



3. Noor Shaker, Julian Togelius, Georgios N. Yannakakis, Ben Weber, Tomoyuki Shimizu, Tomonori Hashiyama, Nathan Sorenson, Philippe Pasquier, Peter Mawhorter, Glen Takahashi, **Gillian Smith**, Robin Baumgarten. The 2010 Mario AI Championship: Level Generation Track. *IEEE Transactions on Computational Intelligence and AI in Games*, vol. 3 iss. 4, December 2011, p 332 - 347.
4. **Gillian Smith**, Jim Whitehead, Michael Mateas. Tanagra: Reactive Planning and Constraint Solving for Mixed-Initiative Level Design. *IEEE Transactions on Computational Intelligence and AI in Games*, Special Issue on Procedural Content Generation in Games, vol. 3, iss. 3, September 2011, p 201 - 215.
5. **Gillian Smith**, Jim Whitehead, Michael Mateas, Mike Treanor, Jameka March, Mee Cha. Launchpad: A Rhythm-Based Level Generator for 2D Platformers. *IEEE Transactions on Computational Intelligence and AI in Games*, vol. 3, iss. 1, March 2011, p 1 – 16.

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## REFEREED CONFERENCE PUBLICATIONS

Conferences are considered a primary publication venue in computer science and in much of technically-oriented game design research. Where known, acceptance rates are noted in *italics* at the end of the citation.

1. Britton Horn, Christopher Clark, Oskar Strom, Hilery Chao, Amy J. Stahl, Casper Hartevelde, **Gillian Smith**. Design Insights into the Creation and Evaluation of a Computer Science Educational Game. Proceedings of the 47<sup>th</sup> ACM Technical Symposium on Computer Science Education (SIGCSE 2016). Memphis, TN, March 2-5, 2016. *[full paper, acceptance rate: 35.4%]*
2. Casper Hartevelde, Steven C. Sutherland, Amy J. Stahl, **Gillian Smith**, Cigdem Talgar. Standing on the Shoulders of Citizens: Exploring Gameful Collaboration for Creating Social Experiments. Proceedings of the 49<sup>th</sup> Hawaii International Conference on System Sciences (HICSS). Kauai, HI, January 5-8, 2016. *[full paper, acceptance rate: 50%]*
3. Britton Horn, **Gillian Smith**, Rania Masri, Janos Stone. Visual Information Vases: Towards a Framework for Transmedia Creative Inspiration. Proceedings of the Sixth International Conference on Computational Creativity (ICCC 2015). Park City, UT, June 29 – July 2, 2015. *[full paper]*
4. Mike Treanor, Alex Zook, Mirjam P Eladhari, Julian Togelius, **Gillian Smith**, Michael Cook, Tommy Thompson, Brian Magerko, John Levine, Adam Smith. AI-Based Game Design Patterns. Proceedings of the 2015 Conference on the Foundations of Digital Games (FDG 2015). Monterey, CA, June 22-25, 2015. *[full paper]*
5. Alessandro Canossa, **Gillian Smith**. Towards a Procedural Evaluation Technique: Metrics for Level Design. Proceedings of the 2015 Conference on the Foundations of Digital Games (FDG 2015). Monterey, CA, June 22-25, 2015. *[full paper]*
6. Michael Cook, **Gillian Smith**. Formalizing Non-Formalism: Breaking the Rules of Automated Game Design. Proceedings of the 2015 Conference on the Foundations of Digital Games (FDG 2015). Monterey, CA, June 22-25, 2015. **Recipient of Best Paper award in Game Design. Award nominations given to top 18.9% of papers in conference.** *[full paper]*
7. **Gillian Smith**. An Analog History of Procedural Content Generation. Proceedings of the 2015 Conference on the Foundations of Digital Games (FDG 2015). Monterey, CA, June 22-25, 2015.

**Nominated for best paper award in Game Design.** *Award nominations given to top 18.9% of papers in conference. [full paper]*

