Department of Sociology
Program on Intergroup Relations
University of Illinois at Urbana-Champaign

2007 - 2011

Courses included (1) Libraries, Information and Society, (2) Community Engagement (GSLIS), (3) Social Aspects of Information Systems, (4) Social Perceptions of the Family, (5) Social Research Methods, (6) Introduction to Sociology, and (7) Intergroup Dialogue Facilitation on Race and Ethnicity

Computer and Network Technician — University Housing, University of Illinois at Urbana-Champaign — 2003 - 2008

Extensive IT technician and user support experience, also included an internship for CDW Corporation

Web Design and Development — ROC Group Chicago (2003 only), Numerous University organizations — 2003 - 2008

Web design, development and support for student, professional and academic organizations

Education

PhD Library and Information Science — University of Illinois at Urbana-Champaign — 2009 - 2015

Area of Interest: Social and Community Informatics
Dissertation: Capturing the Context of Digital Literacy: A Case Study of Illinois Public Libraries in Underserved Communities
Course work included history and foundations of information science, additional research methods experience (qualitative) and various individual topics of study in social and community informatics: distributed knowledge, ubiquitous learning, IT and the black experience, community engagement, human-computer interaction, geographic information systems, and digital literacy

PhD Sociology (transferred, incomplete) — University of Illinois at Urbana-Champaign — 2006 - 2009

Masters paper: The Facebook Project: Performance and Construction of Digital Identity
Course work equivalent to a masters with emphasis on science and technology studies, race and ethnicity; classes included social science research methods (ethnography, interviews, surveys,

intermediate statistics), classical sociology theory, exploration into individual topics of identity and racism, art interactivity and interface design

BA Sociology, minor in Computer Science — University of Illinois at Urbana-Champaign — 2002 - 2006

Course work and senior projects included digital ethnography, the design of accessible web resources, black leadership + leveraging ICTs and community history and racism in Illinois

Awards

Listed in "Ten Notable Dissertations of 2015" by American Libraries magazine

List of Teachers Ranked as Excellent (Fall 2007, Spring 2007, Spring 2008, Spring 2012, Fall 2012, Fall 2014, Spring 2017)

Service

The Terrible Wise Art Collective — 2024-present

I advise and participate in an activist artist collective
I have created multiple interactive artworks presented during our 3 exhibitions with over 40 artists and 600 attendees in the River North neighborhood of Denver
The Community Organizing Wing (COW) raised $4000 to purchase and directly distribute clothing and supplies to unhoused persons in the Denver metro

Denver Urban Skate Troop — 2021-present

I help to lead an outdoor recreation and informal learning group of over 150 diverse individuals from the Colorado Denver metro region
We are advocates for sustainable and environmentally-conscious transportation as well as social inclusion and enjoyable fitness
Give-back activities have included promoting ballot measures for pedestrian infrastructure, trash pickup and fundraisers

Gold Crown Foundation 2022-2023

Teaching facilitators and participants how to use makerspace tools and develop activities for kids

Champaign-Urbana Community Fab Lab 2011-2020

Volunteered here before I worked here; I still volunteer time well above and beyond my regular workload
I make sure the Fab Lab stays committed to its mission of Public Engagement – this means the lab will always be an equal balance between community outreach, free public access and services for University research and classes
This includes volunteering with the connected community organizations like The Urbana Free Library and Urbana Neighborhood Connections Center for events and workshops

Tap In Leadership Academy, New Hope Academy 2011-2015

Assisted with various digital literacy workshops, including helping kids to use multimedia equipment to plan, capture and edit video interviews
Preliminary summer camp workshops with the CUC Fab Lab, initial off-site mini-fab lab site
Developed and led digital literacy workshops (creating games, learning computer hardware), rebuilt and setup two computer labs (hardware, software, network, policy)

Community Informatics Club (video overview) 2008-2012

Conducted volunteer and education projects in collaboration with community groups in Champaign county, East St. Louis, and Chicago
The club was key to forming and retaining the Urbana Free Library technology volunteers, conducted workshops like Storytelling in [stop] Motion
Collaboration with the Urbana Independent Media Center - Zine Library, Books2Prisoners, WRFU
Awarded a $2500 grant by UIUC student affairs for outstanding, cutting-edge community service

Various other clubs and organizations at the University of Illinois 2003-2013

Eclectic Design and Research Group, 2011-2013
GSLIS Action and Town Hall organization group, Social Informatics Reading Groups, 2011-2012
Association of Undergraduate Sociologists, 2003-2008
Feminist Majority Leadership Alliance, 2005-2007
Beckwith Hall Training and Web Accessibility, Spring 2006
Avalanche alternatives to drinking weekend program, 2004-2005

I am also an Eagle Scout. I renovated a bird sanctuary to make it accessible again back in 2002.

