

## EDUCATION

---

**Simon Fraser University, School of Interactive Arts & Technology**

Surrey, BC

Ph.D., Dec 2017

- Dissertation: “Investigating the Role of Social Eye Gaze in Designing Believable Virtual Characters.”  
Senior supervisor: Steve DiPaola.

**Simon Fraser University, School of Interactive Arts & Technology**

Surrey, BC

M.Sc., Dec 2009

- Thesis: “Enhancing Believability: Evaluating the Application of Delsarte's Aesthetic System to the Design of Virtual Humans.” Senior supervisor: Magy Seif El-Nasr.

**Vancouver Island University**

Nanaimo, BC

Diploma, Digital Media Technology, 2006.

**Vancouver Island University**

Nanaimo, BC

Bachelor of Science, Computer Science, 2004.

---

## PUBLICATIONS & PRESENTATIONS

---

### Books

1. Turner, J., Nixon, M., Bernardet, U., & DiPaola, S. (Eds.). (2016). Integrating Cognitive Architectures into Virtual Character Design. Hershey, PA: IGI Global. Retrieved from <http://www.igi-global.com/book/integrating-cognitive-architectures-into-virtual/146983>.
2. Tanenbaum, J., Seif El-Nasr, M., & Nixon, M. (Eds.). (2014). Nonverbal Communication in Virtual Worlds: Understanding and Designing Expressive Characters. Pittsburg, PA: ETC Press. Retrieved from <http://repository.cmu.edu/etcpress/14/>.

### Peer-reviewed Journal Articles

1. Shakeri, H., Nixon, M., & DiPaola, S. (2017). Saliency-Based Artistic Abstraction With Deep Learning and Regression Trees. *Journal of Imaging Science and Technology*, 61(5). <https://doi.org/10.2352/J.ImagingSci.Technol.2017.61.6.060402>.
2. Turner, J. O., Pasquier, P., & Nixon, M. (2014). Qiezli – A “Self-Absorbed” Creative Virtual Agent in Second Life. *Metaverse Creativity*, 4(1), 55–74.
3. Nixon, M., & Bizzocchi, J. (2014). Interaction Images promote Character Identification in Heavy Rain. *Well Played Journal*, 3(1), 43–64. <http://press.etc.cmu.edu/index.php/product/well-played-vol-3-no-1/>

### Conference Proceedings

1. Nixon, M., DiPaola, S., & Bernardet, U. (2018). An Eye Gaze Model for Controlling the Display of Social Status in Believable Virtual Humans. In *Forthcoming*. Maastricht, The Netherlands: IEEE.
2. Bernardet, U., Adhia, D., Jaffe, N., Wang, J., Nixon, M., Alemi, O., ... Schiphorst, T. (2016). M+M: A Novel Middleware for Distributed, Movement Based Interactive Multimedia Systems. In *Proceedings of the 3rd International Symposium on Movement and Computing* (pp. 21:1–21:9). New York, NY, USA: ACM. <http://doi.org/10.1145/2948910.2948942>
3. Nixon, M., Bizzocchi, J. (2013). Press X for Meaning: Interaction Leads to Identification in Heavy Rain. Proceedings of Digital Games Research Association Conference (DiGRA), Atlanta, Georgia,

online: <http://www.digra.org/digital-library/publications/press-x-for-meaning-interaction-leads-to-identification-in-heavy-rain/>. 14pp.

4. Bizzocchi, J, Nixon, M, DiPaola, S, & Funk, N. (2013). The Role of Micronarrative in the Design and Experience of Digital Games. Proceedings of Digital Games Research Association Conference (DiGRA), Atlanta, Georgia, online: <http://www.digra.org/digital-library/publications/the-role-of-micronarrative-in-the-design-and-experience-of-digital-games/>. 16pp.
5. Nixon, M., Pasquier, P., & Seif El-Nasr, M. (2010). DelsArtMap: Applying Delsarte's Aesthetic System to Virtual Agents. In Lecture Notes in Computer Science (Vol. 6356, pp. 139-145). Presented at 10th International Conference on Intelligent Virtual Agents, Philadelphia: Springer.

