

# David I. Schwartz, Ph.D.

## Curriculum Vitae

School of Interactive Games and Media  
B. Thomas Golisano College of Computing and Information Sciences Rochester Institute of Technology  
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## 1. Career History

### 1.1 Rochester Institute of Technology (Rochester, New York)

2015–present     **Director**  
                          [School of Interactive Games and Media](#)  
2013–2016       Undergraduate Program Coordinator  
                          School of Interactive Games and Media  
2011–present     Associate Professor  
                          School of Interactive Games and Media  
2009–2011       Assistant Professor  
                          Department of Interactive Games and Media  
2007–2009       Assistant Professor  
                          Information Technology Department

### 1.2 Air Force Research Laboratory (Rome, New York)

2006–2008       **Visiting Research Professor** (6/06–12/06, 5/07–8/07, 6/08–9/08)

### 1.3 Cornell University (Ithaca, New York)

2003–2007       **Director**  
                          [Game Design Initiative at Cornell University](#)  
1999–2007       **Lecturer**  
                          [Department of Computer Science](#)

### 1.4 State University of New York at Buffalo (Amherst, New York)

1997–1998       **Instructor**  
                          School of Engineering and Applied Science  
1990–1997       Teaching/Research Assistant  
                          Department of Civil Engineering

## 2. Education

Ph.D. in Civil Engineering, State University of New York at Buffalo, 1999  
Dissertation: [Deterministic Interval Uncertainty Methods for Structural Analysis](#)

M.S. in Civil Engineering, State University of New York at Buffalo, 1994  
Thesis: [Qualitative Reasoning for Matrix Structural Analysis](#)

B.S. in Civil Engineering, State University of New York at Buffalo, 1990  
Concentration: [Structural Engineering](#)

### 3. External Awarded Grant | Post-Tenure Summary

- PI=Principal Investigator | Co-PI=Co-Principal Investigator | KP=Key Personnel
- See Sections 7-8 for more details and complete project history
- Total funding involvement since tenure: ~\$2.3M

2023	\$600K	NSF	KP	CAREER: Towards Reliable and Quantum-resistant Connected Vehicle Security
	\$30K	NSA/University of South Florida	Co-PI	A game to introduce cybersecurity careers to low-income community members
	\$30K	NASA	Co-PI	Integrating Gamification and IDEIs to Enable Crew Health and Performance on Mars
	\$50K	MITRE	KP	RIT Innovation Fellows
2022	\$30K	Army & RIT AEOP Design of	PI	Resilience Game Design Research
	\$615K	US Military Academy Army Cyber Institute	PI	Resilience Game Design Research (\$864K if project extension granted)
	~\$200K	Foundry (MAGIC Project)	Co-PI	Blockchain and Decentraland
2021	\$50K	NASA	Co-PI	Gamification and Performance-Based Monitoring of Sensorimotor Training Activities
2019	\$100K	Dapper Labs (MAGIC Project)	Co-PI	Flow Blockchain
2017	\$146K	NSF	Co-PI	REU Site: Serious Geographic Information Systems (GIS) Games for Disaster Resilience Spatial Thinking
2015	\$10K	BioDrill Technical Solutions	KP	SIMAD (Simulated Anaerobic Digester): An Educational STEM Game
2014	\$106K	NSF/BioDrill Technical Solutions	KP	SIMAD (Simulated Anaerobic Digester): An Educational STEM Game
	\$241K	NSF	KP	Gamified Digital Forensics Course Modules for Undergraduates
2013	~\$200K	RIT Trustee Gift	PI	StoreWorld (project initial funding pre-tenure)

### 4. Publications, Creative Work, Articles, and Presentations

#### 4.1 Peer-Reviewed Books and Chapters

1. Tomaszewski, B.; Konovitz-Davern, A.; **Schwartz**, D. I.; Szarzynski, J.; Siedentopp, L.; Miller, A.; Hartz, J. (2017). GIS and Serious Games in T.J. Cova, M.-H. Tsou (Eds.) Comprehensive Geographic Information Systems, Elsevier, 2017, pp. 15 pages. [doi.org/10.1016/B978-0-12-409548-9.09623-8](https://doi.org/10.1016/B978-0-12-409548-9.09623-8).
2. Selinger, E.; Seager, T. P.; Spierre, S.; **Schwartz**, D. I. (2012). Using Sustainability Games to

Elicit Moral Hypotheses From Scientists and Engineers. In Per Homann, Jespersen, Soren Riis, and Pernille Almlund (eds.), *Rethinking Climate Change Research: Clean-Technology, Culture, and Communication*, Ashgate, pp. 117-130. [www.ashgate.com/isbn/9781409428664](http://www.ashgate.com/isbn/9781409428664), <https://asu.pure.elsevier.com/en/publications/using-sustainability-games-to-elicite-moral-hypotheses-from-scient>.

3. **Schwartz, D. I.**; Bayliss, J. D. (2011). *The Ethics of Reverse Engineering of Game Technology, Designing Games for Ethics: Models, Techniques and Frameworks*, K. Schrier (ed), IGI Global. [www.igi-global.com/book/designing-games-ethics/46007](http://www.igi-global.com/book/designing-games-ethics/46007).
4. **Schwartz, D. I.**; Bayliss, J. D. (2011). *Unifying Instructional and Game Design, Handbook of Research on Improving Learning and Motivation through Educational Games*, P. Felicia (ed), IGI Global. [www.igi-global.com/book/handbook-research-%20improving-learning-motivation/47397](http://www.igi-global.com/book/handbook-research-%20improving-learning-motivation/47397).
5. **Schwartz, D. I.** (2005). [Introduction to UNIX, 2nd edition](#), Prentice Hall, 2005. Translations: Japanese, Chinese.
6. **Schwartz, D. I.** (2003). [Introduction to Maple, 2nd edition](#), Prentice Hall, 2003. Translations: Italian.

## 4.2 Peer-Reviewed Journal Papers

1. Tomaszewski, B.; Walker, A.; Gawlik, E.; Lane, C.; Williams, S.; Orieta, D.; McDaniel, C.; Plummer, M.; Nair, A.; San Jose, N.; Terell, N.; Pecok, K.; Thomley, E.; Mahoney, E.; Haberlack, E.; **Schwartz, D.** (2020). Supporting Disaster Resilience Spatial Thinking with Serious GeoGames: Project Lily Pad. *DISPRS Int. J. Geo-Inf.* 2020, 9(6), 405; [doi.org/10.3390/ijgi9060405](https://doi.org/10.3390/ijgi9060405); [www.mdpi.com/2220-9964/9/6/405](http://www.mdpi.com/2220-9964/9/6/405).
2. **Schwartz, D. I.** (2011). Teaching Students to Make Alternative Game Controllers, *Journal of Game Design and Development Education*, A. K. Peters Ltd. [www.rit.edu/gccis/gameeducationjournal/download-2011-pdf](http://www.rit.edu/gccis/gameeducationjournal/download-2011-pdf) (link under construction).
3. Fan, K-Y. D.; **Schwartz, D. I.** (2004). First Programming Course in Engineering: Balancing Tradition and Application. *Computers in Education Journal*, Vol. 13, No. 3 (July-September), 55-60. [peer.asee.org/12160](http://peer.asee.org/12160).
4. **Schwartz, D. I.**; Chen, S. S. (1995). A Constraint-Based Approach for Qualitative Matrix Structural Analysis, *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 9, 23–36, DOI:10.1017/S0890060400002067, [www.cambridge.org/core/journals/ai-edam/article/abs/constraintbased-approach-for-qualitative-matrix-structural-analysis/A289CDD44BEF649E836772F4B54704BA](http://www.cambridge.org/core/journals/ai-edam/article/abs/constraintbased-approach-for-qualitative-matrix-structural-analysis/A289CDD44BEF649E836772F4B54704BA).
5. **Schwartz, D. I.**; Chen, S. S. (1994). Towards a Unified Framework for Interval Based Qualitative Computational Matrix Structural Analysis, *Computing Systems in Engineering*, 5, 147–158, [doi.org/10.1016/0956-0521\(94\)90046-9](https://doi.org/10.1016/0956-0521(94)90046-9).
6. Dagher, H.J.; Caccese, V.; Hebert, R; **Schwartz, D. I.** (1991). Feasibility of CCA Treated Stressed Timber Bridge Decks, *Forest Products Journal*, 41 (10): 60–64, [agris.fao.org/agris-search/search.do?recordID=US9159673](http://agris.fao.org/agris-search/search.do?recordID=US9159673).

## 4.3 Shipped/Published Games

1. D. I. **Schwartz** (with Yin Pan and Sumita Mishra) (2017). IPAR, Rochester Institute of Technology, forensic-games.csec.rit.edu (now closed).
2. D. I. **Schwartz** (with Steve Gold, Ashok Rao, Jason Arena) (2012). StoreWorld™, Rochester Institute of Technology, apps.facebook.com/storeworldgame (no longer available).

## 4.4 Peer-Reviewed Conference Papers and Extended Abstracts

1. Xu, J.; Papangelis, K.; Tigwell, G.; Lalone, N.; Zhou, P.; Saker, M.; Chamberlain, A.; Dunham, J.; Luna, S. M.; **Schwartz, D.** (2024). Spatial Computing: Defining the Vision for the Future, CHI EA '24, May 11–16, 2024, 10.1145/3613905.3643978.