Notable Publications and Presentations

Papers

Freeman, C., Barrett, J., Ginger, J., Zapata-Rivera, D., Lehman, J., Sparks, J., Gooch, R. (2026). Multi-Stage Co-Design of an AI K-12 Classroom Teacher Support Tool. 18th annual International Conference on Education and New Learning Technologies.

Zambrano, A., Wei, Z., Zhang, J., Baker, R., Ocumpaugh, J., Barany, A., Liu, X., Zhou, Y., Paquette, L., Ginger, J., & Borchers, C. (2026). Data Plus Theory Equals Codebook: Leveraging LLMs for Human-AI Codebook Development. Journal of Educational Data Mining Special Issue.

Hum, S., Palaguachi, C., Duda, K., Ginger, J., & Lane, H. C. (2026). BarrelBots: Examining problem solving in computational thinking activities in Minecraft. In Proceedings of the 19th International Conference on Educational Data Mining (EDM 2026). Seoul, Republic of Korea.

Barrett, J., Zapata-Rivera, D., Lehman, B. Sparks, J., Ginger, J. Gooch, R. Israel, M. (2025) WIP: Building on Teacher Perceptions to Help Bring AI to K-12 Classrooms. Frontiers in Education Conference, Nashville, TN.

Hum, S., Gadbury, M., Duda, K., Ginger, J., Lane, H. C., & Nadler, D. (2025). BarrelBots: Measuring Self-efficacy and Puzzle-based Computational Thinking in Minecraft. In Proceedings of the 19th International Conference of the Learning Sciences-ICLS 2025. International Society of the Learning Sciences.

Hum, S., Gadbury, M., Ginger, J., Duda, K., & Lane, H. C. (2025). BarrelBots: ChatGPT Feedback for Middle School Student Creative Minecraft Artifacts. In International Conference on Artificial Intelligence in Education. Cham: Springer Nature Switzerland.

Liu, X., Zambrano, A., Barany, A., Ocumpaugh, J., Ginger, J., Gadbury, M., Lane, H., Baker, R. (2024). Investigating Learner Interest and Observation Patterns in a Minecraft Virtual Astronomy Environment. International Conference on Quantitative Ethnography.

Hum, S. Gadbury, M., Shipley, E., Lane, H.C., Ginger, J. (2024). Mars, Minecraft, and AI: A Deep Learning Approach to Improve Learning by Building. 25th International Conference on Artificial Intelligence in Education, Recife, Brazil.

Mahajan, J., Hum, S., Henhapl, J., Yunus, D., Gadbury, M,. Brown, E., Ginger, J., Lane, H.C. (2024). MineObserver 2.0: A Deep Learning & In-Game Framework for Assessing Natural Language Descriptions of Minecraft Imagery. Association for the Advancement of Artificial Intelligence 2024 Conference, Vancouver.

Lane, H. C., Yi, S., Gadbury, M., Ginger, J., Comins, N., Henhapl, J. (2022). Triggering STEM interest with Minecraft in a hybrid summer camp. Technology, Mind, and Behavior: Innovations in Remote Instruction

Gadbury, M., Zimmer, K., Ginger, J., & Lane, H.C. (2022). How adolescent learners in a STEM summer camp represent astronomy concepts through a drawing exercise. Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.), Proceedings of the 16th International Conference of the Learning Science – ICLS 2022 (pp. 1928 – 1929). Hiroshima, Japan: International Society of the Learning Sciences.

Mahajan, J.M., Hum, S., Ginger, J., Lane, H.C. (2022). "MineObserver: A Deep Learning Framework for Assessing Natural Language." The International FLAIRS Conference, Florida

Lee C., Samuel N., Israel M., Arnett H., Bievenue L., Ginger, J., Perry, M. (2020) "Understanding Instructional Challenges and Approaches to Including Middle School Students with Disabilities in Maker activities: A cross-case analysis." FabLearn 2020, Columbia University, New York

Ginger, J. (2015). "Capturing the context of digital literacy: a case study of Illinois public libraries in underserved communities." Dissertation. Available online at the Illinois Digital Environment for Access to Learning and Scholarship, IDEALS