8. Steven C. Sutherland, Casper Hartevelde, **Gillian Smith**, Joseph Schwartz, Cigdem Talgar. Exploring Digital Games as a Research and Educational Platform for Replicating Experiments. Proceedings of the 2015 Northeast Decision Sciences Conference (NEDSI 15). Cambridge, MA, March 20-22, 2015. **Recipient of David M. Levine Best Paper in Innovative Education Award.**
9. Casper Hartevelde, **Gillian Smith**, Gail Carmichael, Elisabeth Gee, Carolee Stewart-Gardiner. A Design-Focused Analysis of Games Teaching Computer Science. Proceedings of the 10<sup>th</sup> Conference on Games, Learning, and Society (GLS 10). Madison, WI, June 11-13, 2014. *[full paper, acceptance rate: 59%]*
10. **Gillian Smith**. Understanding Procedural Content Generation: A Design-Centric Analysis of PCG in Games. Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI 2014). Toronto, Canada, April 26 – May 1, 2014. *[full paper, acceptance rate: 23%]*
11. Britton Horn, Steve Dahlskog, Noor Shaker, **Gillian Smith**, Julian Togelius. A Comparative Evaluation of Level Generators in the Mario AI Framework. Proceedings of the 2014 International Conference on the Foundations of Digital Games (FDG 2014). Fort Lauderdale, FL, April 3 – 7, 2014. *[full paper, acceptance rate: 48%]*
12. **Gillian Smith**, Alexei Othenin-Girard, Jim Whitehead, Noah Wardrip-Fruin. PCG-Based Game Design: Creating Endless Web. Proceedings of the 2012 International Conference on the Foundations of Digital Games (FDG 2012). Raleigh, NC, May 30 – June 1, 2012. *[full paper, acceptance rate: 29%]*
13. **Gillian Smith**, Anne Sullivan. The Five Year Evolution of a Game Programming Course. Proceedings of the 43rd ACM Technical Symposium on Computer Science Education (SIGCSE 2012), Raleigh, NC, February 29 - March 3, 2012. *[full paper, acceptance rate: 35%]*
14. **Gillian Smith**, Ryan Anderson, Brian Kopleck, Zach Lindblad, Lauren Scott, Adam Wardell, Jim Whitehead, Michael Mateas. Situating Quests: Design Patterns for Quest and Level Design in Role-Playing Games. Proceedings of the 4<sup>th</sup> International Conference on Interactive Digital Storytelling (ICIDS 2011), Vancouver, Canada, November 28 – December 1, 2011. *[short paper, acceptance rate: 42%]*
15. Adam Smith, Chris Lewis, Kenneth Hullett, **Gillian Smith**, Anne Sullivan. An Inclusive View of Player Modeling. In Proceedings of the 2011 International Conference on the Foundations of Digital Games (FDG 2011). Bordeaux, France. June 29 – July 1, 2011. *[short paper]*
16. Anne Sullivan, **Gillian Smith**. Lessons in Teaching Game Design. In Proceedings of the 2011 International Conference on the Foundations of Digital Games (FDG 2011). Bordeaux, France. June 29 – July 1, 2011. *[short paper]*
17. Martin Jennings-Teats, **Gillian Smith**, Noah Wardrip-Fruin. Polymorph: A Model For Dynamic Level Generation. In Proceedings of the 6<sup>th</sup> Artificial Intelligence and Interactive Digital Entertainment Conference (AIIDE 2010), Palo Alto, California, USA. October 2010.
18. **Gillian Smith**, Jim Whitehead, Michael Mateas. Tanagra: A Mixed-Initiative Level Design Tool. In Proceedings of the 2010 International Conference on the Foundations of Digital Games (FDG 2010). Monterey, CA, USA. June 19-21, 2010. *[full paper, acceptance rate: 34%]*

19. **Gillian Smith**, Mike Treanor, Jim Whitehead, Michael Mateas. Rhythm-Based Level Generation for 2D Platformers. In *Proceedings of the 2009 International Conference on the Foundations of Digital Games (FDG 2009)*. Orlando, FL, USA. April 26-30, 2009. [full paper, acceptance rate: 28%]

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## BOOK CHAPTERS

1. **Gillian Smith**. Procedural Content Generation: An Overview. *Game AI Pro 2*. CRC Press. 2015. [The *Game AI Pro* series is a sequel to the *AI Programming Gems* series, and is an industry standard, well-respected book series for learning about advances in Game AI programming.]
2. Antonios Liapis, Noor Shaker, **Gillian Smith**. Mixed-Initiative Approaches. *The Procedural Content Generation Book*. 2014. To be published by Springer; available online in pre-print format at <http://pcgbook.com>
3. Noor Shaker, **Gillian Smith**, Georgios Yannakakis. Evaluating Content Generators. *The Procedural Content Generation Book*. 2014. To be published by Springer; available online in pre-print format at <http://pcgbook.com>

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## WORKSHOP AND SYMPOSIUM PUBLICATIONS

1. Michael Cook, **Gillian Smith**, Tommy Thompson, Julian Togelius, Alexander Zook. Hackademics: A Case for Game Jams at Academic Conferences. *Proceedings of the Game Jam 2015 Workshop*, co-located with *Foundations of Digital Games 2015 (FDG 2015)*. Pacific Grove, CA, June 21-26.
2. Casper Hartevelde, Steven C. Sutherland, **Gillian Smith**. Design Considerations for Creating Game-Based Social Experiments. *Proceedings of the 2015 CHI Workshop on Gamifying Research (GAMICHI 15)*, co-located with the *ACM CHI Conference on Human Factors in Computing Systems*. Seoul, Korea. April 18, 2015.
3. **Gillian Smith**. The Future of Procedural Content Generation in Games. *Proceedings of the 2014 Workshop on Experimental AI in Games (EXAG)*, co-located with *Artificial Intelligence in Interactive Digital Entertainment 2014*. Raleigh, NC. October 4, 2014.
4. **Gillian Smith**, Casper Hartevelde. Procedural Content Generation as an Opportunity to Foster Collaborative Mindful Learning. *Proceedings of the Workshop on Games for Learning*, co-located with *FDG 2013*. Chania, Crete, May 16, 2013.
5. **Gillian Smith**, Elaine Gan, Alexei Othenin-Girard, Jim Whitehead. PCG-Based Game Design: Enabling New Play Experiences through Procedural Content Generation. In *Proceedings of the Second International Workshop on the Foundations of Digital Games (PCGames 2011)*, co-located with the *2011 Foundations of Digital Games Conference*. Bordeaux, France. June 28, 2011.
6. **Gillian Smith**, Jim Whitehead. Evaluating the Expressivity of a Level Generator. In *Proceedings of the Workshop on Procedural Content Generation in Games (PCGames 211)*, co-located with the *2010 Foundations of Digital Games Conference*. Monterey, CA, USA. June 18, 2010.
7. Martin Jennings-Teats, **Gillian Smith**, Noah Wardrip-Fruin. Polymorph: Dynamic Difficulty Adjustment through Level Generation. In *Proceedings of the Workshop on Procedural Content Generation in Games (PCGames 211)*, co-located with the *2010 Foundations of Digital Games Conference*. Monterey, CA, USA. June 18, 2010.

