

Nathan R. Prestopnik

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Professional Profile

I am an educator and human-computer interaction (HCI) researcher with nearly 20 years of experience in game design, user experience design, web design, and interactive media.

Academic Appointments

Assistant Professor, Department of Computer Science | *August 2013 – Present*
School of Humanities and Sciences, Ithaca College, Ithaca, NY

Education

Ph.D. Syracuse University, Information Science & Technology | *May 2013*

School of Information Studies | Dissertation Title: *Design Science in Human-Computer Interaction: A Model and Three Examples* | **Winner**: 2013 Syracuse University School of Information Studies Doctoral Prize

Advisor – Dr. Ping Zhang

Committee – Drs. Dan Cosley, Mike D'Eredita, Alan Foley, Michael Schoonmaker, Howard Turtle, Yang Wang

M.Phil. Syracuse University, Information Science | *December 2012*

School of Information Studies (GPA 3.95)

M.S. Syracuse University, New Media | *July 2006*

S.I. Newhouse School of Public Communications (GPA 4.0)

B.A. Syracuse University, Television-Radio-Film Production | *May 2001*

S.I. Newhouse School of Public Communications (Magna Cum Laude)

B.A. Syracuse University, History | *May 2001*

Maxwell School of Citizenship and Public Affairs (Magna Cum Laude)

Current Research Interests & Projects

PIM/VR: Exploring Personal Information Management in Virtual Worlds | *September 2017 – Present*

Working with Ithaca College students to explore personal information management (PIM) in purpose-built virtual worlds developed using Autodesk Maya, the Unity Game Engine, and the HTC Vive SDK.

Arena: Purposeful Gaming for Informal Second Language Acquisition | *September 2014 – Present*

Working with Ithaca College Computer Science and Emerging Media students to design, implement, and study an adventure video game (*Arena*) set in a Spanish-speaking world. The goals of the game are to support Spanish vocabulary acquisition. The goals of the project are to study how game worlds, stories, and mechanics can engage learners who are not motivated by traditional classroom instruction, especially male “gamers” who fall into this category.

Purposeful Gaming for Citizen Science | *September 2010 – Present*

Served as lead designer, project manager, and researcher for an NSF-funded research effort (Grant# 09-68470) exploring purposeful gaming in the context of online, crowdsourced science. Project has attracted more than 5,000 players, has produced an ongoing stream of scientific publications, and has been covered in various media, including Scientific America, National Geographic, and the Guardian/Observer online. More information at www.citizensort.org.

Publications

Publications in Progress

Tang, J. & Prestopnik, N. (in progress). Framing, Player Experience, and Contribution Behavior in two Gamified Information Systems.

Refereed Journal Publications

Prestopnik, N.R., Crowston, K. & Wang, J. (2017). Gamers, Citizen Scientists, and Data: Exploring Participant Contributions in two Games with a Purpose. *Computers in Human Behavior* (68), pp. 254-268.

Prestopnik, N.R. (2016). Games, Stories and Language: Motivating Second Language Acquisition with Play. *International Journal of Designs for Learning* (7) 3, pp. 72-87.

Prestopnik, N. R., & Tang, J. (2015). Points, stories, worlds, and diegesis: Comparing player experiences in two citizen science games. *Computers in Human Behavior* (52), pp. 492-506.

Kim, S.Y.S., Prestopnik, N.R. & Biocca, F.A. (2014). Body in the Interactive Game: How Interface Embodiment Affects Physical Activity and Health Behavior Change, *Computers in Human Behavior* (36), pp. 376-384.

Prestopnik, N.R. (2013) Cooperative Visualization: A Design Case, *Library Hi Tech*, (31) 2. (A version of this article was originally presented at *iConference 2013*, held in Fort Worth, Texas, 12–15 February, 2013.

Prestopnik, N.R. & Foley, A. (2012). Visualizing the Past: The Design of a Temporally Enabled Map for Presentation (TEMPO), *International Journal of Designs for Learning. Vol 3, No 1*.

Prestopnik, N.R. (2010). Theory, Design and Evaluation – (Don't Just) Pick any Two, *AIS Transactions on Human-Computer Interaction* (2) 4, pp. 167-177.