1. Dunham, J.; Xu, J.; Papangelis, K.; LaLone, N.; Saker, M.; Schwartz, D. (2024). Pokémon GO as an Advertising Platform: The Case for Locative Advertising in Location-Based Games, *ACM Games: Research and Practice*, [Volume 2, Issue 1](#), Article No.: 6pp 1–25, [doi.org/10.1145/3641509](https://doi.org/10.1145/3641509).
2. Dunham, J.; Papangelis, K.; Boulanger, C.; Lalone, N.; Nika, E. L.; Saker, M.; **Schwartz, D.** (2023). Building Positively Affective Location-Based Advertising: A Study of Pokemon GO Players. *CHI '23: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*, April 2023, Article No.: 570, Pages 1–19, [doi.org/10.1145/3544548.3580939](https://doi.org/10.1145/3544548.3580939).
3. Zhang, H.; Cao, L.; Howell, G.; Schwartz, D.; Peng, C. (2023). An educational virtual reality game for learning historical events, *Virtual Reality* **27**, 2895–2909 (2023). [doi.org/10.1007/s10055-023-00845-5](https://doi.org/10.1007/s10055-023-00845-5).
4. Cao, L.; Shuminski, J.; Zhang, H.; Solanki, P.; Long, D.; **Schwartz, D.**; Mardini, I.; Peng, C. (2023). Multi-User VR Experience for Creating and Trading Non-Fungible Tokens, *International Conference on Human-Computer Interaction*, pp. 604-618, *Lecture Notes in Computer Science*, vol 14027. Springer, Cham. [https://doi.org/10.1007/978-3-031-35634-6\\_44](https://doi.org/10.1007/978-3-031-35634-6_44).
5. Xu, J.; Pagangelis, K.; Dunham, J.; Goncalves, J.; LaLone, N. J.; Chamberlain, A., Lykourantzou, I.; Vinhella, F. L.; **Schwartz, D. I.** (2022). Metaverse: The Vision for the Future, *CHI EA '22: Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems*, April 2022, Article No.: 167, pp. 1-3, [doi.org/10.1145/3491101.3516399](https://doi.org/10.1145/3491101.3516399).
6. Dunham, J.; Xu, J.; Papangelis, K.; **Schwartz, D. I.** (2022). Advertising Location-Based Games: An Exploration in Pokemon GO, *CHI EA '22: Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems*, April 2022, Article No.: 271, pp. 1-6. [doi.org/10.1145/3491101.3519663](https://doi.org/10.1145/3491101.3519663).
7. **Schwartz, D. I.** (2021). Making Games to Teach Physics and Mechanics, *Middle Atlantic American Society for Engineering Education (ASEE) Conference 2021 Villanova, PA*, [peer.asee.org/making-games-to-teach-physics-and-mechanics](https://peer.asee.org/making-games-to-teach-physics-and-mechanics), [peer.asee.org/36308](https://peer.asee.org/36308).
8. Peng, C.; **Schwartz, D. I.**; Johnson, D.; Stackpole, B.; Weeden, C.; Marcovecchio, J.; Richards, D.; Fogle, C.; Brown, C.; Walrond, V. (2020). Visualization for Spectators in Cybersecurity Competitions. *VizSec 2020, 17th IEEE Symposium on Visualization for Cyber Security*. [vizsec.org/vizsec2020](https://vizsec.org/vizsec2020), [doi.org/10.1109/VizSec51108.2020.00009](https://doi.org/10.1109/VizSec51108.2020.00009).
9. Tomaszewski, B; **Schwartz, D. I.** (2017). Critical Spatial Thinking and Serious Geogames: A Position, *AGILE 2017 Workshop on Geogames and Geoplay*, [www.geogames-team.org/agile2017](http://www.geogames-team.org/agile2017), [ceur-ws.org/Vol-1952/Critical\\_SpatialThinking.pdf](https://ceur-ws.org/Vol-1952/Critical_SpatialThinking.pdf).
10. Pan, Y.; Mishra, S.; **Schwartz, D. I.** (2017). Gamifying Course Modules for Entry Level Students, *Proceedings of the 2017 ASEE Annual Conference & Exposition*, pp. 435-440, [dl.acm.org/doi/abs/10.1145/3017680.3017709](https://dl.acm.org/doi/abs/10.1145/3017680.3017709).
11. Pan, Y.; Mishra, S.; **Schwartz, D. I.** (2017). Gamifying Cybersecurity Course Content for Entry Level Students, *Proceedings of the 2017 ACM SIGCSE Technical Symposium on Computer Science Education*, DOI: 10.18260/1-2—27736, [peer.asee.org/27736](https://peer.asee.org/27736).
12. Tomaszewski, B.; **Schwartz, D. I.**; Szarzynski, J. (2016). Crisis Response Serious Spatial Thinking Games: Spatial Think Aloud Study Results. In A. Tapia, P. Antunes, V.A. Bañuls, K. Moore, & J. Porto (Eds.), *ISCRAM 2016 Conference Proceedings – 13th International Conference on Information Systems for Crisis Response and Management*. Rio de Janeiro, Brasil: Federal University of Rio de Janeiro, [www.iscram2016.nce.ufrj.br](http://www.iscram2016.nce.ufrj.br), [www.rit.edu/gccis/geoinfosciencecenter/sites/rit.edu/gccis.geoinfosciencecenter/files/docs/1369\\_BrianTomaszewski\\_etal2016.pdf](https://www.rit.edu/gccis/geoinfosciencecenter/sites/rit.edu/gccis.geoinfosciencecenter/files/docs/1369_BrianTomaszewski_etal2016.pdf).
13. Pan, Y.; **Schwartz, D. I.**; Mishra, S. (2015). Gamified Digital Forensic Course Modules for Undergraduates, *Proc. of the 5th IEEE Integrated STEM Education Conference*, Princeton, NJ.
14. Tomaszewski, B; Szarzynski, J. **Schwartz, D. I.** (2014). Serious Games for Disaster Risk Reduction Spatial Thinking, *GIScience 2014 (extended abstract)*.
15. Critelli, M.; **Schwartz, D. I.**; Gold, S. (2012). Serious social games: Designing a business simulation game, *Proceedings of Games Innovation Conference (IGIC), 2012 IEEE*

- International, pp. 84-88, [doi.org/10.1109/IGIC.2012.6329843](https://doi.org/10.1109/IGIC.2012.6329843).
16. Pan, Y.; Mishra, S.; Yuan, B.; Stackpole, B.; **Schwartz**, D. I. (2012). Game-based Forensics Course For First Year Students, SIGITE '12, Proceedings of the 13th annual conference on Information technology education, ACM, pp 13-18, [dl.acm.org/doi/10.1145/2380552.2380558](https://dl.acm.org/doi/10.1145/2380552.2380558).
  17. Ey, M.; Pietruch, J.; **Schwartz**, D. I. (2010). "Oh-No! Banjo"—A Case Student in Alternative Game Controllers, in Proceedings of Future Play 2010, ACM, [dl.acm.org/doi/10.1145/1920778.1920810](https://dl.acm.org/doi/10.1145/1920778.1920810).
  18. Seager, T. P.; Selinger, E.; Whiddon, D.; **Schwartz**, D. I. (2010). Debunking the Fallacy of the Individual Decision-maker: An Experiential Pedagogy for Sustainability Ethics, The International Symposium on Sustainable Systems and Technology, 2010, [doi.org/10.1109/ISSST.2010.5507679](https://doi.org/10.1109/ISSST.2010.5507679).
  19. Bayliss, J. D.; **Schwartz**, D. I. (2009). Instructional Design as Game Design, [dl.acm.org/doi/10.1145/1536513.1536526](https://dl.acm.org/doi/10.1145/1536513.1536526).  
Proceedings of the 4th International Conference on Foundations of Digital Games, ACM.
  20. **Schwartz**, D. I. (2008). Motivating Engineering Mathematics Education with Game Analysis Metrics, Proceedings of the ASEE Zone I Conference, West Point, NY, March 2008, [docplayer.net/8620286-Motivating-engineering-mathematics-education-with-game-analysis-metrics.html](https://docplayer.net/8620286-Motivating-engineering-mathematics-education-with-game-analysis-metrics.html).
  21. **Schwartz**, D. I.; Locke, K.; Ross, D. O.; Emeny, M. (2007). The Future of Wargame Design: A Componentized Approach, Proceedings of The Huntsville Simulation Conference (HSC 2007).
  22. **Schwartz**, D. I.; Norton, C.; Schwartz, S. (2007). Outreach with Game Design Education (2007). Proceedings of The American Society for Engineering Education 2007 Annual Conference, DOI: 10.18260/1-2—2604, [peer.asee.org/2604](https://peer.asee.org/2604).
  23. **Schwartz**, D. I.; Cosgrave, T.; Weidner, S. (2007). Designing Shape-shifting Collaborative Laboratory Spaces to Facilitate Game-Design Education. Proceedings of the 2nd Annual Microsoft Academic Days on Game Development in Computer Science Education, 95-99, Microsoft, [www.cs.cornell.edu/dis/CL3/Evaluation/ms\\_final.pdf](http://www.cs.cornell.edu/dis/CL3/Evaluation/ms_final.pdf), [stewart.sdsu.edu/3dgame-prog/MADGD-CSE-C/madgdce2007.pdf](http://stewart.sdsu.edu/3dgame-prog/MADGD-CSE-C/madgdce2007.pdf).
  24. Rajagopalan, M.; **Schwartz**, D. I. (2005). Game design and game-development education, Phi Kappa Phi Forum, Honor Society of Phi Kappa Phi, [link.gale.com/apps/doc/A135022702/AONE?u=nysl\\_oweb&sid=googleScholar&xid=dc84704a](https://link.gale.com/apps/doc/A135022702/AONE?u=nysl_oweb&sid=googleScholar&xid=dc84704a).
  25. Hoetzlein, R.; **Schwartz**, D. I. (2005). GameX: A Platform for Incremental Instruction in Computer Graphics and Game Design, SIGGRAPH Proceedings 2005, SIGGRAPH, [dl.acm.org/doi/10.1145/1187358.1187402](https://dl.acm.org/doi/10.1145/1187358.1187402).
  26. **Schwartz**, D.I.; Rajagopalan, R.; Hoetzlein, R.; Ross, D. O. (2005). Developing a Virtual Engineering Curriculum Via Video Game Design. Proceedings of The American Society for Engineering Education St. Lawrence Section Conference, Binghamton University.
  27. **Schwartz**, D. I. (with many others) (2005). Supporting Workflow in a Course Management System, Proceedings of the 36th SIGCSE Technical Symposium on Computer Science Education, 262-266, [dl.acm.org/doi/10.1145/1047344.1047439](https://dl.acm.org/doi/10.1145/1047344.1047439).
  28. Hoetzlein, R; **Schwartz**, D. I. (2003). Computer Game Design as A Tool for Cooperative Interdisciplinary Education, Proceedings of The American Society for Engineering Education St. Lawrence Section Conference, Queens University.
  29. **Schwartz**, D. I.; Chen. S. S. (1996). Interval Methods for Qualitatively Uncertain Models in Structural Design, Information Representation and Delivery, In Civil And Structural Engineering Design Conference Proceedings of ITCSED '96, International Conference on Information Technology in Civil & Structural Design, Glasgow, Scotland (B. Kumar, editor), Civil-Comp Press, U.K., 63-67.
  30. **Schwartz**, D. I.; Chen, S. S. (1993). Order of Magnitude Reasoning for Qualitative Matrix Structural Analysis, Proceedings of The Fifth International Conference on Computing in Civil and Building Engineering, ASCE, 1267-1274, 1993,