Ginger, J. (2009). "Storytelling in [Stop] Motion." *VO[I]CES,* 2(1), 9. Available online at the Illinois Digital Environment for Access to Learning and Scholarship, IDEALS

Ginger, J. (2008). "The Facebook Project - The Missing Box: The Racial Politics Behind the Facebook Interface." Available online at the Illinois Digital Environment for Access to Learning and Scholarship, IDEALS. First follow-up, second follow-up

Ginger, J. (2008). "The Facebook Project - Social Capital and the Chief." Available online at the Illinois Digital Environment for Access to Learning and Scholarship, IDEALS

Ginger, J. (2008). "Digital Divide 2.0: African American Communities and Library Resources in Illinois" Available online at the Illinois Digital Environment for Access to Learning and Scholarship, IDEALS

LoDolce, K., Ayad, M., Ginger, J., McCauley, S., Thompson, A., Williams, K., Jamali, B. (2008). "Prairienet and community networking: An annotated bibliography." Available online at the Illinois Digital Environment for Access to Learning and Scholarship, IDEALS

Presentations and Workshops

Ginger. J. (2026). VEX Robotics Summer Camps Recruitment. CU Science Discovery STEAMfest, CU Boulder, CO.

Ginger, J., Zapata-Rivera, D. (2025). Learning Environment Design with GenAI. Workshop at the HISPA Youth Conference, Princeton University, NJ.

Ginger, J., Paquette, L., Barany, A., Ocumpaugh, J. (2025). Interactive Demo: Experiencing Data Driven Classroom Interviews (DDCIs) with What-if Hypothetical Implementations in Minecraft. Artificial Intelligence in Education Conference, Palermo, Italy.

Ginger, J., Zapata-Rivera, D. (2025) Learning Environment Design with GenAI. Workshop at the HISPA Youth Conference, Princeton University, NJ.

Ginger. J. (2025). What-If Hypothetical implementations in Minecraft with Fiske Planetarium. CU Science Discovery STEAMfest, CU Boulder, CO.

Ginger. J. (2024). What-If Hypothetical implementations in Minecraft with Fiske Planetarium. CU Science Discovery STEAMfest, CU Boulder, CO.

Lane, H. C., Comins, N., Ginger, J. (2023). "Culminating Ateneo WHIMC Event." Keynote presentation (virtual) for Ateneo University in the Philippines, 03.2023

Ginger, J. (2022). "Code, Art and AI in Education: Teaching Astronomy with Minecraft." Public lecture with CU Science Discovery at Lafayette Public Library, 03.2023

Lane, H.C., Ginger. J. (2020). "Interest, Play and Learner Engagement." Public lecture and podcast at Ateneo University in the Philippines, 02.2020

Lane, H.C., Ginger, J. (2020). "WHIMC collaboration with ALLS and Arete." Professional development workshop for Ateneo University in the Philippines, 02.2020

Ginger, J. (2019). "Makerspaces, Education and Libraries in the US." Speaking on behalf of the US State Department at the Trends in Libraries Conference, State Scientific Library in Banská Bystrica, 05.2019

Ginger, J. (2019). "Research and Education with the CU Community Fab Lab." Beckman Curious and Eclectic Speaker Series. Beckman Institute, 03.2019

Ginger, J. (2018). "Minecraft 3D Printing for Teachers." Professional development workshop for University of Illinois Extension Teacher Tuesdays event, Fulton-Mason-Peoria-Tazewell Unit, Peoria, IL, 04.2018

Ginger, J., Bievenue, L. (2018). "Research Models and Methods to Assess Learning Outcomes in Makerspaces in Formal and Informal Education Settings" iSchool Research Showcase, UIUC, 10.2018

Ginger, J., Choate, C. (2018). "The CU Community Fab Lab and The Urbana Free Library." A presentation for the Rotary Club, Clark-Lindsey Retirement Community, 05.2018

Ginger, J., Serbanuta, C. (2017). "Storytelling with Quantitative & Qualitative Evaluation Methods." Presentation for the Mortenson Center Moldovan Librarian Associates, UIUC, 07.2017

Ginger, J. (2017). "It's not DIY. It's DIWO: do it with others." PechaKucha @ Pygmalion Festival 2017. Location 51 Main, 09.2017

Chan, A.S., Ginger, J. (2017). "Design Research: The Space of Design Research." Erlanger House, University of Illinois, Design Research Initiative, 04.2017

Ginger, J., Linder, S., Silverman, D. (2017). "Curriculum at the Fab Lab." Teaching with Technology Seminar Series, Center for Innovation in Teaching and Learning, UIUC, 02.2017