Refereed Conference Proceedings

Lane, N.* & Prestopnik, N.R. (2017). Diegetic Connectivity: Blending Work and Play with Storytelling in Serious Games. *CHIPlay 2017*. Amsterdam, Netherlands, Oct. 15-18 2017.
* Undergraduate co-author

Tang, J. & Prestopnik, N. (2017). Effects of Framing on User Contribution: Story, Gameplay and Science. *America's Conference on information Systems (AMCIS) 2017*. Boston, MA, USA, Aug. 10-12 2017.

Tang, J. & Prestopnik, N.R. (2016). Toward a Meaningful Framing for User Participation in a Gamified Information System. *European Conference on Information Systems*. Istanbul, Turkey, 12-15 June, 2016.

Prestopnik, N.R., Crowston, K. & Wang, J. (2014). Exploring Data Quality in Games With a Purpose. *iConference*. Berlin, Germany, 4–7 March, 2014.

Prestopnik, N.R. (2013). Cooperative Visualization: A Design Case. *iConference*. Fort Worth, TX, 12–15 February, 2013.

Winner: Lee Dirks Best Paper Award

Crowston, K. & Prestopnik, N.R. (2013). Motivation and Data Quality in a Citizen Science Game: A Design Science Evaluation. *Hawaii International Conference on System Sciences (HICSS)*. Wailea, Maui, HI, 7–10 January, 2013.

- Prestopnik, N.R. & Crowston, K. (2012). Purposeful Gaming & Socio-Computational Systems: A Citizen Science Design Case. *ACM Group: International Conference on Supporting Group Work*. Sanibel Is., FL, 27–31 October, 2012.
- Prestopnik, N.R. & Crowston, K. (2012). Citizen Science System Assemblages: Toward Greater Understanding of Technologies to Support Crowdsourced Science. *iConference*. Toronto, ON, Canada, 8–11 February, 2012.
- Prestopnik, N.R. & Crowston, K. (2011). Gaming for (Citizen) Science: Exploring Motivation and Data Quality in the Context of Crowdsourced Science through the Design and Evaluation of a Social-Computational System, *7th IEEE International Conference on e-Science*. Stockholm, Sweden, 6–8 December, 2011.
- Prestopnik, N.R. & Foley, A. (2011). The TEMPO of Battle: Designing a Temporally Enabled Map for Presentation, *ED-MEDIA*. Lisbon, Portugal, 27 June–1 July, 2011.
- Prestopnik, N.R. & Zhang, P. (2010). Coping With Nuisances on the Web. *16th Americas Conference on Information Systems*. Lima, Peru, 12–15 Aug, 2010.
Nominated: Best Paper Award

Refereed Conference Posters and Notes

- Lane, N.* , Fletcher, E.* , Wang, Y.* & Prestopnik, N.R. (2016). Arena: Designing an Adventure Video Game for Second Language Engagement and Acquisition. *iConference 2016*. Philadelphia, PA. March 20-23, 2016.
Winner: Best Poster Award
 * Undergraduate co-authors
- Prestopnik, N.R. & Yan, J.L.S. (2014). Obscuring the Task: Story and Theme as Motivators in an Emotion Annotation Game. *Collective Intelligence 2014*. Massachusetts Institute of Technology, June 10-12, 2014.
- Prestopnik, N.R. and Souid, D. (2013). Forgotten Island: A Story-Driven Citizen Science Adventure. *ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)*. Paris, France, April 27 – May 2, 2013.
Finalist: CHI 2013 Student Game Design Competition
- Crowston, K., Prestopnik, N.R. & Wiggins, A. (2012). Motivating Citizen Scientists with a Classification Game. *Conference on Public Participation in Scientific Research*. Portland, OR, 4–5 August, 2012.
- Prestopnik, N.R. (2011). Information Spaces as Interactive Worlds. *iConference*. Seattle, WA, 8–11 February, 2011.

Refereed Book Sections

- Prestopnik, N.R. & Zhang, P. (2014). Human Computer Interfaces (HCI): Interactivity, Immersion and Invisibility as New Extensions, in D. Straub and R. Welke (eds.), *Encyclopedia on Management Information Systems, 3rd Edition*, Wiley.