[cedb.asce.org/CEDBsearch/record.jsp?dockey=0082249](http://cedb.asce.org/CEDBsearch/record.jsp?dockey=0082249).

31. **Schwartz, D. I.**; Chen, S. S. (1992). Spatial and Temporal Aspects of Qualitative Structural Reasoning, Proceedings of the Eighth Annual Conference on Computing in Civil Engineering, ASCE, 277–284, 1992, [cedb.asce.org/CEDBsearch/record.jsp?dockey=0076467](http://cedb.asce.org/CEDBsearch/record.jsp?dockey=0076467).
32. Dagher, H. J.; Caccese, V.; Herbert, R.; **Schwartz, D. I.** (1990). Design of CCA-Treated Timber Decks, Proceedings of The Second NSF Workshop on Bridge Engineering Research in Progress, University of Nevada, Reno, 261–263, 1990.

#### 4.5 Peer-Reviewed (\*) and Invited Abstracts, Talks, Panels, Posters, and Workshops

1. \* **Schwartz, D. I.**, Abitbol, D., Nack, E. A., Wilkinson, C. M., Whitham, S. M., Tomaszewski, B., Bayliss, J. D., Peng, C. (2023, to appear June 2023). Game Design for Critical Infrastructure Resilience: Game Engine Integration with Geospatial Technology, presentation, [www.mors.org/Events/Symposium/91st-Symposium](http://www.mors.org/Events/Symposium/91st-Symposium).
2. \* **Schwartz, D. I.**, Tomaszewski, B., Bayliss, J. D. (2023). Gaming that Saves Lives: Toward Resilience Games, poster, Great Lakes Security Day, RIT.
3. **Schwartz, D. I.** (2023). (Beyond) Serious Games, ACM Games: Research and Practice.
4. DeBartolo, E. A. & **Schwartz, D. I.** (2023). Game Jam, 2023 KEEN National Conference, [na.eventscloud.com/website/45812/agenda](http://na.eventscloud.com/website/45812/agenda).
5. \*DeBartolo, E. A. & **Schwartz, D. I.** (2022). [Capstone Design: The Role Playing Adventure Game, Capstone Design Conference 2022 | results](#).
6. \***Schwartz, D. I.** (2022). ATLAS: a new open-source collection of game development examples with fully commented code, [education.siggraph.org/newcontent/first-soiree-may-13](http://education.siggraph.org/newcontent/first-soiree-may-13).
7. \***Schwartz, D. I.** & Tomaszewski, B. (2021). When Virtual and Real Worlds Collide: Civil Engineering and Location-based Games. Middle Atlantic American Society for Engineering Education (ASEE) Conference 2021 Villanova, PA. [peer.asee.org/collections/middle-atlantic-asee-section-spring-2021-conference](http://peer.asee.org/collections/middle-atlantic-asee-section-spring-2021-conference).
8. **Schwartz, D. I.** & Pan, Y. (2016). IPAR, NSF ATE Conference 2016, Washington, DC. [atecentral.net/pimeeting2016](http://atecentral.net/pimeeting2016).
9. \*Pan, Y., McGlenn, R., Mishra, S., & **Schwartz, D. I.** (2016). Gamifying Cybersecurity Modules for Entry Level Students, CISSE, 21st Colloquium.
10. \*Pan, Y., Mishra, S., **Schwartz, D. I.**, McNett, A. & McCarthy, P. (2015). Gamified Digital Forensics Course Modules for Entry-Level Students: Presentation and Demonstration, the 24th Annual Conference on Instruction & Technology (CIT 2015), SUNY Geneseo, NY.
11. \*Tomaszewski, B., Szarzynski, J. & **Schwartz, D. I.** (2014). Serious Games for Disaster Risk Reduction Spatial Thinking, GIScience 2014, [www.giscience.org/accepted\\_short.html](http://www.giscience.org/accepted_short.html).
12. **Schwartz, D. I.** (2012). Marketing Your Games, Rochester Sci-Fi Convention.
13. **Schwartz, D. I.** (2011). Breaking into the Game Industry, Videogame Mania, The Strong National Museum of Play.
14. **Schwartz, D. I.** (2011). Breaking into the Game Industry, Rochester Sci-Fi Convention.
15. **Schwartz, D. I.** (2009). Beyond Motion Sensing: Alternative Game Interfaces, Dakota State University Symposium on Computer Game Design & Game Jam 2009.
16. **Schwartz, D. I.** (2009). Course Development for Alternative Game Controllers, Education Summit, Game Developers Conference.
17. **Schwartz, D. I.** (2009). RIT student games, Foundations of Digital Games: Demo Session, ACM.
18. Sarnacki, A., **Schwartz, D. I.** & Ross, D. O. (2008). Wargame Workshop, Info Challenges 2008 Conference and Exposition, Department of the Air Force, Air Force Materiel Command, AFRL-Rome Research Site.
19. **Schwartz, D. I.** (2008). Wargame Engine Development and Research Concepts, Info Challenges 2008 Conference and Exposition, Department of the Air Force, Air Force Materiel Command, AFRL-Rome Research Site.
20. \***Schwartz, D. I.**, Weidner, S. & Cosgrave, A. (2007). Fostering and Measuring Collaborative

- Computing and Learning in the Cornell Library Collaborative Learning Computer Laboratory, ACRL (Association of College & Research Libraries) 13th National Conference.
21. \*Schwartz, D. I. & Rajagopalan, M. (2006). Teaching Technical Communication with Computer Game Design, American Society for Engineering Education National Conference.
  22. \*Schwartz, D. I. (2005). Building Game Development Labs and Facilities in Academic Settings (moderator), FuturePlay Conference.
  23. \*Schwartz, D. I., Cosgrave, A. & Bronson, G. (2005). Collaborative learning, multimedia development, flexibility: Developing and implementing the Cornell Library Collaborative Learning Computer Laboratory, LabMan 2005, the 6th Annual Lab Management Conference, Cornell University.
  24. \*Schwartz, D. I. (2001). The Inexperienced Educator's Guide To Managing A Large Hierarchical Staff in Emerging Technologies for Industry and Education, ASEE St. Lawrence Section Conference.

#### 4.6 Sponsor-Reviewed Articles and Technical Reports

1. Schwartz, D. I. & Davis, S. (2009). Linguistic Geometry: Extension Grant final report, AFRL/RI, VFRP Technical Report.
2. Schwartz, D. I. (2008). Wargame Research Directions: Summer Report, AFRL/RI, VFRP Technical Report.
3. Schwartz, D. I. (2008). Wargame Engine Design: Extension Grant final report, AFRL/IFSB, VFRP Technical Report.
4. Schwartz, D. I. (2007). Wargame Engine Design Summer Report, AFRL/IFSB, VFRP Technical Report.
5. Rajagopalan, M. & Schwartz, D. I. (2005). Game Design and Game-Development Education, Phi Kappa Phi Forum, Volume 85, Summer 2005.
6. Fan, K-Y. & Schwartz, D. I. (2002). Introductory Programming Using MATLAB,
7. MATLAB News & Notes, October 2002.