Linder, S., Ginger, J., and Nelson, J. (2016). “Arduino Powered Pom Pom Robots for Fun and Learning.” Fab Learn Conference, Palo Alto, 10.2016

Ginger, J. (2016). “Beyond DILP: Metacognitive Strategies for Learning and Design Center Public Engagement.” University of Illinois Extension Annual Conference, UIUC, 10.2016

Ginger, J. (2016). Starting a Small Community Fab Lab. Videos published as a deliverable for the Digital Innovation and Leadership Program, 2016

Ginger, J., Nelson, J. (2016). Fab Labs: Opportunities for Education, Research, Entrepreneurship and Communities Georgia’s Innovation and Technology Agency (abroad), 03.2016

Ginger, J. (2015). Fab Labs: Opportunities for Education, Research, Entrepreneurship and Communities. University of Costa Rica, 04.2015

Twidale, M., Ginger, J. Organisciak, P., Floyd, I., Smith, B. (2013). “Tech Learning Potluck” and “Design Jams in iSchools: Approaches, and examples,” iSchools iConference 2013, Fort Worth, 02.2013

Nicholson, S., Ginger, J., Mayer, B. (2013). “Monster or Bust: Enabling Youth through 3D Modeling and Printing.” A presentation in Creating Game-Based Makerspaces, American Library Association Annual Conference, Chicago, 06.2013

Twidale, M., Ginger, J. Organisciak, P., Floyd, I. (2012). “Design Jam Session: Approaches, Challenges and Examples,” iSchools iConference 2012, Toronto, 02.2012

Ginger, J. (2012). "Building Capacity for Innovation through a Local Community Fab Lab Network." Harold Washington Library Center, Chicago, 11.2012

Ginger, J. (2012). "User Experience Design." a presentation to the Illinois IDEA organization at UIUC, 10.2012

Ginger, J., McGrath, R. Barrett, B. & McCreary, V. (2012). “Mini Labs: Building Capacity For Innovation through a Local Community Fab Lab Network” Fab8nz (agenda), Wellington, New Zealand 2012.

Ginger, J. (2011). "Fostering Digital Literacies with Storytelling in [Stop] Motion", GSLIS in a Flash, UIUC, 10.2011

Ginger, J. (2009). "The São Tomé Map Project: Empowering People through Geographic Information Systems, GIS Fair 2009, UIUC, 12.2009

Ginger, J. (2009). "Uncovering Racism on Facebook", a follow-up, a presentation to DTC 475 at Washington State University, Vancouver, 07.2009

Haythornthwaite, C., Twidale, M., Ginger, J. (2009). "Facebook and Ubiquitous Learning" HASTAC conference 2009, UIUC, 04.2009

Ginger, J. (2008). "Web2.0 Resources and the Digital Divide: The Good, The Bad, and the Ugly", presentation to the Mortenson Center Associates, UIUC, 10.2008

Ginger, J. (2007). "The Facebook Project: Social Capital and the Chief." Ethnography of the University Initiative Student Conference, UIUC, 11.2007

Posters

Hum, S., Stinar, F., Lee, H.J., Ginger, J., Lane, H.C. (2022). "Classification of Natural Language Descriptions for Bayesian Knowledge Tracing in Minecraft." Artificial Intelligence in Education 2022 Annual Conference, Durham, UK.

Gadbury, M., Zimmer, K., Ginger, J., Lane, H.C. (2022). "How Adolescent Learners in a STEM summer camp represent astronomy concepts through a drawing exercise." International Society of the Learning Sciences Annual Meeting 2022, Hiroshima, Japan.

Guerrero, B., Lane, H.C., Ginger, J., Lawson, W., Mattson, E. (2021). "Integrating computational thinking and science learning in Minecraft." Technology, Mind and Society Conference, online, 11.2021.

Lane, H.C., Comins, N., Perez-Gallego, J., Condon, D., Gadbury, M., Ginger, J. (2021). "WHIMC: Inspiring and Strengthening STEM Interest with Games and Informal Learning Environments." Advanced Informal STEM Learning annual PI conference, online, 10.2021

CU Community Fab Lab Road Show, numerous dates, events and locations, 2014-2019

Ginger, J., Butt, E., Kumaran, A. (2019). "Iterative Learning With Lithophane Light Boxes." FabLearn 2019, New York, 03.2019

Ginger, J., Israel, M., Teasdale, R., Bievenue, L., Linder, S., Bentz, J. (2016) "Towards a Progressive Model for Metacognitive Strategies and Makerspace Learning." iSchool Research Showcase, UIUC, 10.2016