8. **Gillian Smith**, Mee Cha, Jim Whitehead. A Framework for Analysis of 2D Platformer Levels. In Proceedings of ACM SIGGRAPH Sandbox Symposium 2008. Los Angeles, CA, USA. August 9-10, 2008.

## EXHIBITIONS

### JURIED SHOWS

#### INTERNATIONAL

1. *Threadsteading*. A game for quilting and embroidery machines. Accepted to the Game Developers Conference alt.ctrl.GDC showcase, which features games using innovative control schemes. GDC is attended by more than 25,000 people from all areas of the games industry. San Francisco, CA, March 2016.
2. *Boids*. A quilt inspired by Craig Reynolds's *Boids* algorithm for simulating flocking. Modern Quilt Guild Quilt Show at Quiltcon 2016, Pasadena, CA, February 2016.
3. *eBee: An Electronic Quilt Game*. Smithsonian American Art Museum's "Indie Arcade" Festival. Attended by approximately 7,000 people. Washington, DC, January 2016.
4. *Collaboration*, a computer-generated quilt. Modern Quilt Guild Quilt Show at Quiltcon 2015, Austin, TX, February 2015.

### CURATED GALLERIES AND FESTIVALS

#### REGIONAL

1. *eBee: An Electronic Quilt Game*. Cambridge Science Festival Science Carnival & Robot Zoo. Cambridge, MA, April 16, 2016.
2. *eBee: An Electronic Quilt Game*. The NYC Arcade, NYU Game Center, December 10, 2015.
3. Women of Science Quilt. Designed and created for the *Cambridge Science Festival "Central Elements" Show*, a collaboration between artists and scientists, which ran April 18 – 27, 2014. The quilt's design celebrates five women who discovered elements on the periodic table. Shown at the *Art.Science.Gallery* exhibition "Go Ahead And Do It: Women in STEM", Austin TX, September 13 – October 3, 2014.

### ACADEMIC CONFERENCE ART EXHIBITS

Several computer science and interdisciplinary conferences have an exhibition track, allowing researchers to publish a short paper on their work as well as show it as an installation.

1. Lea Albaugh, April Grow, Chenxi Liu, James McCann, Jen Mankoff, **Gillian Smith**. *Threadsteading: Playful Interaction for Textile Fabrication Devices*. Installation in *Interactivity* at ACM Conference on Computer-Human Interaction (CHI 2016). San Jose, CA, May 7-12, 2016.

2. Celia Pearce, **Gillian Smith**, Jeanie Choi, Isabella Carlsson. eBee: Merging Quilting, Electronics, and Board Game Design. Installation in the Art Show at ACM Conference on Computer-Human Interaction (CHI 2016). San Jose, CA, May 7-12, 2016.
3. Isabella Carlsson, Jeanie Choi, **Gillian Smith**, Celia Pearce. eBee: An Electronics Quilting Bee and Game. Installation workshopped at the 2015 SIGGRAPH Studio. Los Angeles, CA, August 9-13, 2015.
4. **Gillian Smith**. Alexei Othenin-Girard, Jim Whitehead, Noah Wardrip-Fruin. Endless Web. 2013 Conference on Artificial Intelligence in Interactive Digital Entertainment, Playable Experiences track. Boston, MA, October 14-18, 2013.

## OTHER WRITTEN WORK

### ONLINE PUBLICATIONS

1. **Gillian Smith**, Amanda Phillips, Tanya Short, Michael Cook. Can Computers Be Feminists? First Person Scholar, September 2015. <http://www.firstpersonscholar.com/can-computers-be-feminists/>

### MAGAZINES AND NON-ACADEMIC PUBLICATIONS

1. *Strange Loop*. Quilt pattern inspired by recursion and self-similarity. Published in *Simply Moderne* issue 3, December 2015.
2. *Boids*. Quilt pattern inspired by Craig Reynolds's eponymous AI algorithm, distributed as part of the Modern Quilt Guild's "Quilt of the Month" program, March 2015. One of twelve quilts selected for 2015, and distributed to approximately 10,000 members worldwide.

### ABSTRACTS

1. **Gillian Smith**. Well-Played Procedural Content Generation in *Spore*. Well-Played Symposium at the 2014 Digital Games Research Association Conference (DiGRA 2014), Snowbird, UT, August 3-6, 2014.
2. **Gillian Smith**. An Analysis of the Role of Procedural Content Generation in Game Design. Proceedings of the 2013 Digital Games Research Association Conference (DiGRA 2013), Atlanta, GA, August 26-29, 2013.