#### 4.7 Popular Press

1. Schwartz, D. I. (2022). Introduction for *What's Wrong with this Resume?* by Mark Buchignani, [books2read.com/u/bP7kxd](https://books2read.com/u/bP7kxd).
2. Schwartz, D. I. (2019) Beyond 'Bandersnatch,' the future of interactive T.V. is bright, The Conversation, [theconversation.com/beyond-bandersnatch-the-future-of-interactive-tv-is-bright-111037](https://theconversation.com/beyond-bandersnatch-the-future-of-interactive-tv-is-bright-111037). See also [www.fastcompany.com/90326433/what-history-teaches-us-about-the-future-of-interactive-tv](https://www.fastcompany.com/90326433/what-history-teaches-us-about-the-future-of-interactive-tv).

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## 5. Teaching and Course Development

### 5.1 Terminology

Because I have taught at three different schools with multiple forms of terminology and academic year terms (quarters and semesters), I use the following “codes” to unify and clarify my teaching record:

- Semester codes: Calendar Year, F (Fall) and Spring S (Spring)  
e.g., Spring 2015 and Fall 2016 → S15 and F16
- Quarter codes: Academic Year, 1 (Fall), 2 (Winter), 3 (Spring)  
e.g., 2007 Fall, Spring, Winter → 071, 072, 073

Below, I explain the unit/department/school abbreviations across multiple schools and term structures:

IGME	School of Interactive Games and Media	Rochester Institute of Technology
4080	Game Design and Development (BS)	Rochester Institute of Technology
4085	Game Design and Development (MS)	Rochester Institute of Technology
4002	Information Technology	Rochester Institute of Technology
4003	Computer Science	Rochester Institute of Technology
CS	Computer Science	Cornell University
CIS	Computing and Information Science	Cornell University
INFO	Information Science	Cornell University
ENGRG	Engineering	First-year Engineering, Cornell University
EAS	Engineering and Applied Science	First-year Engineering, State University of New York at Buffalo

### 5.2 Rochester Institute of Technology

Course development:

IGME 797	2024	In 2024, I have planned a new section of 797 to expand from game physics into <a href="#">3D workflow via NVIDIA Omniverse</a> . This work expands the 2023 project with MITRE and RIT Innovation Fellows.
IGME 750	2024	I took over Graduate Game Engines when a faculty member had medical leave. Working with two industry experts, we restructured the course to include more examples, new assignments, and weekly lecture topics.
IGME 206	2022–2023	Refining a relatively new bridge course for graduate and transfer students. Course material combines classic CS1 and CS2 material in the context of game design and development.
IGME 099 IGME 299	2014–2020	Developed and refined a co-op/career skills course for sophomores. The course involves collaborating with Career Services to explain how to create job-searching material. IGME-299 merged into IGME-099. IGME-099 became the template for all GCCIS co-op prep classes and has helped thousands of students.

IGME 590 IGME 790	2014–2019	“Game Physics/Physically-based Animation” and related game development examples. See also <a href="http://bit.ly/programgames">bit.ly/programgames</a> .
IGME 797	2014–2018	Developed a new course to assist incoming MS-GDD students with game development in C, C++, graphics, architecture, and physics.
Various courses	2010–2016	Semester conversion for undergraduate and graduate IGM courses. I played a key role in conversion planning (and eventually “fixing” as undergraduate program coordinator) for several IGM courses.
IGME 209 IGME 309	2011–2013	Rewrote the entire “DSA” sequence: updated fixed-function material to the programmable pipeline via shaders, modern OpenGL, and C++.
4080 221 4080 222 4080 223	2011–2012	Updated the entire introductory programming sequence (final year of the quarter system). Highlights include formalizing an “advanced” course for students with high CS-AP scores (which I handed off to other faculty after I joined administration) and rewriting all course projects, which created multiple portfolio items for my cohort of students.
4085 787 4085 788	2010–2012	Updated and formalized the entire MS-GDD capstone policies, documents, and procedures. See Section 11 for a comprehensive list of all supported graduate projects/theses.
N/A	2009–2012	Developed courses that teach the ethics of sustainability with educational games based on economic game theory via a Provost-awarded \$22K grant. This work involved a multidisciplinary group of faculty and students from Sustainability, Philosophy, and IGM.
N/A	2009–2010	Collaborated with IGM and RIT’s Electrical Engineering Technology department faculty to write a CCLI proposal for Physical Computing2, a follow-up to IGM’s Physical Computing course.
4080-221 4080-222 4080-223	2009–2010	Developed a suite of new homework assignments and examples in C# for the introductory programming sequence in game software development, funded by a \$50K Microsoft grant.
4002-590 4002-790	2008–2009	Developed a course on alternative game interfaces in which students make custom game controllers.
4080-330	2007–2008	Rebuilt course; adopted by other instructors.
4002-217 4002-218	2007–2008	Revamped material.

**Semester courses taught by title and terms:**

IGME 099	Co-op Preparation Workshop	S15–S21
IGME 206	Game Development for Programmers	F22
IGME 299	Co-op Preparation Workshop	S15
IGME 309	Data Structures & Algs for Games and Sim. II	F13, F18
IGME 590	Game Physics Seminar	S14, S15, S17, F19
IGME 599	Independent Studies	S14-S22, S23
IGME 790	Game Physics Seminar	S14, S15, S17, F19
IGME 797	Advanced Topics in Game Development	F14, F16, S17

IGME 799	Independent Studies	S14-S22, F23-S24
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**Quarter courses taught by title and terms:**

4080-201	Freshman Seminar (GDD)	101, 111
4080-221	Game Software Development I	091, 121
4080-222	Game Software Development II	111, 112, 121
4080-223	Game Software Development III	091, 113
4080-380	Game Design & Development I	091, 102, 111-112
4080-387	Data Structures & Algorithms for Games I	092, 093, 112-113, 123
4080-417	Visual C++ for Programmers	092, 103, 111, 121
4080-487	Data Structures & Algorithms for Games II	093, 103, 122
4080-599	Augmented Reality Golf (independent study)	092-103
4080-599	GameBoy Development (independent study)	112
4080-599	Independent Studies (other students/projects)	093-103, 112-122
4080-834	2D Graphics Programming	122
4080-887	Capstone Design (MS GDD)	102, 112, 122
4080-888	Capstone Development (MS GDD)	103, 113, 123
4080-899	Independent Studies (graduate capstone support)	112-113
4002-217	Programming for Information Technology I	071
4002-218	Programming for Information Technology II	072, 073
4002-330	Interactive Digital Media	072, 073, 081
4002-590	Alternative Game Interface Seminar	082
4002-790	Emerging Themes in Entertainment Technology	073
4003-231	Computer Science 1/"RAPT" 1	082
4003-232	Computer Science 3/"RAPT" 2	083
4003-233	Computer Science 3/"RAPT" 3	081, 083

**All RIT Courses taught by term:**

S24	IGME 750, IGME 799
F23	IGME 799
S23	IGME 599
F22	IGME 206
S22	IGME 599, IGME 799
F21	IGME 599, IGME 799

S21	IGME 099, IGME 599
F20	IGME 099, IGME 599
S20	IGME 099, IGME 599
F19	IGME 099, IGME 590, IGME 790, IGME 599
S19	IGME 099, IGME 599
F18	IGME 099, IGME 309, IGME 599
S18	IGME 099, IGME 599
F17	IGME 099, IGME 599
S17	IGME 099, IGME 590, IGME 790, IGME 599
F16	IGME 099, IGME 797
S16	IGME 099
F15	IGME 099
S15	IGME 099, IGME 590, IGME 790, IGME 599
F14	IGME 797, IGME 599, IGME 790, IGME 299
S14	IGME 590, IGME 599
F13	IGME 309 (2 sections)
123	4080-387, 4080-888, 4080-599, 4080-899
122	4080-487, 4080-834, 4080-887, 4080-599
121	4080-221, 4080-222, 4080-417
113	4080-381, 4080-387, 4080-888, 4080-599, 4080-899
112	4080-222, 4080-387, 4080-887, 4080-599, 4080-899
111	4080-201, 4080-222
103	4080-417, 4080-487, 4080-888, 4080-599, 4080-899
102	4080-380 (2 sections), 4080-887, 4080-599, 4080-899
101	4080-201 (2 sections), 4080-417, 4080-599
093	4080-387, 4080-487, 4080-599
092	4080-387, 4080-417, 4080-599
091	4080-221, 4080-380
083	4003-232, 4003-233
082	4003-231, 4002-590
081	4003-233, 4002-330
073	4002-218, 4002-330, 4002-790
072	4002-218, 4002-330
071	4002-217

### 5.3 Cornell University

#### Course development:

CIS 300 CIS 400	2001–2007	Developed two courses on game design, CIS300 and CIS400, the core courses of Cornell’s Minor in Game Design. The Minor is the first-ever undergraduate Ivy League game design program. <a href="http://gdiac.cis.cornell.edu">gdiac.cis.cornell.edu</a> .
CS 212	2002–2007	Developed compiler-design project and introductory software engineering material for this course on project development. In Fall 2006, I created a second project using game development on the GameBoyAdvance.
CS 214 CS 215	2003–2007	Created two courses: Advanced UNIX (214) and Introduction to C# (215), and trained graduate students in running the courses.
CS 100M	2000–2004	Developed Academic Excellence Workshop program for CS100M in collaboration with Cornell’s College of Engineering.
CS 100M	2000	Developed course material for the first offering of CS100M, an introductory programming course that teaches programming with MATLAB and Java using scientific computing examples.