### **Book Chapters**

1. Davies, R., & Nixon, M. (2016). Digitisation Fundamentals. In R. Siemens, R. Lane, & C. Crompton (Eds.), *Doing Digital Humanities: Practice, Training and Research* (163-176). London, UK: Routledge. (Invited)
2. Turner, J., Nixon, M., Bernardet, U., & DiPaola, S. (Eds.). (2016). Conclusion. In *Integrating Cognitive Architectures into Virtual Character Design* (pp. 294–304). Hershey, PA: IGI Global.
3. Turner, J. O., Nixon, M., & Bizzocchi, J. (2015). SL-Bots: Automated and Autonomous Performance in Second Life. In D. Doyle (Ed.), *New Opportunities for Artistic Practice in Virtual Worlds*. (pp. 263-289). Hershey, PA: IGI Global. (Editor reviewed)
4. Tanenbaum, J., Nixon, M., & Seif El-Nasr, M. (2014a). Basics of Nonverbal Communication in the Physical World. In J. Tanenbaum, M. Seif El-Nasr, & M. Nixon (Eds.), *Nonverbal Communication in Virtual Worlds* (pp. 10–26). Pittsburg, PA: ETC Press.
5. Tanenbaum, J., Nixon, M., & Seif El-Nasr, M. (2014b). Basics of Nonverbal Communication in the Virtual World. In J. Tanenbaum, M. Seif El-Nasr, & M. Nixon (Eds.), *Nonverbal Communication in Virtual Worlds* (pp. 27–37). Pittsburg, PA: ETC Press.
6. Tanenbaum, J., Seif El-Nasr, M., & Nixon, M. (2014). Challenges and Opportunities for the Ongoing Study of Nonverbal Communication in Virtual Worlds. In J. Tanenbaum, M. Seif El-Nasr, & M. Nixon (Eds.), *Nonverbal Communication in Virtual Worlds* (pp. 319–326). Pittsburg, PA: ETC Press.
7. Seif El-Nasr, M., Bishko, L., Zammito, V., Nixon, M., Vasiliakos, A. V., & Wei, H. (2009). Believable Characters. In B. Furht (Ed.), *Handbook of Multimedia for Digital Entertainment and Arts* (pp. 497–528). New York, NY: Springer US. (Editor reviewed)

### **Conference Presentations and Posters**

1. Nixon, M., & DiPaola, S. (2017). The Hybrid Nature of User Interface in the Facilitation of Social Relationships & Nonverbal Behaviour as Game Mechanics. Presented at the Canadian Game Studies Association 2017, Toronto, Canada. (Refereed Abstract Submission)
2. Lari, A., Desai, N., Zhao, R., Church, M., Miller, R., Schmitt, J., Graves, E., Szafron, D., Carbanaro, M., Schaeffer, J., Seif El-Nasr, M., Nixon, M., Mould, D., Erdeg, A. (2012). BELIEVE: Believable Characters and Stories in Video Games. Poster: GRAND Annual Conference 2012.
3. DiPaola, S., Nixon, M., Bizzocchi, J., & Funk, N. (June 2013). Driving Emotional Involvement in Sports Games: a Case Study in Knowledge-Based Procedural Cinematography. Presented at the Canadian Game Studies Association 2013, Victoria, BC. (Refereed Abstract Submission)
4. Soules, M., & Nixon, M. (2008). The Image Dialogue: Agile Computing and Social Commentary. Presented at SDH/SEMI 2008, University of British Columbia.
5. Soules, M., & Nixon, M. (2004). The Juxtaposition Engine: Recombinant Images and Emerging Narratives. Presented at COCH/COSH 2004, University of Manitoba.

### **Artistic Exhibitions and Demonstrations**

1. <<datastream>> photography and digital art installation. Curator: Robin Field. Nanaimo Art Gallery. May 18 – 31, 2004.

---

## WORK EXPERIENCE

---

**Institute of Communication, Culture, Information and Technology,  
University of Toronto Mississauga** Miss., ON  
*Assistant Professor, Teaching Stream* July 2018 - present

**School of Interactive Arts & Technology, Simon Fraser University** Surrey, BC  
*Term Lecturer* 2017 – 2018

**School of Interactive Arts & Technology, Simon Fraser University** Surrey, BC  
*Sessional Instructor* 2013 – 2017

**School of Interactive Arts & Technology, Simon Fraser University** Surrey, BC  
*Term Lecturer* 2014 – 2015

**School of Interactive Arts & Technology, Simon Fraser University** Surrey, BC  
*Research Assistant* 2008, 2010 – 2014

**Institute for Creative Technologies, USC** CA, USA  
*Visiting Researcher* Summer 2011

**School of Interactive Arts & Technology, Simon Fraser University** Surrey, BC  
*Teaching Assistant* 2009 – 2015, 2017

**Digital Media department, Vancouver Island University** Nanaimo, BC  
*Instructor* 2007 – 2009

**Digital Humanities Summer Institute, University of Victoria** Victoria, BC  
*Instructor* 2004, 2009 – 2015

**Bravenet Web Services** Parksville, BC  
*Software Developer* 2006 – 2007

**Internet Shakespeare Editions, University of Victoria** Victoria, BC  
*Research Assistant* 2004

**Centre for Digital Humanities Innovation, Vancouver Island University** Nanaimo, BC  
*Research Assistant* 2003 – 2004

---

## RESEARCH EXPERIENCE

---

**Movement & Meaning Middleware Project/Moving Stories** SFU  
*Programmer* 2014 – 2015  
Developed a relational database of movement and interpretative annotations, as well as a web application that coordinates access