Ginger, J. (2019). "The Digital Innovation Leadership Program (DILP)", GSLIS Research Showcase, UIUC, 04.2015

Ginger, J. (2019). "Service Roles, Community Engagement and Digital Literacies: A qualitative study of Illinois Public Libraries in Underserved Communities." GSLIS Research Showcase, UIUC, 03.2014

Ginger, J. (2019). "Champaign Urbana Community Fab Lab." Public Engagement Symposium, UIUC, 03.2014

Ginger, J. (2019). "The Local Fab Lab Network as Community Informatics: Avenues for LIS-oriented Inquiry." GSLIS Research Showcase, UIUC, 03.2013

Champaign-Urbana Community Fab Lab: Community MiniLabs, Public Engagement Symposium, UIUC, 02.2012

GSLIS Student Community Engagement 2012, Public Engagement Symposium, UIUC, 04.2012

Enabling Spatial Data Infrastructure Development: Collaboration, Supportive Web Technologies and São Tomé, iSchools iConference 2011, Seattle, 01.2011

Community Informatics Club, Public Engagement Symposium, UIUC, 04.2011

Exploring Methods in Community Informatics, iSchools iConference 2010, UIUC, 02.2010

Grants

Supporting Personnel on the NSF AI Institute for Inclusive Intelligent Technologies for Education (INVITE) – National Science Foundation (2023-2028) #2229612, with Principle Investigator H. C. Lane, Co-PI's Kristy Boyer, ChengXiang Zhai, Diego Zapata and Jamie Payton - $19,998,746

Core Personnel on EHR Core Research (ECR) - National Science Foundation (2023-2027) "Collaborative Research: Advancing the Science of STEM Interest Development through Educational Gameplay with Machine Learning and Data-driven Interviews" (joint award) #2301172 & 2301173, with Principle Investigators Luc Paquette and Jaclyn Ocumpaugh - $698,019 and $419,515

Core Personnel on Advancing Informal STEM Learning (AISL) - National Science Foundation (2017-2024) "Fostering Enduring Interest in STEM through Exoplanet Education and Interactive Exploration and Creation of Potentially Habitable Worlds" #1713609 & #1906873, with Principle Investigator H. C. Lane, Co-PI's N. Comins and J. Perez-Gallego - $299,949 and $2,738,242

Core Personnel on STEM + Computing (STEMC) - National Science Foundation (2019-2022) "Cultivating Creativity to Integrate Computation and Science Problem Solving in Informal Learning" #1934087, with Principle Investigator H. C. Lane - $530,459

Principle Investigator on Discovery Research K-12 (DRK-12) - National Science Foundation (2017-2019) "**Project MAPLE: MAkerspaces Promoting Learning and Engagement**." In collaboration with Maya Israel (Co-PI) and Lisa Bievenue (Co-PI), awarded $669,253

Advisory board and instruction on Advancing Informal STEM Learning (AISL) - National Science Foundation (2017-2019) "**Fostering Interest in Science through Interactive Exploration of Astronomy What-If Simulations**." In collaboration with H. Chad Lane (PI), Neil Comins (Co-PI) and Jorge Perez-Gallego (Co-PI), awarded $299,949

UC2B Community Benefit Fund (2017-19) - Urbana Neighborhood Connections Center Teen Tech Learning Lab. In collaboration with Janice Mitchel and Jared Dunn, awarded $24,410

Illinois Learning Sciences Design Initiative (ILSDI) Seed Funding Program (2015-2016) - "**Making a difference: Project based approaches to STEM engagement in Middle School**." In collaboration with Emma Mercier (PI), Sharlene Denos, Barbara Hug and University High School staff, awarded $37,000

Advisor for **Makers UIUC** - **CU Make**, winners of the 2016 Chancellor's Public Engagement Student Fellows Award. In collaboration with Joey Lund, Sophia Pipathsouk, Cameron Alberg, Lawrence Elizter and Isak Massman, awarded $825

The Chancellor's Public Engagement Student Fellow Award (2015) for **Open-Source Makerspace Curriculum**, in collaboration with The Urbana Free Library. Awarded $1500.