#### Courses taught by title and terms:

CS 99	Fundamentals of Computer Programming	F00, F01, F02
CS 100A	Introduction to Computer Programming	S00
CS 100B	Introduction to Computer Programming	F99
CS 100J	Introduction to Computer Programming	S01, F01
CS 100M	Introduction to Computer Programming	F00, F02, S04
CS 114	Introduction to UNIX	F99, S00
ENGRG 150	Engineering Seminar	F00, F02, F04, F05, F06
CS 211	Computers & Programming	S02–F03, F04–S07
CS 212	Java Practicum	S02–F03, F04–S07
CIS 300	Digital Game Design	F04–F05
CIS 400	Advanced Projects in Game Design	F06–S07
CS 490 CIS 490 CS 790	Game Design Projects	F01–F05
CS 490 CIS 490 INFO 490 CS 790 CIS 790	Advanced Game Design Projects	F02–S06

#### Courses taught by term:

S07	CS 211, CS 212, CIS 400
F07	CS 211, CS 212, CIS 400, CS 490, CIS 490
S06	CS 211, CS 212, CIS 400, CS 490, CS 490, CIS 490 CS 490, CIS 490, INFO 490, CS 790, CIS 790

F06	CS 211, CS 212, ENGRG 150, CIS 400, CS 490, CIS 490 CS 490, CIS 490, INFO 490, CS 790, CIS 790
S05	CS 211, CS 212, CIS 300, CS 490, CIS 490 CS 490, CIS490, INFO 490, CS790, CIS 790
F05	CS 211, CS 212, ENGRG 150, CIS 300, CS 490, CIS 490 CS 490, CIS490, INFO 490, CS 790, CIS 790
S04	CS 100M, CIS 300, CS 490, CIS 490 CS 490, CIS 490, INFO 490, CS 790, CIS 790
F04	CS 211, CS 212, ENGRG 150, CIS 300, CS 490, CIS 490, INFO 490, CS 790, CIS 790
F03	CS 211, CS 212, CS 490 CS 490, CIS 490, INFO 490, CS 790, CIS 790
S03	CS 211, CS 212, CS 490 CS 490, CIS 490, INFO 490, CS 790, CIS 790
F02	ENGRG 150, C.S. 99, CS 100M, CS 490, CIS 490, INFO 490, CS 790, CIS 790
S02	CS 211, CS 212, CS 490
F01	CS 99, CS 100J, CS 490
S01	CS 100J, CS 490
F00	ENGRG 150, CS 99, CS 100M
S00	CS 100A, CS 114
F99	CS 100B, CS 144

#### 5.4 State University of New York at Buffalo

##### Course development:

EAS 140	1997–1998	Developed Unix and Maple laboratory modules for EAS 140, an introductory engineering course. These modules formed the basis of the two textbooks published during graduate school, which ultimately made my “break” into Cornell.
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##### Courses taught by term:

F98	EAS 140: Introduction to Engineering
S97	EAS 140: Introduction to Engineering
F97	EAS 140: Introduction to Engineering



## 6. Current/Recent Research and Projects (RIT)

### 6.1 Resilience Game Design & Development (2006–2010, 2014–present)

#### Objectives:

- *Save lives with games.*
- From the Fall 2022 proposal to the Army Cyber Institute (Schwartz, Tomaszewski, Bayliss): “We seek to extend ACI collaboration with a research project that expands the scope of the previous resilience game and [Jack Voltaic](#) in a new framework called **P4**: a game that collects perceived threats, offers options for protection, and allows players to practice through various scenarios. The proposed framework would provide ways to model relationships akin to a network or graph, emphasizing building an engine with a geographic/physical foundation. The framework and the scenario development will have logical and social layers. Players develop the scenarios (user-generated content, UGC) and leverage the engine and physical infrastructure integrations to enable learning objectives.”
- From the Spring 2022 (RIT News): “The [Army Cyber Institute at West Point](#) has funded faculty researchers [David Schwartz](#) and [Brian Tomaszewski](#) in RIT's [School of Interactive Games and Media](#) \$30K to prototype a resilience game to instruct [critical infrastructure](#) leaders about cyber security threats and impacts. The project is part of RIT's [Army Apprenticeship Program](#) (AEOP) and RIT's [Global Cybersecurity Institute](#) (GCI), and it continues the collaboration from RIT's Centers: [MAGIC](#) and [Geographic Science & Technology](#).”

#### Accomplishments and progress:

- 2023: Additional funding for teaching low-income students about cybersecurity via a game; working with new student hires to build first prototypes of this game and the one for ACI.
- 2022: Successful funding for collaboration with West Point. Prior work sought to fund a wargame engine design project, which the 2022 grant has realized in the context of broader resiliency against cyberattacks.
- 2022: Key Personnel for CAREER: Towards Reliable and Quantum-resistant Connected Vehicle Security.
- 2014–2022: multiple peer-reviewed publications, presentations, and impactful press releases.
- 2017: Successful funding of an NSF REU site (2017).
- 2008: Explored one target area (Linguistic Geometry) uncovered during the Summer 2008 research effort. Evaluated its effectiveness for wargame research concerning course-of-action analysis and predictive environments.
- 2008: Redefined and focused entire wargame research effort for AFRL/RI (the Information Directorate). Identified numerous areas that offer potential for furthering the R.I. research objectives and generate future (and targeted) research proposals.
- 2007–2008: Funded one undergraduate co-op and two part-time graduate students.
- 2007: Researched modern approaches to wargame design for extending classic wargames for command hierarchies, multidimensional environments, and non-kinetic conflict. Extended work during first year at RIT to define visualization and modeling techniques for wargame development and design.

#### Proposals and funding (total awarded \$680K)

- NSA/University of South Florida, A game to introduce cybersecurity careers to low-income community members, \$30K, 2023, awarded, co-PI.
- U.S. Military Academy (West Point, ACI), Resilient Game Design Research: Saving lives by designing games to improve resilience for disaster response, \$600K, 2022, awarded, PI.
- NSF CAREER: Towards Reliable and Quantum-resistant Connected Vehicle Security, \$600K, 2022, KP.
- AEOP/ACI and IGM Collaboration \$30K, 2022, awarded, PI.

- NSF, CAREER: Towards Reliable and Quantum-resistant Connected Vehicle Security (2022), pending, senior personnel.
- D.O.D. NSA/SUNY Albany, Careers Preparation National Center: Competency Development and Documentation (2022), \$1.62M, not awarded, co-PI.
- DHS (specific program under NDA, 2020), \$200K, not funded, PI.
- GCCIS Seed Funding, 3-D Game Engine Integration for Improved User Interaction with a GIS-based Spatial Thinking Disaster Resilience Framework, (awarded), \$10K, PI.
- NSF REU Site: Serious Geographic Information Systems (GIS) Games for Disaster Resilience (\$200K submitted 2014, 2015, 2016: not awarded; \$146K awarded in 2017), co-PI.
- DARPA ([www.darpa.mil/program/prototype-resilient-operations-testbed-for-expeditionary-urban-operations](http://www.darpa.mil/program/prototype-resilient-operations-testbed-for-expeditionary-urban-operations)) (with Jessica Bayliss and Amazon, 2017) (\$11M proposed but Amazon chose not to move forward), co-PI.
- Development of an Extensible Framework for the Modeling and Simulation of Kinetic and Non-Kinetic Warfare (with J. D. Bayliss and K. Bierre), \$600K, not awarded due to limited funds, PI.
- \$10K AFRL Information Institute Extension Grant, Fall–Winter 2008, PI.
- \$10K AFRL Information Institute Extension Grant, Fall–Winter 2007, PI.

## 6.2 Game Interfaces and Controllers (2007–2014, 2021–present)

### Objectives:

- Combine background in engineering with game design and development for courses and research in game interfaces. Students analyze, design, and make experimental game controllers.

### Accomplishments:

- [Collaborated with multidisciplinary team across multiple colleges to design and build a balance-training platform for NASA astronauts.](#) Yielded an Imagine [1<sup>st</sup> Place TAD award](#) and new collaborative research in gamification.
- Microsoft Surface 2.0 for student prototyping (funded, RIT).
- Developed and ran the first offering of alternative game interfaces (new seminar).
- Garnered national and international press from Oh No! Banjo, the world’s first “Banjo Hero” guitar at the 2009 Game Developers Conference.
- Selected for competitive project selection for the 2009 ImagineRIT WOW Center.
- Created co-ops at Kionix.
- Continuing to generate grant proposals, publications, and student projects.
- Publication on custom marker-based game controller design (2009).

### Funding (total awarded \$82.6K):

- NASA, Integrating Gamification and IDEIs to Enable Crew Health and Performance on Mars (2023), \$30K, awarded, co-PO.
- NASA/NSGF, Gamification and Performance-Based Monitoring of Sensorimotor Training Activities (2021), \$49.99K, awarded, co-PI.
- SUNY Research Foundation, H-Controller-An Innovative Haptic Game Controller (2014), \$10K, not awarded, PI.
- Accelerating Research Funding Program (RIT), 2010, \$24.6K, awarded, PI.
- PLIG (RIT), Refocused Tangible Experience Design, 2010, \$8K, awarded, PI.
- PLIG (RIT), Alternative Game Interfaces (2010), \$2K, not awarded, PI.
- PLIG (RIT), Mood Fashion (2010), \$8K, not awarded, co-PI.
- NSF TUES Phase I, Fostering Transdisciplinary Innovation Using Sociable Physical Computing (2010), \$200K, not awarded, co-PI.
- NIH (2009), \$15 million (\$150K for RIT, not funded), Immersion Research Institute in collaboration with SUNY Upstate Medical Center, Syracuse New York, Cornell University.
- RIT Grant Writing Workshop (2008), \$5K, not awarded, co-PI.

