Krzysztof Pietroszek

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I am an Assistant Professor in the School of Communication, and a Founding Director of Immersive Designs, Experiences, Applications, and Stories Lab (IDEAS Lab) at American University in Washington, D.C. I am also a writer/director/producer/vr developer running an indie film/game/vr studio. These two lives are linked through my interest in immersive media, games, and filmmaking.

EDUCATION

Ph.D. in Computer Science
David R. Cheriton School of Computer Science, Faculty of Mathematics, University of Waterloo
Waterloo, Canada
Aug. 2015

M.F.A. in Film
School of the Arts, Media, Performance and Design, York University
Toronto, Canada
Apr. 2011

M.A. in Communication Studies (Ethnographic Film)
Department of Communication Studies, Faculty of Arts, Wilfrid Laurier University
Toronto, Canada
Feb. 2010

B.Sc./M.Sc. in Computer Science (with courses in Archeology)
Institute of Computer Science, Faculty of Mathematics, University of Wroclaw
Wroclaw, Poland
Apr. 2004

WORK EXPERIENCE

Assistant Professor (tenure-track) & Founding Director of IDEAS Lab
School of Communication, American University
Washington, DC
July. 2018 – present

Assistant Professor (tenure-track) & Program Director at the Game Research Lab
School of Computing and Design, California State University Monterey Bay
Seaside, CA
Aug. 2015 – June 2018

Adjunct Research Professor
School of Computing and Design, California State University Monterey Bay
Seaside, CA
Feb. 2015 – Aug. 2015

Think-Off Films, Founder and Owner
Games, Films and New Media production company (www.thinkofffilms.com)
Chevy Chase, MD
2018 - present

KPicture Productions Inc, Founder and Owner
Games, Films and New Media production company (www.kpicture.com)
Toronto, Canada
2008 - 2015

- ○ **Games**: Banzai Ball (movie theatre game), Earth Defender (mobile game), Little Red Riding Hood (interactive storybook for movie theatres).
- ○ **Films**: Waiting for Summer (award-winning feature film), Greenscreen, Daniel, Agape (short films), Apptui, MixMasher (mobile apps)

CineClick Inc., Founder and CEO
Invented and led product development for CineClick, a mass gaming system for movie theatres.
Waterloo, Canada
2013 – 2014

NetClick Inc., Co-founder and CEO
Invented, and led product development of a real-time mobile student response system.
Waterloo, Canada
2011 – 2014

Christie Digital Systems, NSERC/MITACS Research Intern
Designed proprietary, immersive telepresence system, preserving eye contact of the interlocutors.
Waterloo, Canada
2010-2010

Wilfrid Laurier University, Director of Language Learning Centre
Managed a language learning centre that served over 1000 students.
Waterloo, Canada
2006 – 2008

Nokia Siemens Networks, Junior Software Engineer
I served as a Java developer responsible for charging module of "Advantage" prepaid mobile platform.
Wroclaw, Poland
2003 – 2004

Opticomp, Owner
Game and new media startup
Chybie, Poland
1994-1999

My research interests include Artificial Reality Continuum technologies, 3D Interactions for VR and AR (especially using mobile and wearable devices), and applications of VR/AR technologies in entertainment, education, medicine, well-being, and assistive technologies. I publish mainly in ACM and IEEE associations in the areas of Human-Computer Interaction and Computer Graphics research communities, with occasional publications on Educational Technology. According to Google Scholar, my current citation count is 520 and my h-index is 9.

Refereed Publications

2019

[1] **Krzysztof Pietroszek**. IRIS: Inter-Reality Interactive Surface. In *Proceedings of the 25th ACM Conference on Virtual Reality Software and Technology*. ACM, November 2019, DOI: 10.1145/3359996.3364731.

[2] **Krzysztof Pietroszek** and Chao Cheng Lin. UniVResity: Face-to-Face Class Participation for RemoteStudents using Virtual Reality. In *Proceedings of the 25th ACM Conference on Virtual Reality Software and Technology*. ACM, November 2019, DOI: 10.1145/3359996.3364730.