### POSTER AND DEMONSTRATION PRESENTATIONS

1. Michael Cook, Mirjam Eladhari, Adam Smith, **Gillian Smith**, Tommy Thompson, Julian Togelius, Alexander Zook. AI-Based Games: Contrabot and What Did You Do? Proceedings of the 2015 Conference on the Foundations of Digital Games (FDG 2015). Pacific Grove, CA, USA. June 21-26, 2015.

2. **Gillian Smith**, Jim Whitehead, Michael Mateas. Tanagra: An Intelligent Level Design Assistant for 2D Platformers. In Proceedings of the 6<sup>th</sup> Artificial Intelligence and Interactive Digital Entertainment Conference (AIIDE 2010), Palo Alto, California, USA. October 2010.

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#### NON-REFEREED PUBLICATIONS

1. **Gillian Smith**. Human-Computer Collaboration in Level Design for Computer Games. 2011 Grace Hopper Celebration of Women in Computing. Portland, OR, November 9 – 11, 2011.  
[Portions of this poster were first published in the Tanagra TCIAIG journal article. Poster was reviewed and accepted to the ACM Student Research Competition with an acceptance rate of 23%.]
2. **Gillian Smith**, Jim Whitehead, Michael Mateas. Computers as Design Collaborators: Interacting with Mixed-Initiative Tools. Workshop on Semi-Automated Creativity, co-located with ACM Creativity & Cognition 2011. Atlanta, GA. November 3, 2011.  
[Peer selected, but no peer reviews.]
3. Caitlin Sadowski, **Gillian Smith**, Gail Carmichael. Girls, Games, and Getting to the First Day. 2010 Grace Hopper Celebration of Women in Computing. Atlanta, GA, September 28 – October 10, 2010.  
[Appears in the conference proceedings in the short-form as a poster, and long-form as a Birds of a Feather session.]
4. **Gillian Smith**, Jim Whitehead, Charlie McDowell. Using Game Technology in an Introductory Programming Course. Poster at the IGDA Educational Special Interest Group, GDC 2008. San Francisco, CA, March 2008.

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#### TECHNICAL REPORTS

1. Ian Horswill, Michael Mateas, Josh McCoy, Ana Paiva, Günther Rudolph, **Gillian Smith**, Michael Young, Jichen Zhu. *Interdisciplinary Research Methods*. In Report of Dagstuhl Seminar 15051, "Artificial and Computational Intelligence in Games: Integration". Dagstuhl Research Online Publication Server, DOI: 10.420/DagRep.5.1.207, 2015.
2. Michael Treanor, Michael Cook, Mirjam Eladhari, John Levine, Brian Magerko, Adam Smith, **Gillian Smith**, Tommy Thompson, Julian Togelius, Alex Zook. *AI-Based Game Design*. In Report of Dagstuhl Seminar 15051, "Artificial and Computational Intelligence in Games: Integration". Dagstuhl Research Online Publication Server, DOI: 10.420/DagRep.5.1.207, 2015.
3. Alex Zook, Rafael Bidarra, Michael Cook, Antonios Liapis, **Gillian Smith**, Tommy Thompson, Mark Van Kreveld. *Procedural Content Generation and Formal Design*. In Report of Dagstuhl Seminar 15051, "Artificial and Computational Intelligence in Games: Integration". Dagstuhl Research Online Publication Server, DOI: 10.420/DagRep.5.1.207, 2015.
4. Julian Togelius, Michael Cook, Mirjam Eladhari, **Gillian Smith**, Tommy Thompson, Julian Togelius, Alex Zook. *What Did You Do?* In Report of Dagstuhl Seminar 15051, "Artificial and Computational Intelligence in Games: Integration". Dagstuhl Research Online Publication Server, DOI: 10.420/DagRep.5.1.207, 2015.

5. Alex Zook, Alex Champandard, Michael Cook, Adam Smith, **Gillian Smith**, Tommy Thompson. *Contrabot*. In Report of Dagstuhl Seminar 15051, "Artificial and Computational Intelligence in Games: Integration". Dagstuhl Research Online Publication Server, DOI: 10.420/DagRep.5.1.207, 2015.
6. **Gillian Smith**. *Exploring Embedded Design Theory in Maze Generation*. In Report of Dagstuhl Seminar 15051, "Artificial and Computational Intelligence in Games: Integration". Dagstuhl Research Online Publication Server, DOI: 10.420/DagRep.5.1.207, 2015.
7. Mirjam P. Eladhari, Anne Sullivan, **Gillian Smith**, Josh McCoy. *AI-Based Game Design: Enabling New Playable Experiences*. Technical Report UCSC-SOE-11-27, 2011.
8. Anne Sullivan, **Gillian Smith**. *Lessons from COSMOS: Four Years of Iteration on a Game Design Course*. Technical Report UCSC-SOE-11-15, 2011.
9. Adam M. Smith, Chris Lewis, Kenneth Hullett, **Gillian Smith**, Anne Sullivan. *An Inclusive Taxonomy of Player Modeling*. Technical Report UCSC-SOE-11-13, 2011.