- ActionXL (2007–present), donation of controllers and accelerometers, value uncertain.

### 6.3 Gamification of Education (2008–2012, 2022–present)

#### Objectives:

- (2022–present) Explore teaching capstones via gamification.
- (2008–2012) Collaborate with colleagues to apply principles of game design to course design.

#### Accomplishments:

- Recent workshops: [Capstone Design Conference](#) (2022), [KEEN](#) (2023).
- Published [seminal paper](#) that focuses on the parallels and connections.

### 6.4 Blockchain (2019–2022)

#### Objectives:

- Explore applications of blockchain technology for games.

#### Roles:

- Co-PI and faculty technical supervisor.

#### Funding (total awarded ~\$300K):

- 2021–2023: approximately \$200K, Foundry Digital, co-PI.
- 2019: approximately \$100K, Dapper Labs, co-PI.

#### Accomplishments:

- Published study of VR and blockchain (2023).
- Students developed prototypes for Foundry Digital for virtual real estate in Decentraland.
- Students developed prototypes for Dapper Labs, leading to additional funding from Foundry Digital (all of the Digital Currency Group).

### 6.5 “Esportsification” for Cyber Security Competitions (2019–2022)

#### Vision:

- Competition is intrinsic to the pedagogy of cyber security competition, and games are inherent to competitions.

#### Mission and objectives:

- Collaborate with several faculty from RIT’s Computing Security Department in building a game engine to facilitate the design, development, implementation, and running of cyber security competitions.
- Provide an engaging experience for all players, spectators, and developers to improve the outreach and learning from the “esportsification” of cyber security competitions.

#### Roles:

- Project lead

#### Accomplishments:

- Developed prototypes to seek funding in collaboration with RIT Global Cyber Security Institute.

### 6.6 ATLAS (2014–2022)

#### Objectives:

- Develop a large open-source collection of examples and tutorials that span learning low

- programming to physical simulation.
- Create a foundation for R&D in engineering simulation games.

#### **Accomplishments and progress:**

- Material currently shared with SIGGRAPH colleagues and IGM students.
- Work to be folded back into game physics course, which is under development.

#### **Funding:**

- GCCIS Associate Professor “mid-career development,” \$30K (awarded), PI.
- Additional support (funding via GCCIS, \$100K (6 co-op students per year for four years), PI.

### **6.7 Game-Based Digital Forensics (2012–2018)**

#### **Objectives:**

- Collaborate with several faculty from RIT’s Computing Security Department in developing software to help teach introductory computer security concepts.
- Hone game design skills via branching narratives and interface.

#### **Roles:**

- Senior personnel (2014–2017).
- Supervised and produced game design and development.

#### **Accomplishments:**

- Game published at forensic-games.csec.rit.edu.
- Six peer-reviewed publications and presentations to date.
- 63 (and counting) faculty reviewers from 43 schools.
- NSF Phase 1 funding.

### **6.8 Funding:**

- ATE Grant, Creating an interactive visualization game-based introductory computer forensics course for undergraduate education (submitted 2013, funded), \$241K, senior personnel.
- NSF TUES Phase I, Creating an interactive visualization game-based introductory computer forensics course for undergraduate education (submitted 2012), \$200K, notawarded.
- GCCIS internal funding: ~10K, co-PI.

### **6.9 RIT esports (administrative and scholarly project) (2016–2020)**

#### **Objective:**

- Create a varsity esports program at RIT.
- Collaborate across multiple academic and administrative units to build and strengthen connections, which will benefit my “Games@RIT” vision for infusing all of RIT with games.

#### **Accomplishments:**

- Worked across multiple administrative and academic units to develop an eSports proposal, which RIT Senior Administration accepted early in 2017.
- IGM has led eSports intramurals since 2016 with several successful teams, e.g., an RIT team placed first in Overwatch.
- RIT has built a formal esports program.

#### **Funding:**

- Internal funding proposal under development.

## 6.10 BioDrill (2014–2015)

### Objectives:

- Collaborate with a local company on a MAGIC center project to build educational games and simulations to teach high-school students about anaerobic digestion.
- Develop further expertise in engineering simulation games.

### Roles:

- Senior personnel (2014).
- Worked with the simulation to distill down a rather complex set of equations and a “massive” Matlab model. Using a spreadsheet, the development team created an online simulation (see a sample session), and the simplified rules were used to create a card game.

### Accomplishments:

- NSF Phase 1B, supplemental support for STTR Phase I: A Simulated Anaerobic Digester Learning Tool, \$30K, awarded, senior personnel.

## 6.11 Hydraulic Fracturing Training Game (2012–2013)

### Objectives:

- Develop and implement a 3-D game to assist Schlumberger in training hydrofracturing operators.

### Roles:

- P.I. and producer.

### Funding:

- Proposed \$210K in funding, not awarded, PI.

## 6.12 StoreWorld™ (2009–2013)

### Objectives:

- Collaborate with RIT’s College of Business and College of Imaging Arts & Sciences to create a fun, social, and educational game to attract students to business school courses.

### Roles:

- Co-producer and co-designer (2009–2012).
- Technical adviser (2012–present).

### Accomplishments:

- First game to be accepted on RIT’s scholarship directory (2012), which provided a key source for IGM’s scholarship policy. This policy was shared internationally to help other programs develop their scholarship model.
- Developed a Facebook game based around managing a fashion store and basic augmented reality system for shopping interface.
- Won Hewlett Packard first-place sponsor prize, ImagineRIT (2011).
- Built a genuinely multidisciplinary effort that bridges a variety of units across RIT.
- Selected for competitive project display for the 2010–2012 ImagineRIT WOW Center.
- Published and disseminated game.
- Continuing to publish academic papers (one so far) about the game.

### Students:

- Supervised approximately 30 students across several colleges.

**Funding:**

- \$200K gift from RIT trustee. Based on successful progress in May 2011, gift increased to \$1M for RIT. Approximately \$100K funded by College of Business, PI.
- \$5K (approximate), GCCIS Student Summer Fellowship (2010), PI.

**6.13 Augmented Reality Golf (2009–2011)****Objectives:**

- Build a virtual golf fairway via Vuzix goggles and a real green on RIT campus.
- Collaborate with RIT's Facilities Management Services and RIT students in engineering, game design and development, computer science students, and graphics in a large-scale independent study.
- Integrate ball-placement system with robotics (2010–2011).
- Extend project into funded, yearly effort that continues to build a real and virtual RIT golf course and simulator.
- Explore aspects of augmented reality for game interfaces.

**Roles:**

- Project lead

**Accomplishments:**

- Starting in Fall 2009, most faculty, staff, and student teams assembled.
- Established working relationships with Facilities Management Services to facilitate scholarship into mixed-reality and alternative game interfaces.
- Designed and ran proof-of-concept at ImagineRIT 2010.
- Built successful and ongoing collaboration with art students and local SIGGRAPH chapter.
- Won First Place Sponsor's award at ImagineRIT 2010.
- Awarded two summer student fellowships (2010).
- Exploring applications of robotics via ball-placement mechanisms.

**Supervised students:**

- Approximately 30 students and staff across several colleges.
- Complete list/history: [igm.rit.edu/~argolf/developers.html](http://igm.rit.edu/~argolf/developers.html).

**Funding:**

- \$5K of external funding (2010), PI.
- \$10K (approximate), GCCIS Student Summer Fellowships (2010), PI.
- Additional donations of equipment from Vuzix.

**6.14 Sustainability and Ethics (2009–2010)****Objectives:**

- Collaborate with the Golisano Institute for Sustainability in helping to research game design based on economic game theory.
- Develop games that educate engineering students about the ethics of sustainability.
- Advance the state of game design theory by formalizing connections with “the other” game theory (mathematical game theory).

**Accomplishments:**

- A competitive RIT Provost award was awarded to fund two co-ops and summer students to develop four initial games.
- Generated early set of results published in book chapter.

### **Proposals and funding:**

- \$22K, Provost grant (OVPR F&A Funds), co-PI.

## **6.15 Industry Consulting (2007–2013, 2022–present)**

### **StockFighters (2022–present):**

- Consulting for [www.intrepidvx.com](http://www.intrepidvx.com). Seeking funding for IGM co-ops involved in gamification.

### **VolumeReadz (2013–2015):**

- Consulted for an industry project on merging music and reading for children's books.

### **Autism Collaborative (2007–2009)**

- [www.autismcollaborative.org/aboutUs.html#RIT](http://www.autismcollaborative.org/aboutUs.html#RIT)
- Initiated computer game development, which has formed the basis of an internationally-recognized project.
- Constructed co-ops and independent-study courses for RIT students.

### **ActionXL/Made-for-Motion (2007–2009)**

- Initiated idea for forming Made-for-Motion game development studio and consulted on recruitment in Spring 2007.

### **Innovative Solutions for Tomorrow LLC (Summer 2009):**

- Collaborated to develop a \$15 million NIH proposal for a building to house the “Immersion Research Institute” in Syracuse, NY to conduct advanced research in emergency medical response via live and virtual simulations. (NIH rejected the proposal.)
- Forged connections with RIT, SUNY Upstate Medical Center, and Cornell University.