Invited Presentations and Workshop Participation

- Invited Seminar & Presentation: *Serious Unseriousness: Researching Games, Play, and Purpose* at the Central University of Finance and Economics (CUFE), Beijing, China, June 1-15, 2017.
- Workshop: *Human Computation Roadmap Summit Workshop* at the Computing Research Association (CRA) Computing Community Consortium (CCC), Woodrow Wilson International Center for Scholars, Washington, DC. June 18-20, 2014.

Presentation: *Games, Tasks and Crowds: Designing Purposeful Interactions Around Stories and Play* at the Production and Operations Management Society Annual Conference, Crowd-based Innovation: Central Themes and New Insights Track. Atlanta, GA. May 10, 2014.

Workshop: *White House Office of Science and Technology Policy (OSTP) Crowdsourcing Games Workshop*. White House Eisenhower Executive Office Building, 1650 Pennsylvania Avenue, Washington DC. April 29, 2014.

Workshop: *National Science Foundation (NSF) Regional New York State Workshop on Social Computational Systems*. Syracuse University. Syracuse, NY. April 5, 2014.

Presentation: *Citizen Science Design: Socially Intelligent Computing to Support Citizen Science* at the Social Computational Systems Citizen Science Workshop, Blue Mountain Lake, NY. May 24–27, 2011.

Editorially Reviewed Book Chapters and Articles

Alten, S.R. (2008). Audio in Media, Ninth Edition. Boston, MA: Wadsworth. (Chapter 17, *Audio for Interactive Media: Game Sound*, drafted by N.R. Prestopnik for 8th and 9th editions).

Alten, S.R. (2008). Audio in Media, Ninth Edition. Boston, MA: Wadsworth. (Chapter 18, *Internet Production*, drafted by N.R. Prestopnik for 8th and 9th editions).

Prestopnik, N.R. (2009). Q n A: Realistic Outdoor Lighting Techniques. *3D World*, (120), 88.

Prestopnik, N.R. (2009). Q n A: Using 3D Particle Systems to Simulate a Laser Effect. *3D World*, (115), 78.

Prestopnik, N. (2009). Q n A: Designing an Underwater Scene in TrueSpace. *3D World*, (112), 77.

Prestopnik, N.R. (2008). Modeling on Rails. *3D World*, (109), 58-59.

Teaching Experience

Instructor of Record, Undergraduate

COMP 202: Computational Foundations of Emerging Media | Ithaca College | S2016, S2017
Redesigned the course to include topics in EM, JavaScript (including OOP), structured data (JSON), interaction and event-driven programming, and asset creation using Adobe Creative Suite.

COMP 290: 3D Computer Graphics & Animation | Ithaca College | F2015, F2016
Designed experimental course, covering various aspects of 3D computer graphics. Students used Autodesk Maya software while also exploring the underlying technical details of 3D graphics.

COMP 325: Introduction to Human-Computer Interfaces | Ithaca College | F2013 & 14, S2015-17
Redesigned the course and covered principles of human-computer interaction for various technologies from the perspectives of designer, user, researcher, and implementer. Upgraded course from 225 to 325 level for Spring 2015.

COMP 171: Principles of Computing Science I | Ithaca College | S2015, F2017
Introduction to computer science: programming fundamentals in the Python programming language, including OOP.

COMP 107: Introduction to 2D Game Development | Ithaca College | F2013-2017
Redesigned the course and covered game design principles, designing and implementing game mechanics, interactive storytelling, 2D game technologies, and 2D game aesthetics.

COMP 106: Multimedia Programming | Ithaca College | S2013 (2 sections)
Redesigned the course and covered the creative aspects of multimedia programming using web technologies such as HTML5, CSS3, JavaScript, and JavaScript/Canvas.

IST 263: Web Design & Management | Syracuse University | S2013
Developed a syllabus and covered WWW and the internet, principals of web management, HTML5, CSS/CSS3, jQuery, Information Architecture for the Web, and Visual Design for the Web.

TRF 414: Writing & Designing for Interactive Media | Syracuse University | S2008
Taught for the Department of Defense Advanced Visual Information Program. Developed a syllabus and covered XHTML, CSS, Graphic Design, Flash, Usability, and Information Architecture.