[3] **Krzysztof Pietroszek** and Carl Moore. AHMED: Toolset for Ad-Hoc Mixed-reality Exhibition Design. In *Proceedings of the 25th ACM Conference on Virtual Reality Software and Technology*. ACM, November 2019, DOI: 10.1145/3359996.3364729.

[4] **Krzysztof Pietroszek** and Liudmila Tahai. Scalebridge VR: Immersive Proportional Reasoning Game for Children with Brain-Computer Interface for Difficulty Scaling. In *Proceedings of the 25th ACM Conference on Virtual Reality Software and Technology*. ACM, November 2019, DOI: 10.1145/3359996.3364734.

[5] **Krzysztof Pietroszek**. Mixed-Reality Exhibition for Museum of Peace Corps Experiences using AHMED toolset. In *Proceedings of the 2019 Symposium on Spatial User Interaction*. ACM, October 2019, DOI: 10.1145/3357251.3358754.

[6] **Krzysztof Pietroszek**. SIGMA: Spatial Interaction Gaming for Movie- and Arena-goers. In *Proceedings of the 2019 Symposium on Spatial User Interaction*. ACM, October 2019, DOI: 10.1145/3357251.3358758.

[7] Liudmila Tahai, James R. Wallace, Christian Eckhardt, and **Krzysztof Pietroszek**. Scalebridge: Design and Evaluation of Adaptive Difficulty Proportional Reasoning Game for Children. In *Proceedings of the 11th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)*. IEEE, September 2019,

[8] **Krzysztof Pietroszek**. Virtual Reality as a Medium for Remote Class Participation. In *Workshop, Long and Short Paper, and Poster Proceedings from the Fifth Immersive Learning Research Network Conference (iLRN 2019 London)*, pages 116–123. Immersive Learning Network, June 2019, DOI: 10.3217/978-3-85125-657-4-17.

[9] **Krzysztof Pietroszek**, Amelia Tyson, Felipe Simas Magalhaes, Carlos Enrique Macher Barcenas, and Patricia Wand. Museum in Your Living Room: Recreating the Peace Corps Experience in Mixed Reality. In *Proceedings of the IEEE Games, Entertainment, Media Conference (GEM)*, pages 1–4. IEEE, June 2019, DOI: 10.1109/GEM.2019.8811547.

2018

[10] A Datallo, Irene Humer, Liudmila Tahai, S Sueda, **Krzysztof Pietroszek**, and Christian Eckhardt. Interactive Large Structure N-Body Gravity Simulation for Immersive Learning in Virtual Reality. In *Proceedings of the 2018 Immersive Learning Network Conference*, pages 35–42. Immersive Learning Network, June 2018, DOI: 10.3217/978-3-85125-609-3-09.

[11] **Krzysztof Pietroszek**. Raycasting in Virtual Reality. In *Encyclopedia of Computer Graphics and Games*. Springer, 2018, DOI: 10.1007/978-3-319-08234-9_180-1.

[12] **Krzysztof Pietroszek**. Virtual Hand Metaphor in Virtual Reality. In *Encyclopedia of Computer Graphics and Games*. Springer, 2018, DOI: 10.1007/978-3-319-08234-9_178-1.

[13] **Krzysztof Pietroszek**. Virtual Pointing Metaphor in Virtual Reality. In *Encyclopedia of Computer Graphics and Games*. Springer, 2018, DOI: 10.1007/978-3-319-08234-9_179-1.

[14] **Krzysztof Pietroszek**, Christian Eckhardt, and Liudmila Tahai. Hamlet: Directing Virtual Actors in Computational Live Theater. In *Proceedings of the 24th ACM Symposium on Virtual Reality Software and Technology*, VRST '18, pages 93:1–93:2, New York, NY, USA, 2018. ACM, DOI: 10.1145/3281505.3281600.

2017

[15] Christian Eckhardt, John Sullivan, and **Krzysztof Pietroszek**. Flex: Hand Gesture Recognition Using Muscle Flexing Sensors. In *Proceedings of the 5th Symposium on Spatial User Interaction*, SUI '17, pages 164–164, New York, NY, USA, 2017. ACM, DOI: 10.1145/3131277.3134360.