Department of Economic Opportunity and Commerce – Eliminate the Digital Divide (2014-2015). "**Digital Literacy for ALL**." In collaboration with Martin Wolske (PI), Lisa Bievenue and the Center for Digital Inclusion, awarded $106,000

University of Illinois Extension and Outreach Initiative – Enhancing Economic Development in Illinois with Digital Tech Hub Creativity Studios. "**Digital Innovation and Leadership Program**." In collaboration with Jon Gant (PI), Lisa Bievenue and the Center for Digital Inclusion, awarded $300,000

City of Champaign Digital Divide Grant (2012). Written in collaboration with Reverend Nash of New Hope Academy, Champaign in collaboration with UC2B outreach operations, awarded $3000

Community Informatics Initiative Grant for the Institution of Museum and Library Services (2009), assistance with reporting in collaboration with Sharon Irish

Technical Summary

- **Graphics and AV:**Midjourney (GenAI), Adobe Premiere, Photoshop, Illustrator; Canva, Figma, Inkscape, iMovie, OBS Studio, Cakewalk Sonar (DAW), MIDI softsynths, wave editors, and vocal adjustment
- **Rapid fabrication and modeling:** Netfabb, Cura, Simplify3D, Meshmixer, Blender, Sculptris, TinkerCAD, AGIsoft, Arduino and many sensors, Silhouette Studio, SewArt, CNC routing and 3D scanning/printing packages, various tool drivers and interfaces
- **Programming:** Natural Language Programming (Vibe Coding) with platforms like Cursor or Vercel, Java on IntelliJ, Github, API's, open source game modifications (Minecraft, Spigot, Bukkit, Lua, etc) – and years ago ArcGIS, VisualStudio, C++, Drupal, Omeka, Wikimedia
- **Web Development:** HTML, CSS, JavaScript, php, MySQL, FTP and SSH, Apache, Wordpress, various web frameworks
- **Hardware:** Experience evaluating, building and repairing computers, tablets, cell phones and peripherals (i.e. printers, scanners) of all kinds as well as most kinds of makerspace equipment, like lasers and 3D printers
- **Networking:** Wireless and wired network administration, cloud solutions, small-scale server applications and remote management
- **Security:** Basic cybersecurity, automated backup and image-based lab management
- **Office:** Various Agentic/GenAI tools, Adobe Acrobat Pro, MS Office 365, Google suite (Gmail, drive, calendar, docs), project management and communication apps like Zoom, Slack, Box and Clickup
- **OS:** Comfortable using every operating system, various simple scripting and command line, virtual machines and AWS

Skills often related to the above

- User experience / interaction / information design, usability testing and accessibility
- Rapid prototyping and phased-fabrication for varied applications (invention)
- Teaching, leadership and organization (people/project management)
- Qualitative and quantitative social science research techniques
- Critical sociology and divergent thinking skills, teamwork and inclusion
- Storytelling, media editing, production and promotion
- Multimodal communication - writing, speech and graphic design

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Full Bio

Jeff Ginger is a Research Scientist and educator at the University of Illinois at Urbana-Champaign. Over the years he has worked on a number of state and federally funded research projects related to community engagement, informal learning and technology education. He is currently engaged with the NSF National AI Institute for Inclusive Intelligent Technologies for Education (INVITE), which seeks to fundamentally reframe how AI-based educational technologies interact with learners by developing AI techniques to track and promote skills that underlie successful learning and contribute to academic success: persistence, academic resilience, and collaboration. Jeff also helps to lead Project WHIMC, What-If Hypothetical Implementations in Minecraft (now continuing as "QRF"), an NSF-funded research collaboration between University of Illinois/Maine/Pennsylvania, PBS Nova Labs, CU Science Discovery and the Fiske Planetarium. In addition, he has taught students ages 8 to 25 in camps, workshops and semester classes for over 15 years, primarily in areas of STEAM education such as computational thinking, astronomy, user experience design and social science research. Prior to his current role Jeff served as a leader and eventual director of the CU Community Fab Lab.

Jeff draws upon a robust technical, multimedia and social science background, accented by teaching and organizational leadership, and first earned his rabble-rousing reputation as a result of activist research on structural racism as observed on Facebook. His doctoral scholarship and teaching was primarily situated in social and community informatics: deciphering the discourse and effects of the digital divide and Web2.0, critical pedagogy in technology education and contextualized study of human-computer interaction. Jeff's dissertation focused specifically on the investigation of how public libraries foster digital literacies through community engagement, which ultimately led him to his role as the director of the Champaign-Urbana Community Fab Lab, where he lent a critical but optimistic perspective to the study and implementation of makerspaces, particularly by tackling some of its most key challenges, such as cultivating and supporting diversity, a prerequisite to innovation, and sustainably establishing capacity-building technology education services in collaboration with underserved communities.