ART 100: Computer Animation | Fulton-Montgomery Community College | Summer 2000, Winter 2001
Designed and taught two sections of an introductory 3D computer graphics course covering 3D modeling, shading, lighting, and basic animation.

Instructor of Record, Graduate

EXCO 61106: Gamification & Crowdsourcing | Ithaca College | Winter 2015, Spring 2017
Designed and taught a 2-credit graduate course for students in the Park School of Communications Executive Master's in Communication Innovation. Winter 2015: Boston, MA @ Emerson College and MIT; Spring 2017: Chicago, IL @ Adler Planetarium / Zooniverse.

Co-Instructor

IST 688: Social Web Technologies | Syracuse University | Spring 2010
Co-taught a social web technologies course as part of a teaching practicum for credit. Instructed and guided students as they developed websites with a social-computational focus, such as crowdsourced recommendation services, collaborative art, and ride sharing.

IST 400: Scripting for Games | Syracuse University | Spring 2010
Co-taught a game scripting course as part of a teaching practicum for credit. Instructed and guided students as they developed web-based games using XHTML, CSS, and JavaScript.

Academic Service

Service to Scholarly Community

Reviewer: Journals, Conferences and Books

- Journal: Computers in Human Behavior (CHB)
- Journal: Computers and Education
- Journal: Transactions on Human-Computer Interaction (TOCHI)
- Journal: International Journal of Human-Computer Studies (IJHCS)
- Hawaii International Conference on System Sciences (HICSS)
- Transactions on Social Computing
- JMIR Serious Games
- ACM Conference on Computer Supported Cooperative Work
- International Conference on Information Systems (ICIS)
- iConference
- Americas Conference on Information Systems (ACIS)
- Book: Reviewed Proposal on Semantic Web for Imperial College Press
- Innovation and Technology in Computer Science Education (ITiCSE)

Service at Ithaca College

College-Level Service

- Whalen Research Symposium Committee (2016-2017)
- H&S 3D Lab co-coordinator, School of H&S (2015-2017)
- EXCO Master's Defense Committee Member (6 defenses), Park school (2015-2016)
- Global Game Jam Faculty Organizer, Ithaca College Annual Event Site (2014-2016)
- Ithaca College Game Developers Club, Faculty Advisor (2013-2017)
- Ithaca College Gamers Club, Faculty Advisor (2016-2017)
- Juror, Campus Google Glass App Competition (2014)

Departmental Service

- Emerging Media Steering Committee Member (2016-2017)
- Faculty Search Committee Member for EM Position at Park School (2014-2017)
- Integrative Core Curriculum Application for COMP 107 (Summer 2014)
- Integrative Core Curriculum Application for COMP 106 (Spring 2014)
- Senior Project Presentation Coordinator (Fall 2013)
- Ongoing departmental service as required

Community Service

- External Program Reviewer, Morrisville State College CIS degrees (2014)
- Frequent interviews with student media on topics of games, media, and interaction (ongoing)
- The Learning Web: High School Student Mentoring (2014)

Service at Syracuse University

University and Departmental Service

- Global Game Jam Organizing Committee, SU Event Site (2012, 2013)
- Personnel Committee (2011 – 2012)
- Doctoral Programs Task Force (2011)
- Undergraduate Committee (2010 – 2011)
- Peer Advisor to the 2010 PhD Cohort (2010 – 2011)
- Strategic Faculty Search Committee (2010)
- Doctoral Programs Committee (2009 – 2010)

Service at Morrisville State College

College and Departmental Service

- Morrisville State College Faculty Congress, Ex Officio Member (2007 – 2009)
- Web Advisory Group, Chair (2006 – 2009)
- Web Advisory Dean's Group, Chair (2006 – 2009)
- College Judicial Board (2008 – 2009)
- Crisis Communication Team (2007 – 2009)
- Community Service Initiative Committee (2007 – 2009)
- Hiring Committees for Web-Related Positions (2006 – 2009)
- Review Committee, Web Development Bachelor Degree Program (2009)
- Technology Services Laptop Scholarship/Award Committee (2007 – 2009)

Professional Interactive Design Experience

Morrisville State College, State University of New York, Morrisville, NY

Interactive Design Consultant | *September 2009 – September 2011*

After concluding my full-time employment at Morrisville State College to pursue my PhD, I continued to work with the school as a consultant. I led a college-wide video production initiative, writing, shooting, and editing more than 150 short videos to promote the school and its unique educational vision. I also worked with senior administrators and web designers to strategize the college's creative and technical approach for the web.