[16] **Krzysztof Pietroszek**, Phuc Pham, Sophia Rose, Liudmila Tahai, Irene Humer, and Christian Eckhardt. Real-time Avatar Animation Synthesis from Coarse Motion Input. In *Proceedings of the 23nd ACM Conference on Virtual Reality Software and Technology*. ACM, 2017,

[17] **Krzysztof Pietroszek**, Pham Phuc, and Christian Eckhardt. CS-DTW: Real-time Matching of Multivariate Spatial Input Against Thousands of Templates using Compute Shader DTW. In *Proceedings of the 2017 Symposium on Spatial User Interaction*. ACM, 2017,

[18] **Krzysztof Pietroszek**, Liudmila Tahai, James R Wallace, and Edward Lank. Watchcasting: Freehand 3D interaction with off-the-shelf smartwatch. In *3D User Interfaces (3DUI), 2017 IEEE Symposium on*, pages 172–175. IEEE, 2017,

[19] Mathew Tomberlin, Liudmila Tahai, and **Krzysztof Pietroszek**. Gauntlet: Travel technique for immersive environments using non-dominant hand. In *Virtual Reality (VR), 2017 IEEE*, pages 299–300. IEEE, 2017,

[20] Jessica Vega, Sophia Rose, Liudmila Tahai, Irene Humer, Christian Eckhardt, and **Krzysztof Pietroszek**. VR Wildfire Prevention: Teaching Campfire Safety in a Gamified Immersive Environment. In *Proceedings of the 22nd ACM Conference on Virtual Reality Software and Technology*, pages 363–364. ACM, 2017,

2016

[21] Matthew Johnson, Irene Humer, Brian Zimmerman, Joshua Shallow, Liudmila Tahai, and **Krzysztof Pietroszek**. Low-Cost Latency Compensation in Motion Tracking for Smartphone-Based Head Mounted Display. In *Proceedings of the International Working Conference on Advanced Visual Interfaces*, pages 316–317. ACM, 2016,

[22] Keiko Katsuragawa, **Krzysztof Pietroszek**, James R Wallace, and Edward Lank. Watchpoint: Freehand pointing with a smartwatch in a ubiquitous display environment. In *Proceedings of the International Working Conference on Advanced Visual Interfaces*, pages 128–135. ACM, 2016,

[23] Daniel Kharlamov, **Krzysztof Pietroszek**, and Liudmila Tahai. Ticktockray demo: Smartwatch raycasting for mobile hmds. In *Proceedings of the 2016 Symposium on Spatial User Interaction*, pages 169–169. ACM, 2016,

[24] Daniel Kharlamov, Brandon Woodard, Liudmila Tahai, and **Krzysztof Pietroszek**. TickTockRay: smartwatch-based 3D pointing for smartphone-based virtual reality. In *Proceedings of the 22nd ACM Conference on Virtual Reality Software and Technology*, pages 363–364. ACM, 2016,

[25] **Krzysztof Pietroszek** and Daniel Kharlamov. TickTockRay: Smartwatch Raycasting for Mobile HMDs. In *Proceedings of the 2016 Symposium on Spatial User Interaction*, pages 181–181. ACM, 2016,

[26] Edward R Sykes, Dilip Muthukrishnan, Yousif Al-Yousifi, Darren Spriet, and **Krzysztof Pietroszek**. Mobile devices at the cinema theatre. *Entertainment Computing*, 15:21–39, 2016.

2015 and before

[27] **Krzysztof Pietroszek**, Liudmila Tahai, James R Wallace, and Edward Lank. 3D interaction with networked public displays using mobile and wearable devices. In *Adjunct Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2015 ACM International Symposium on Wearable Computers*, pages 787–788. ACM, 2015,

[28] **Krzysztof Pietroszek**, James R Wallace, and Edward Lank. Tiltcasting: 3D interaction on large displays using a mobile device. In *Proceedings of the 28th Annual ACM Symposium on User Interface Software & Technology*, pages 57–62. ACM, 2015,