**Attention Cuing Processes to Enhance Emotional Character Engagement in Video Games (NSERC Engage)** SFU

*Research Assistant*

2012 – 2013

In collaboration with CBC TV Producer and EA developers, produced a validated framework to improve procedural cameras and characterization of virtual hockey players in Electronic Arts' NHL games.

**Graphics, Animation and New Media (GRAND) NCE: Believable Characters and Stories for Games and Simulations**

SFU

*Research Assistant*

2012

Investigated the capability of the Kinect device and development kit for creating environments to support improv scenarios.

**Graphics, Animation and New Media (GRAND) NCE: Believable Characters and Stories for Games and Simulations**

SFU

*Research Assistant*

2011

Investigated the connection between character nonverbal behaviour and social status in virtual worlds.

**Virtual Environment Real User Study (VERUS): Social Signaling in Virtual Worlds**

SFU

*Research Assistant*

2010 – 2011

Developed scripts for longitudinal behaviour tracking research within the Second Life virtual environment. Performed data collection and analysis for user studies.

**Creativity Assistive Tools for Games (CAT Games): Gestural and Embodied Game Interfaces Group**

SFU

*Research Assistant*

2008

Developed game character algorithms for controlling action and aesthetic display.

**Canada-Cuba image dialogue: social commentary in the public sphere**

VIU

*Research Assistant / Programmer*

2008

Developed an interactive web application called the image dialogue.

**Internet Shakespeare Editions**

VIU

*Research Assistant*

2004

Produced XSLT files and supporting scripts for web-based digital versions of Shakespeare.

---

**TEACHING EXPERIENCE**

---

**SFU, SIAT – Sessional Instructor & Lecturer (2013 – 2018)**

IAT 103W – Design Communication and Collaboration

IAT 206W – Media Across Cultures

IAT 210 – Introduction to Game Studies

IAT 309W – Writing Methods for Research

IAT 312 – Foundations of Game Design

IAT 313 – Narrative & New Media

IAT 334 – Interface Design

IAT 343 – Animation

IAT 351 – Advanced Human-Computer Interaction

IAT 432 – Design Evaluation

**SFU, SIAT – Teaching Assistant (2009 – 2017)**

IAT 103W – Design Communication & Collaboration

IAT 167 – Digital Games: Mechanics, Design and Programming  
IAT 309W – Writing for Design, Media & Informatics  
IAT 312 – Foundations of Game Design  
IAT 313 – Narrative & New Media  
IAT 404-405 – “Capstone” Project Development  
IAT 432 – Design Evaluation

**VIU, Digital Media – Instructor (2007 – 2009)**

IPRO 240 – Internet Scripting I  
IPRO 245 – Core Internet Technologies  
IPRO 246 – Internet Applications Development  
IPRO 290 – Internet Project Development

---

**AFFILIATIONS & MEMBERSHIPS**

---

IEEE	2018
Canadian Game Studies Association (CGSA)	2013 – 2014, 2017
Digital Games Research Association (DiGRA)	2013 – 2014
President, SIAT Graduate Student Association	May 2011 – Spring 2015
PhD Rep., SIAT Graduate Program Committee	May 2011 – Aug 2012, 2014
Steward, SFU Teaching & Support Staff Union	May 2011 – May 2017
Vice-President, SIAT Graduate Student Association	2010 – 2011, Spring 2015 – Summer 2015

---

**SCHOLARSHIPS & AWARDS**

---

Franklin D. & Helen K. Van Pykstra Graduate Scholarship (\$3000)	Spring 2017
Robar Industries Limited Graduate Scholarship (\$700)	Spring 2015
President’s PhD Scholarship (\$6250)	Spring 2014
Westak International Sales, Inc. Graduate Scholarship (\$700)	Spring 2012
Dean of Graduate Studies – Graduate Fellowship (\$6250)	2008, 2010, 2011, 2012, 2014
Robert, Edwin, Richard, and Elisabeth Eppich Graduate Scholarship (\$700)	Spring 2011