Web Administrator | *June 2006 – August 2009*

Working with the college president, administrators, deans, faculty, staff, and students, I established a creative vision for the college's web environment and shepherded that vision from concept to implementation and launch. During my tenure as web administrator, I established information architecture, created engaging user experiences, and developed a consistent and effective design language for virtually all of the college's more than 70 public and internal websites. Furthermore, by employing user testing and aggressively incorporating user feedback, I designed and developed a highly effective custom CMS system to support the college's extensive front-end web infrastructure. Many parts of this CMS, developed in ASP.NET, remain in use today. Finally, I managed the college's web development department, supervising web design staff, liaising with technologists for networking and systems administration, establishing and managing department policy, and sitting on hiring committees for various web-related positions.

Imperial Solutions

Owner / Freelance Designer | *2000 – Present*

As a practicing interactive designer, I have designed creative user experiences, attention-grabbing visuals, and consistently reliable web systems on a freelance basis for numerous clients. Portfolio available at www.imperialsolutions.com.

ICOM, Clifton Park, NY

Art Director | *November 2003 – June 2005*

I leveraged my design background and technical experience to lead ICOM's locally and regionally focused web design department. Equal parts creative, technical, and managerial, this position gave me an opportunity to hone my visual sense, establish a strong working knowledge of web programming (primarily ASP classic), and supervise client web projects from start to finish.

Make-Up Artist Magazine, Los Angeles, CA

Multimedia Director | *April 2002 – October 2003*

In this position I combined my interest in film production and special effects with my interactive design experience. I redesigned the company website from the ground up, authored DVDs, and established myself as the magazine's primary layout artist. This work culminated in a 2003 redesign, where the managing editor and I worked as a team to establish a brand new design language and layout for the magazine. Another major accomplishment was to oversee video production for the Make-Up Artist Trade Show, an industry event attended by film and television make-up professionals, including numerous Academy and Emmy Award winners.

Honors, Awards & Distinctions

Academic & Professional Honors

Ithaca College H&S STEM Student Sponsor (Summer 2016)
Best Poster Award with undergraduate Co-Authors, iConference 2016 (2016)
Upsilon Pi Epsilon Honor Society for Computing and Information Disciplines (2016)
Ithaca College Center for Faculty Excellence Summer Research Grant (Summer 2015)
Ithaca College Dana Student Internship Program Sponsor (Summer 2015)
Doctoral Prize, SU School of Information Studies (2013)
Lee Dirks Best Paper Award Winner, iConference 2013 (2013)
Finalist, CHI 2013 Student Game Competition for Citizen Sort (2013)
Grand Prize Winner, SU Student App Competition for *Citizen Sort* (2012)
Best Paper Nomination, AMCIS 2010 (2010)
Future Professoriate Program, 2 Year Stipend (2009, 2010)
TrueSpace 3D Artwork Gallery 1st Place, 2nd Place, and over 15 Honorable Mentions (2000-2008)
SUNY/CUAD Awards for Excellence Program (2007)
S.I. Newhouse School of Public Communications Summer Fellowship for Graduate Study (2006)
TrueSpace Computer Animation Contest; 2nd place accident reconstruction animation
produced for Crowsey, Inc. (2004)
S.U. University Honors, Magna Cum Laude (2001)
S.U. Faculty Advising Committee (2001)
Golden Key National Honor Society (2001)
S.U. Chauncey Horton Memorial Award (2001)
S.U. Dean's List, Eight Consecutive Semesters (1997-2001)
S.U. Honors Program (1997-2001)
S.U. Chancellor's Scholar (1997)
National Council of Teachers of English National Writing Award (1997)
Barbara Moynehan Excellence in Writing Award (1997)
Computer and Technology Scholarship (1997)