### **Financial education (Winter 2007):**

- Worked with a team of researchers on a proposal to the Bill & Melinda Gates Foundation ([www.gatesfoundation.org](http://www.gatesfoundation.org)) for developing a financial-training game to motivate teenagers to attend and complete college.

### **Book Writing (1997–2010)**

- Developed chapters for upcoming state-of-the-art research books on game design and development (all accepted for publication, 2010).
- Developed introductory computer books to improve first-year student retention (published while still a graduate student at SUNY at Buffalo).
- Both books have been translated into various foreign languages, including a new Chinese edition of the UNIX book.

## **7. Past Research and Projects (Cornell University and SUNY Buffalo)**

### **7.1 The Game Design Initiative at Cornell University (GDIAC) (2001–2007) [gdiac.cis.cornell.edu](http://gdiac.cis.cornell.edu)**

#### **Objectives:**

- Develop an academic organization devoted to the study of games.
- Develop ties to the game industry for recruiting and research.

**Accomplishments:**

- Created, implemented, and directed a Minor in Game Design at Cornell's College of Engineering, the first undergraduate, Ivy-League program in game design.
- Developed new, interdisciplinary (art, music, writing, and programming) courses on game design at Cornell (CIS 300, CIS 400).
- Incorporated ABET (Accreditation Board for Engineering and Technology) accredited engineering communication curriculum in CIS 300.
- Supervised nearly 300 hundred students in approximately 100 game development and research projects.
- Led formation of a new, comprehensive, and large-scale student organization, the Digital Gaming Alliance.
- Created ties to the game industry, which had previously not recruited from Cornell.
- Established a youth-outreach program for local middle- to high-school students.

**Funding:**

- \$115K (2001–2006) from Microsoft, Electronic Arts, The G. E. Fund, Intelligent Information Systems Institute (IISI; Cornell), and a Trustee gift, PI.
- \$150K award (2007) from Electronic Arts for sponsoring women and under-represented minority students interested in computer science and games (gift arrived just after I left for RIT).

**7.2 GDIAC Outreach Program (2003–2007)****Accomplishments:**

- Local youth (middle school, high school) provided opportunities to collaborate with GDIAC students in independent study projects.
- Provided mentorship opportunities for Cornell students to engage in service learning.
- Research impact of game-education on perception of computer science and other mathematics and technology.
- Created and installed new program on training undergraduate students to teach game design to local youth.

**Funding:**

- Awarded \$90K for outreach portion of an NSF research grant on studying game development, senior personnel.

**7.3 Serious Games (2004–2007)****Objectives:**

- Engage academic, commercial, and government organizations with game research and prototype development.
- Provide projects for students to develop real-world experiences and interactions.

**Accomplishments:**

- Initiated research collaborations with Air Force Research Laboratory (AFRL; Information Directorate) while at Cornell. In Summer 2006,
- Performed quality assurance analysis for WARCON (now called SimVentive; [www.stottlerhenke.com/simventive](http://www.stottlerhenke.com/simventive)).
- Supervised game development projects for Eli Lilly, nanooze.org, and playwithyourmind.com.
- Supervised numerous Master of Engineering student research projects.



## 7.4 Cornell Library Collaborative Learning Computer Laboratory [(CL)<sup>3</sup>] (2001–2007)

### Objectives:

- Design and build a flexible computer laboratory that provides infrastructure and technology for team-based learning and pair programming.
- Study the effects of cooperation and collaboration in a computer laboratory.
- Influence other units inside and outside of Cornell to build similar laboratories.

### Accomplishments:

- Designed novel collaborative computer tables for “shape-shifting lab” in which students, operators, and instructors can rapidly reconfigure a computer laboratory for instruction, training, and group work.
- Instituted collaboration between Cornell University Libraries (CUL), Cornell Information Technologies (CIT), and the Department of Computer Science to fund and build the lab.
- Populated the lab with art, music, and software engineering tools and equipment to facilitate game design and development education.
- Collaborated with two courses, INFO 345: Human-Computer Interaction Design and DEA 470: Human Factors: Applied Ergonomics Methods, on evaluations of design and suggested improvements.
- See [www.cs.cornell.edu/dis/CL3](http://www.cs.cornell.edu/dis/CL3) for more information.

### Funding:

- \$20K Faculty Innovation Grant and approximately 200K from CUL and CIT, PI.
- Equipment and software donations from Electronic Arts and IISI.

### Cornell Student Contest Supervision (2003–2007)

- First-place team for the 2006 Games4Girls national competition in which all-female teams competed for the best game to appeal to girls.
- Train Attack, selected for the 2006 “mtvU Game0RZ” showcase.
- Finalists (2003, 2004) in the HiddenAgenda.com contest.

## 7.5 SUNY Buffalo: Uncertainty Analysis in Structural Engineering (1990–1999)

- Explored how to adapt mathematical techniques of qualitative reasoning and interval analysis from computational science to structural analysis and design problems.
- M.S. and Ph.D. work cited as recently as [2018](#).

# 8. Graduate Theses/Capstones/Dissertations

### 2022–present

- Ph.D. committees, member:
  - John Dunham, The Role and Impacts of Designed Affordances on Players of Location-Based Game
  - Sanizida Mojib Luna, Deaf and Hard of Hearing People in Co-located Collaborative Multiplayer Augmented Reality Environments
  - Muhammad Raees, Four Challenge of IML Designers: Lessons of an Interactive Customer Segmentation Prototype in a Global Manufacturing Company

### 2021–2022

- Damn Vulnerable Video Games (2022). M.S. Thesis, Computing Security, RIT (committee member). Fares

Dawal.

## **2014–2016**

- Improve the efficiency of game software testing by generating systematic and standardized test cases using combinatorial testing techniques (2015). M.S. Thesis, Industrial and Systems Engineering, RIT (committee member). Bhargava Rohit Sagi.

## **2013–2014**

- *A.V.* (2014). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Preston Johnson, Douglas Lynn. avthegame.com. Award for Excellence in Sensory Experience, RPI Gamefest 2014, games.wp.rpi.edu/616-2. Published on Steam via MAGIC: [www.rit.edu/news/story.php?id=51220](http://www.rit.edu/news/story.php?id=51220).
- Shady Dealings (2014). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Alex Hogue, Matthew Kaufmann, Avinash Krisnan, Dan Wild.

## **2012–2013**

- RTS (2013). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Dan Whiddon, redstinggames.com/dan/blog.php.
- Unbroken (2013). M.S. Thesis and Capstone Project, IGM, RIT (committee member). John Araujo. johnaraujo.net/unbroken. 3rd Place, RPI Gamefest, games.wp.rpi.edu/2013.
- Chaos Quest (2013). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Luis Bobadilla, Sebastian Hernandez, Rob Link, Nitin Nandakumar, Bill Phillips, Andrew Wilkinson, Jia Xu. sites.google.com/a/g.rit.edu/chaos-quest-project-wiki/dev-blog.

## **2011–2012**

- Card Kingdom (2012). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Ben Dapkiewicz, Stephen Oyarijivbie. Justin Schwartz. 4th Prize, RPI Gamefest, www.hass.rpi.edu/pl/gamefest-2012-awards.
- Micro Missions (2012). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Yana Malysheva. micromissions.blogspot.com.
- Galactose (2012). M.S. Thesis and Capstone Project, IGM, RIT (committee member). John O'Meara, David Wikman. steamcommunity.com/sharedfiles/filedetails/?id=92971046, www.youtube.com/watch?v=pv-GDKwzs28.

## **2010–2011**

- Remote Shepherd (2011). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Eric Baker, Bradley Blankenship, Brian Murphy, Dan Wilson II. [remote-shepherd.blogspot.com](http://remote-shepherd.blogspot.com).
- Tribernetica (2011). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Mike Dapiran, Brian May, Richard Pospel, Bert Wierenga. 63rdgallon.com/wordpress.

## **2009–2010**

- Trigger Happy (2011). M.S. Thesis and Capstone Project, IGM, RIT (committeemember). Sela Davis, Chip Hulseberg, Eric Moreau, Nick Wilsey.
- Shump You! Fighting Spirit (2010). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Michael Ey, Kelley Piering, Joseph Pietruch.
- The Trip (2010). M.S. Thesis and Capstone Project, IGM, RIT (committee member). Heather Arbiter, Jay Austin, Jr., Kapish Rawat, Joshua Wilson.

## **2009–2010**

- Design and Development of Motion Sensing Game Controller Using Stereo Vision and Acceleration Sensing (2009). M.S. Thesis, Department of Information Technology, RIT (committee co-chair). Rashid Tangirbergen.

## 2005–2006

- Video Play Pathways for Females: Developing Theory (2006), M.S. Thesis, Cornell University (committee member). Meredith Aquila, Professor of Communications Studies and Theater, [www.linkedin.com/in/meredith-aquila-a007153](http://www.linkedin.com/in/meredith-aquila-a007153).