#### INVITED CONFERENCE PRESENTATIONS AND PANELS

1. **Invited Plenary Panelist**. Gender Play/Playing with Gender. Extending Play, Rutgers University, New Jersey, April 18, 2015.
2. **Workshop Coordinator**. Designing Games with Impact (with Dan Jackson, Casper Hartevelde). Design+Social Change, Northeastern University, Boston, MA, April 10, 2015.
3. **Panelist**. Can Computers Be Feminists? Panel at the Different Games symposium, NYU, New York City, April 3-4, 2015.
4. **Speaker**. The Power and Peril of PCG. Artificial Intelligence Summit at the 2015 Game Developer's Conference. San Francisco, CA, March 2015.
5. **Speaker**. Socially Responsible Game Education. Education Summit at the 2015 Game Developer's Conference. San Francisco, CA, March 2015.
6. **Panelist**. New Perspectives on Gender-Inclusive Game Design. 2014 Grace Hopper Celebration of Women in Computing. Phoenix, AZ, October 2014.
7. **Panelist**. Evaluation Methods in Procedural Content Generation, 2013 Workshop on Procedural Content Generation in Games, Chania, Crete, May 2013.
8. **Panelist**. Playable Experiences. Artificial Intelligence in Digital Entertainment (AIIDE 2013), Boston, MA, October 2013.
9. **Invited Tutorial**. Collaborating with Computers: A Historical Perspective. IEEE Conference on Computational Intelligence and Games (CIG 2013), Niagara Falls, Canada, August 2013.
10. **Invited Tutorial**. Women in Games Research. IEEE Conference on Computational Intelligence and Games (CIG 2013), Niagara Falls, Canada, August 2013.
11. **Keynote Speaker**, IEEE Conference on Computational Intelligence and Games (CIG 2012), Granada, Spain, September 2012.
12. **Panelist**. Epic Win: Opening Doors for Women in Games Research and Development. Birds of a Feather Session at the 2012 Grace Hopper Celebration of Women in Computing. Baltimore, MD, October 2012.



13. **Panelist.** Girls, Games, and Getting to the First Day. Birds of a Feather Session at the 2010 Grace Hopper Celebration of Women in Computing 2010. Atlanta, GA, September 2010.

## INVITED UNIVERSITY AND COMPANY PRESENTATIONS

1. "Formalizing Aesthetic Design: Generative Methods in Games and Craft", Invited Speaker, MIT Game Lab, Cambridge, MA, November 2015.
2. "Formalizing Aesthetic Design: Generative Methods in Games and Craft", Invited Speaker, Human-Centered Computing Seminar, University of Colorado at Boulder, Boulder, CO, October 2015.
3. "PCG as Formal Design Theory", Invited Speaker, New York University Games Research Series, New York, NY, April 2015.
4. "Procedural Content Generation and Expressive Design Tools", Invited Speaker, MIT Open Doc Lab – Games Meet Documentary, Cambridge, MA, February 2015.
5. "Understanding Our Past to Improve Our Future", Invited Speaker for the 2014 Symposium on the Future of Procedural Content Generation, ITU Copenhagen, November 2014.
6. "make something that makes something (that isn't a game)", Invited Speaker for the 2014 Procedural Content Generation Game Jam, London UK, November 2014.
7. "Expressive Design Tools", Goldsmiths College London, November 2014.
8. "Unpacking Replayability – Why Use PCG?", University of Malta, Computational Expression Seminar, March 2014.
9. "Expressive Design Tools: Procedural Content Generation for Mixed-Initiative Design", Raytheon BBN Technologies, July 2013.
10. "Expressive Design Tools", Worcester Polytechnic Institute, March 2013.
11. "Procedural Content Generation for Game Design", George Mason University, March 2012.
12. "Procedural Content Generation for Game Design", Northeastern University, March 2012.
13. "Procedural Content Generation for Game Design", North Carolina State University, February 2012.
14. "Procedural Content Generation for Mixed-Initiative Design", MIT Lincoln Lab, February 2012.
15. "Procedural Content Generation for Game Design", Rochester Institute of Technology, February 2012.
16. "Procedural Content Generation for Game Design", Olin College, February 2012.
17. "Procedural Content Generation for Game Design", University of Baltimore, February 2012.
18. "The MDA Framework for Designing and Analyzing Games", University of Baltimore, February 2012.

## OTHER SCHOLARSHIP

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## COLLABORATIONS AND EXTERNAL CONSULTING

External Consultant, Disney Research Pittsburgh, July 2015. Collaborated with the Disney Research textiles lab on game design and realtime, playful controls for textile fabrication machines.

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## FELLOWSHIPS, HONORS, AND AWARDS

1. Invited Participant, Workshop on Computational Modeling in Games, Banff International Research Station for Mathematical Innovation and Discovery, Banff, Canada, May 2016.
2. Faculty Fellow, Northeastern Humanities Center. Project on *Understanding the History of Generative Design*, 2015-2016 academic year.
3. Recipient, Best Game Design Paper Award, Foundations of Digital Games Conference, June 2015.
4. Recipient, David M. Levine Best Paper in Innovative Education Award, Northeast Decision Sciences Conference, March 2015.
5. Invited Participant, Dagstuhl Seminar 15051: Artificial and Computational Intelligence in Games: Integration. Schloss Dagstuhl. January 2015.
6. Finalist, Hague Institute for the Internationalization of Law *Innovating Justice* awards, "Online Advocacy Simulation for Self-Represented Parties". November 2014.
7. Valentine and Cosman Research Fellow, The Strong National Museum of Play. Archival research into the history of procedural content generation in games. July 2014.

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#### AUTHORED MEDIA

1. Co-Contributor, Plus Four to Science Podcast. This podcast aims to reach a wide audience, including the general public, to educate about current research and events in game artificial intelligence.

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#### MEDIA EXPOSURE

1. Guest on *Roguelike Radio* podcast, "Episode 94: Procjam", shared with other invited speakers for the Procedural Content Generation Game Jam. October 26, 2014.
2. Guest on *A Brief Escape* podcast, speaking about procedural content generation and socially responsible game education. October 16, 2014.
3. A simulation game to help people prep for court, Greg St. Martin, news@northeastern, September 25, 2014.
4. *Mad Science* project was featured in Hartford Courant article, "Virtual Court: Video Game Could Help Litigants Who Don't Have A Lawyer", September 15, 2014.
5. "Women of the Periodic Table Quilt", Scientific American Blogs, Maia Weinstock. April 25, 2014.
6. "Computers for Crafting?", Angela Herring, news@northeastern, September 13, 2012.

#### GRANTS

#### EXTERNAL

1. Co-PI, "Research on the Development of Computational and Systems Thinking in Middle School Students through Explorations of Complex Earth Systems".  
*Funder:* National Science Foundation, STEM-C program. \$1,967,087. September 2015 – July 2018.  
*Effort:* 25%, contributing to game design education curriculum, game design analysis, domain expert in computational thinking.

2. PI, "GrACE: A Procedurally Generated Puzzle Game to Stimulate Mindful and Collaborative Informal Learning to Transform Computer Science Education". Co-PI: Casper Hartevelde.  
*Funder:* National Science Foundation, Advancing Informal STEM Learning program. \$288,528. September 2014 – August 2016. Effort: 50%, contributing to game design, procedural content generation, and as a domain expert.
3. Co-PI, subcontract on a grant won by Statewide Legal Services of Connecticut.  
*Funder:* Legal Services Corporation, Technology Incentive Grant program. \$90,000. January – December 2015.

## INTERNAL

1. Co-PI, "Automatic Levelling of Citizen Science Game Tasks for Engagement". Northeastern University Tier 1 Research Incentive Grant, \$50,000. July 2015. PI: Seth Cooper, CCIS; Co-PI: Sebastian Deterding, CAMD.
2. PI, "eBee: A Kit for Designing Quilting-Based STEAM Games", Northeastern University College of Arts, Media and Design Faculty Research and Creative Incentives Grant. \$10,000. November 2014. Co-PI: Celia Pearce, CAMD.
3. Co-PI, "Viv: A Crowdsourced Creative AI in your Pocket", Northeastern University College of Arts, Media and Design Faculty Research and Creative Incentives Grant. \$10,000. November 2014. PI: Janos Stone, CAMD.
4. "GrACE: An AI-Driven Game for Broadening Participation in Computer Science", Northeastern University Tier 1 Research Incentive Grant. \$50,000. March 2014. Co-PI: Casper Hartevelde, CAMD.
5. "A Game-Based Platform for Crowdsourced Experimentation and Citizen Science", Northeastern University College of Arts, Media and Design Faculty Research and Creative Incentives Grant. \$10,000. November 2013. Co-PI: Casper Hartevelde, CAMD.

## TEACHING AND ADVISING

### COURSES

Fall 2015	<b>GAME 3700: Rapid Idea Prototyping for Games</b> Undergraduate enrollment: 28
Fall 2015	<b>CS 4991: Research</b> Undergraduate enrollment: 1
Spring 2015	<b>CS 3540: Game Programming</b> Undergraduate enrollment: 19 <i>Developed new activities, assignments, and midterm. Working in collaboration with CAMD artists-in-residence from Oh Heck Yeah! games for students to develop games.</i>

Spring 2015	<b>CS 4991: Research</b> Undergraduate enrollment: 1
Spring 2015	<b>CS 8674: Master's Project</b> Graduate enrollment: 1
Spring 2015	<b>CS 8982: Readings</b> Graduate enrollment: 1
Fall 2014	<b>CS 4150/5150: Game Artificial Intelligence</b> Undergraduate enrollment: 17 Graduate enrollment: 10
Fall 2014	<b>CS 8982: Readings</b> Graduate enrollment: 5
Spring 2014	<b>CS 8674: Master's Project</b> Graduate enrollment: 2
Spring 2014	<b>CS 8982: Readings</b> Graduate enrollment: 1
Fall 2013	<b>CS 4150/5150: Game Artificial Intelligence</b> Undergraduate enrollment: 27 Graduate enrollment: 21 <i>Completely new course which I proposed and developed.</i>
Fall 2013	<b>GAME 3700: Rapid Idea Prototyping for Games</b> Undergraduate enrollment: 26 <i>Significantly revised course, which I developed and helped propose.</i>
Spring 2013	<b>CS 4300/5310: Computer Graphics</b> Undergraduate enrollment: 27 Graduate enrollment: 16 <i>Developed several new lectures and assignments.</i>
Fall 2012	<b>CS 4100/5100: Foundations of Artificial Intelligence</b> Undergraduate enrollment: 10 Graduate enrollment: 44 <i>Developed several new lectures and assignments.</i>