## 9. Service and Administration

### 9.1 RIT

#### Leadership Summary:

- Director (2015–present), School of Interactive Games and Media
- Co-Chair, RIT [Council of Chairs](#), Steering Committee (2022–present)
- Assessment Task Force Chair (2020–present), School of Interactive Games and Media
- Associate Editor, [Entertainment Computing](#) (2021–present)
- Chair, Lecturer Search, School of Interactive Games and Media, 2022.
- Gamer Girl Task Force Chair (2020–2022), School of Interactive Games and Media
- Guest editor, Special Issue “Gaming and Geospatial Information,” International Journal of Geo-Information, [www.mdpi.com/journal/ijgi/special\\_issues/Gaming\\_Geospatial\\_Information](http://www.mdpi.com/journal/ijgi/special_issues/Gaming_Geospatial_Information) (2019–2020)
- Undergraduate Program Coordinator (2013–2016), School of Interactive Games and Media
- Co-chair, Unconscious Bias Institute Task Force (2015–2017)
- Industry Liaison (2008–2013), School of Interactive Games and Media
- External Relations Chair (2011–2013), School of Interactive Games and Media
- Graduate Capstone Committee Chair (2010–2013), School of Interactive Games and Media
- IGM Student Showcase (originator and coordinator) (2009–2014), School of Interactive Games and Media
- Global Game Jam site coordinator (2009–2011)
- Search Committee Chair (2008–2009), Department of Information Technology

#### Hosted Colloquiums (college and department):

- Game Design and Sustainability Ethics (2009), Tom Seager and Evan Selinger, Golisano Institute for Sustainability
- Motion-Sensitive Game Design (2009), Ben Kalb, Lead Programmer at ActionXL
- From Graduation to Corporation: What not to do, by someone who did it (2009), Chelsea Howe, Game Designer and Producer at ActionXL
- Action video game playing as a learning tool (2009), Daphne Bavelier, Ph.D. Associate Professor, Departments of Brain and Cognitive Sciences and of Imaging Science Associate Director, Rochester Center for Brain Imaging University of Rochester
- Designing Serious Video Games for Autism Research and Treatment (2009), Matthew Belmonte, Department of Human Development, Cornell University.
- Game Design & Development Colloquium (faculty candidate), Theresa Devine, Columbia College Chicago (2009)
- Game Design & Development Colloquium (faculty candidate), Frank Gilson, Wizards of the Coast (2009)
- Game Design & Development Colloquium (faculty candidate), Lindsay Grace, The Illinois Institute of Art (2009)

#### Institute Committees/Task Forces and related service:

- Council of Chairs, Steering Committee, co-chair (2022–present)
- Long Range Planning Committee, Faculty Senate, member (2023–present)

- ESL GCI, member (2022–current)
- CASTLE, member (2022–current)
- HCD, affiliation (2017–current)
- RIT Games Visioning Task Force, member (2020–2022)
- ImagineRIT: TAD Competition (2022).
- MAGIC Building Steering & Development Committee, member (2016–2018)
- Unconscious Bias Task Force, co-chair (2015–2017)
- Initiated and named portfolios.rit.edu, a portfolio hosting site for RIT, including alums.
- Campus Committee: member (2009–2011).
- Faculty Outreach and Database (Campus Committee subcommittee, institute): member (2009–2011).
- Parking Appeals Board: member (2009–2010).
- ImagineRIT: TAD Competition (2022).
- ImagineRIT: StoreWorld: A Business Simulation, WoW Center (2012).
- ImagineRIT: StoreWorld: A Business Simulation, WoW Center (2011).
- ImagineRIT: StoreWorld: A Business Simulation, WoW Center (2010).
- ImagineRIT: Augmented Reality Golf, WoW Center (2011).
- ImagineRIT: IGM Graduate Capstones, VIP Room (2011).
- ImagineRIT: Virtual Golf Experience (2010).
- ImagineRIT: Alternative Game Interfaces, WoW Center (2009).

#### **College Committees and related service:**

- GCCIS Honors (2019–2023)
- GCCIS FEAD (2021–2024)
- GCCIS Outstanding Educators (2021–2023)
- Endowed GCI Faculty Search Committee (2020–2022)
- Student Services Task Force (2021–2023)
- Tenure Expectations (2014)
- Strategic Student Success: member (2013–2014)
- RIT Student Scholars: member (2010–2014)
- Visiting Scholar: member (2009–2011)
- Summer Career outreach: presenter (2009–present)

#### **Unit Committees and related service:**

- Assessment Task Force Chair (IGM), chair: (2020–present)
- Faculty Search Committee (IGM): member (2014–2015), Chair (2019–2020), Chair of Expedited Lecturer Search (2022)
- Entrepreneurial Co-ops (IGM), faculty supervisor (2020–2022)
- Graduate Admissions (IGM, ad-hoc, 2011–2015)
- Game Developers Conference “Bootcamp” (2011–2016)
- Industry Liaison (IGM, 2009–2013)
- External Relations & Advisory Board (IGM): member (2009–2011), Chair (2011–2013)
- Game Developers Conference Graduate Student Interviews (2011–2013)
- Technical Steering Committee (IGM): member (2010–2011)
- Course Coordinator (IGM 330): Interactive Digital Media (2009–2011)
- Faculty Search Committee (IT): Chair (2008–2009)

#### **Student Organizations:**

- IGDA Student Chapter, Rochester: advisor (2011–2013)
- Game Development Club: advisor (2009–2011), co-advisor (2008–2009)
- Electronic Gaming Society: co-advisor (2008–2013)
- Faculty Advisor, Smash Heroes Finest Fighting League (2007–2008)

### **Regional and Local Community:**

- Orleans-Niagara BOCES (NCTEC) advisory committee (2020–present)
- Assisting upstate New York high school and BOCES programs with guest lectures on game design and development careers (2006–2014)
- Leader of the Rochester Drum Circle (2008–2019)

### **Reviewer (2000–present):**

- Program reviewer: New England Institute of Technology (NEIT, 2022), Georgia State University (CMII, 2023), Iowa State University (2023)
- Expert interview on “The Externalities Game” for European Commission study (2022)
- Paper review for Water (MDPI) and Sustainability (MDPI) (2021–present)
- Guest editor, Special Issue “Gaming and Geospatial Information,” International Journal of Geo-Information, [www.mdpi.com/journal/ijgi/special\\_issues/Gaming\\_Geospatial\\_Information](http://www.mdpi.com/journal/ijgi/special_issues/Gaming_Geospatial_Information) (2019–2020)
- Article reviews for SIGGRAPH, ACM (2018)
- Article reviews for SIGCSE, ACM (2016)
- Article reviews for Foundations of Digital Games conference, ACM (2010–2015)
- Article reviews for Games and Culture journal, SAGE (2013)
- Chapter reviews for Ethics and Game Design: Volume Two, K. Schrier (ed), IGI Global. (2010)
- Chapter reviews for Handbook of Research on Improving Learning and Motivation through Educational Games, P. Felicia (ed), IGI Global. (2010)
- Textbook reviews for Prentice Hall and Addison Wesley (2000–2004)

### **External Organizations, Conferences, and Events:**

- Rochester Light & Sound Interactive (LSI), Session Chair for Game Track (2017–2018)
- ImagineCup site organizer (2011–2013)
- Global Game Jam site organizer (2009–2011)
- RPI GameFest 2012, IGM coordinator (2012)
- Coordinated RIT teams for regional competition
- Videogame Mania (RIT organizer) (2011–2012)
- RIT organizer for presentations and showcase (2011)
- SIGGRAPH Sandbox Symposium, Conference Chair (2007–2009)
- American Society for Engineering Education, St. Lawrence Section, Chair (2005–2007)
- American Society for Engineering Education, St. Lawrence Section, Vice Chair, (2004–2005)
- IGIC 2012 International Games Innovation Conference Games Showcase (2012).

## **9.2 Cornell University**

### **Leadership:**

- Director and Founder, The Game Design Initiative at Cornell University (2001–2007)
- Coordinator, departmental short courses (CS113, CS114, CS214, CS215; 2001–2007)
- Coordinator, Summer Computer Science Placement Exam (2001–2007)
- Vice President, Cayuga Trails Club, Ithaca, New York (2000–2004)

### **Student Organizations:**

- Faculty Co-advisor and founder, Digital Gaming Alliance (2005–2007)
- Faculty Advisor, The Cornell University Klezmer Ensemble (2006–2007)
- Faculty Advisor, Smash Brothers Club (2004–2007)
- Faculty Advisor, Association of Computer Science Undergraduates (2000–2003)

### **Computing Committees:**

- Lab Futures Committee (2002–2003)

- Computing Policy Committee (2000–2003)

**Admissions:**

- Arts & Sciences Reader (2006)
- College of Engineering Admissions Advisory Committee (2002–2005)

## 10. Awards and Honors

- 2022 NASA project student team (“[Gamification and Performance-based Monitoring of Sensorimotor Training Activities project](http://www.rit.edu/news/three-student-teams-push-boundaries-improve-society-new-competition)”) won one of the three “TAD [Technology, Arts, and Design] Challenge” prizes of \$5K: [www.rit.edu/news/three-student-teams-push-boundaries-improve-society-new-competition](http://www.rit.edu/news/three-student-teams-push-boundaries-improve-society-new-competition)
- 2013 Nominated for Richard and Virginia Eisenhart Provost’s Award for Excellence in Teaching  
Because I became an administrator just before the award screening, I had to withdraw. Since my continuing administration role in 2013, I could not receive the award.
- 2012 Extra Mile Award (faculty) from the RIT Student Government (only one RIT faculty member per year)
- 2011 Hewlett Packard first-place sponsor prize, ImagineRIT
- 2010 GCCIS Student Summer Fellowships (three total)
- 2010 Nominated for Richard and Virginia Eisenhart Provost’s Award for Excellence in Teaching
- 2009 Nominated for Richard and Virginia Eisenhart Provost’s Award for Excellence in Teaching
- 2008 Nominated for Richard and Virginia Eisenhart Provost’s Award for Excellence in Teaching