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## OTHER TEACHING

2008 – 2011	<b>Lead Instructor, COSMOS at UC Santa Cruz</b> California State Summer School for Mathematics and Science
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Cluster 5 – Technologies of Fun: Game Graphics, AI, and Network in Code  
*Designed and iterated upon a one month summer program teaching game design  
and programming to high school students.*

## POSTDOCTORAL FELLOW MENTORSHIP

I currently mentor/co-mentor the following postdoctoral fellows:

1. Amy Hoover, PhD. University of Florida, USA, Computer Science
2. Jacqueline Barnes, PhD. Indiana University, USA, Learning Sciences
3. Yetunde Folajimi, PhD. University of Benin, Nigeria, Computer Science

## SUPERVISION OF GRADUATE STUDENTS

### PHD STUDENTS

1. Britton Horn, Computer Science PhD student, in-progress (expected 2018)

### MASTER'S STUDENTS

1. Donald Bass, Computer Science MS student, completed Fall 2014

## ADVISING ACTIVITIES

The following students have conducted a significant portion of a research project with me, either paid or as part of their course work.

### MASTER'S RESEARCH ASSISTANTS

1. Lindsey Kennard, MS Computer Science, Spring 2015.
2. Nathaniel Wasserman, MS Computer Science, Fall 2014 – Spring 2015.
3. Rania Masri, MFA Information Visualization, Fall 2014.
4. Huichen Guan, MS Computer Engineering, Fall 2014.
5. Yuyang Zhao, MS Computer Engineering, Summer-Fall 2014.

### UNDERGRADUATE RESEARCH ASSISTANTS

1. Nicholas Brown, BS Computer Science/Interactive Media, Fall 2015.
2. Cody Mello-Klein, BA English and Anthropology, Summer-Fall 2015.
3. Hilery Chao, BS Computer Science, Brown University, Summer 2015.
4. Christopher Clark, BS Computer Science/Interactive Media, Spring-Summer 2015.

5. Cristina Silva, BFA Graphic Design/Interactive Media, Spring 2015.
6. Oskar Strom, BFA Digital Art/Game Design, Spring-Fall 2015.
7. Dean Thurston, BS Computer Science/Game Design, Spring-Summer 2015.
8. Amy Stahl, BA Sociology, Spring-Summer 2015.
9. Daniel Grover, BS Computer Science/Game Design, Spring-Summer 2015.
10. William Herbert, BFA Digital Art/Game Design, Spring 2015 – Provost Undergraduate Research and Creative Endeavors Award recipient
11. Isabella Carlsson, undeclared, Fall 2014 – present.
12. Kathleen Mullins, BS Computer Science/Interactive Media, Fall 2014.
13. Ashley Sullivan, BS Computer Science/Game Design, Summer – Fall 2014.
14. Nolan Manning, BA Digital Art/Game Design, Spring - Fall 2014.
15. Max Lever, BS Computer Science/Interactive Media, Summer-Fall 2014.

## SERVICE AND PROFESSIONAL DEVELOPMENT

### SERVICE TO THE INSTITUTION

#### GAME DESIGN PROGRAM

2015-2016	<i>Service release due to fellowship and personal leave.</i>
2014-2015	<b>Game Design BFA Committee</b> (member) Significantly contributed to the design and development of the BFA in Games degree.
2014-2015	Game Undergraduate Committee (member)
2014-2015	Game Research Activities Committee (member)
2013-2014	Game Design Hiring Committee (member)
2013-2014	Game Design Undergraduate Committee (member)
2012-2013	<b>Undergraduate Games Committee</b> (member) Planned alterations to undergraduate game curriculum in CAMD and CCIS.
2012-2013	<b>Graduate Games Committee</b> (member) Heavily assisted in development of new MS in Game Science and Design, contributing toward structure of curriculum and suggestion of new courses.
2012-2013	Games Events Committee (member)
2012-2013	Games Space Committee (member)

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 COLLEGE OF COMPUTER AND INFORMATION SCIENCE
 

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Fall 2013 – present **Faculty mentor**, Northeastern University Women in Technology group (nuWIT)

2015-2016 *Service release due to fellowship and personal leave.*

2014-2015 Associate Dean for Undergraduates Hiring Committee (member)

February 2014 Representative for the College at the Richard Tapia Celebration of Diversity in Computing, Seattle, Washington.

October 2013 Representative for the College at the Grace Hopper Celebration of Women in Computing, Minneapolis, Minnesota.

2013-2014 Undergraduate Committee (member)

2013-2014 Merit Committee (member, untenured representative)

2012-2013 Undergraduate Committee (member)

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 SERVICE TO THE DISCIPLINE
 

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 CONFERENCE AND WORKSHOP ORGANIZATION
 

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1. Program Co-Chair, IEEE Conference on Computational Intelligence in Games (CIG 2016), Santorini, Greece, August 2016.
2. Workshop Organizer, {Craft, Game} Play, co-located with Foundations of Digital Games 2015, Monterey, CA, June 2015.
3. Workshops Chair, Foundations of Digital Games 2015, Monterey, CA, June 2015.
4. Invited Participant, Dagstuhl Symposium on Artificial and Computational Intelligence in Games: Integration. January 2015.
5. Keynotes Chair and Program Committee Member, IEEE Conference on Computational Intelligence in Games (CIG 2014), Germany, August 2014.
6. Doctoral Consortium Co-Chair, Artificial Intelligence in Interactive Digital Entertainment (AIIDE 2013), Boston, MA, October 2013. *[Successfully secured travel funding for students participating in the doctoral consortium through the AI Journal.]*
7. Organizing Committee, Second Workshop on Artificial Intelligence in the Game Design Process (IDP13), co-located with AIIDE 2013, Boston, MA October 2013.
8. Organizing Committee, Workshop on Design Patterns in Games (DPG 2012). Co-located with the Foundations of Digital Games conference. May 29, 2012. Raleigh, NC, USA.
9. Co-chair, Workshop on AI in the Game Design Process (IDP11), co-located with AIIDE 2011. October 11, 2011.

10. Program Chair, Second International Workshop on Procedural Content Generation in Games (PCGames 2011). Co-located with the Foundations of Digital Games conference. June 28 2011, Bordeaux, France.

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## CONFERENCE PROGRAM COMMITTEES

This list does not include all conferences for which I have served as a reviewer.

1. Program Committee, Thirtieth AAAI Conference on Artificial Intelligence (AAAI 2016), Phoenix, Arizona, February 2016.
2. Program Committee, Experimental AI in Games Workshop (EXAG), co-located with the Artificial Intelligence in Interactive Digital Entertainment conference (AIIDE), Santa Cruz, CA, November 2015.
3. Program Committee, 1<sup>st</sup> Workshop on Computational Creativity and Games (CCGW 2015), Park City, Utah, July 2015.
4. Doctoral Mentoring Program Mentor, Foundations of Digital Games (FDG 2015), Monterey, CA, June 2015.
5. Program Committee, Artificial Intelligence track, Foundations of Digital Games (FDG 2015), Monterey, CA, June 2015.
6. Senior PC Member, Game Technology and Production, Digital Games Research Association Conference (DiGRA 2015), Luneberg, Germany, May 2015.
7. Track Chair, Game Technology and Production, Digital Games Research Association Conference (DIGRA 2014), Snowbird, UT, August 2014.
8. Program Committee, International Conference on Computational Creativity (ICCC 2014), Slovenia, June 2014.
9. Program Committee, Workshop on Procedural Content Generation (PCG 2014), April 2014.
10. Program Committee, Foundations of Digital Games Conference (FDG 2014), April 2014.
11. Program Committee, IEEE Conference on Computational Intelligence in Games (CIG 2013), Niagara Falls, Canada, August 2013.
12. Program Committee, Digital Games Research Association Conference (DIGRA 2013), Atlanta, GA, August 2013.
13. Program Committee, Third International Workshop on Procedural Content Generation in Games (PCGames 2012). Co-located with the Foundations of Digital Games conference. May 29, 2012. Raleigh, NC, USA.
14. Program Committee, 2011 IEEE Conference on Computational Intelligence in Games (CIG '11). August 31 – September 3 2011, Seoul, South Korea.
15. Program Committee, Think Design Play: 5<sup>th</sup> DiGRA Conference. 14 – 17 September 2011, Utrecht, The Netherlands.
16. Reviewer, 38<sup>th</sup> International Conference and Exhibition on Computer Graphics and Interactive Techniques (SIGGRAPH 2011). 7-10 August 2011, Vancouver, BC, Canada.
17. Program Committee, 23<sup>rd</sup> International Conference of the Florida Artificial Intelligence Research Society (FLAIRS), Games & Entertainment Track (FLAIRS '10). Daytona Beach, FL, USA.



18. Program Committee, 2010 IEEE Conference on Computational Intelligence in Games (CIG '10). Copenhagen, Denmark.

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## JOURNAL REVIEWING

1. IEEE Transactions on Multimedia Computing Communications and Applications (TOMCCAP)
2. IEEE Transactions on Computational Intelligence and Artificial Intelligence in Games (TCIAIG)
3. ACM Computers in Entertainment

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## OTHER

1. Vice-Chair, Games Technical Committee of the IEEE Computational Intelligence Society, 2015 – present.
2. Associate Editor for the IEEE Transactions on Computational Intelligence and AI in Games (TCIAIG), 2012 – present.
3. NSF Review Panelist, Directorate of Education and Human Resources, 2014.
4. Member of the Games Technical Committee of the IEEE Computational Intelligence Society, 2011 – 2015.

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## SERVICE TO THE COMMUNITY/PUBLIC

1. Panelist. Women in STEM Mentor Program at Harvard University. February 2013.
2. Presenter, Johns Hopkins Center for Talented Youth workshop at Northeastern, December 2012.
3. Reviewer for the National Center for Women & Information Technology (NCWIT) Aspirations in Computing Award, 2010-2011.
4. Between 2009 and 2012, I ran several afternoon workshops for middle school children teaching the basics of game development and design, as well as mentored for girls in the Girl Game Company, a Watsonville, CA-based group that ran after school workshops targeting middle school Latina girls.

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## PROFESSIONAL DEVELOPMENT

I am a member of the following professional societies:

1. Association for Computing Machinery (ACM)
2. Association for the Advancement of Artificial Intelligence (AAAI)
3. International Game Developers Association (IGDA)
4. Institute of Electrical and Electronics Engineers (IEEE) and IEEE Women in Engineering