[29] **Krzysztof Pietroszek**, Anastasia Kuzminykh, James R Wallace, and Edward Lank. Smartcasting: a discount 3D interaction technique for public displays. In *Proceedings of the 26th Australian Computer-Human Interaction Conference on Designing Futures: the Future of Design*, pages 119–128. ACM, 2014,

[30] Darren Abramson, **Krzysztof Pietroszek**, Leila Chinaei, Edward Lank, and Michael Terry. Classroom response systems in higher education: Meeting user needs with NetClick. In *Global Engineering Education Conference (EDUCON), 2013 IEEE*, pages 840–846. IEEE, 2013,

[31] **Krzysztof Pietroszek** and Edward Lank. Clicking blindly: using spatial correspondence to select targets in multi-device environments. In *Proceedings of the 14th international conference on Human-computer interaction with mobile devices and services*, pages 331–334. ACM, 2012,

[32] **Krzysztof Pietroszek**. Providing Language Instructor with Artificial Intelligence Assistant. *International Journal of Emerging Technologies in Learning*, 2(4), 2007.

[33] Krzysztof Czarnecki and **Krzysztof Pietroszek**. Verifying feature-based model templates against well-formedness OCL constraints. In *Proceedings of the 5th international conference on Generative programming and component engineering*, pages 211–220. ACM, 2006,

[34] Krzysztof Czarnecki, Michal Antkiewicz, Chang Hwan Peter Kim, Sean Lau, and **Krzysztof Pietroszek**. fmp and fmp2rsm: eclipse plug-ins for modeling features using model templates. In *Companion to the 20th annual ACM SIGPLAN conference on Object-oriented programming, systems, languages, and applications*, pages 200–201. ACM, 2005,

[35] Krzysztof Czarnecki, Michal Antkiewicz, Chang Hwan Peter Kim, Sean Lau, and **Krzysztof Pietroszek**. Model-driven software product lines. In *Companion to the 20th annual ACM SIGPLAN conference on Object-oriented programming, systems, languages, and applications*, pages 126–127. ACM, 2005,

Dissertation, Theses, Book Translations

[36] **Krzysztof Pietroszek**. *3D Pointing with Everyday Devices: Speed, Occlusion, Fatigue*. PhD thesis, University of Waterloo, 2015.

[37] **Krzysztof Pietroszek**. Agape. Master's thesis, York University, 2011.

[38] **Krzysztof Pietroszek**. Shaman in Camera: Shamanism and Ethnographic Film. Master's thesis, (Major Research Paper) Wilfrid Laurier University, 2010.

[39] **Krzysztof Pietroszek**. ArcheoDB: Case Study of Archaeological Excavation Software Design using Extreme Programming Methodology. Master's thesis, University of Wroclaw, 2004.

[40] Jos Warmer and Anneke Kleppe. *The Object Constraint Language: Precise Modeling with UML*. Addison-Wesley, 2003. Translated to Polish by Krzysztof Pietroszek. Wydawnictwa Naukowo-Techniczne, 2003.

Recent Invited Talks

[41] **Krzysztof Pietroszek**. New Directions in Immersive Storytelling: Merging VR Games and Immersive Filmmaking. *An invited talk presented at the International Association of Film and Television Schools Congress at the Gerasimov Institute of Cinematography in Moscow, Russia*, October 2019.

[42] MacHer Carlos, **Krzysztof Pietroszek**, and Amelia Tyson. Volumetric Filmmaking Workshop. *A workshop presented at the University Film and Video Association Conference in Minneapolis.*, September 2019.

[43] **Krzysztof Pietroszek**. Artificial Reality Continuum. Revolutionary Communication Media. *A talk presented to the Chinese government and media representatives from Nanjing*, September 2019.

[44] **Krzysztof Pietroszek**. "Vera", an adaptation of short story by Katherine Mansfield. *An opening remarks on "Vera" volumetric experience, 360 film and traditional film at the Katherine Mansfield Society Conference at Jagiellonian University, Krakow. Poland*, June 2019.

[45] Vanina Harel, Malvina Martin, **Krzysztof Pietroszek**, and Max Solomon. Exploring the Real World of Virtual Reality. *A discussion panel presented at Environmental Film Festival, National Geographic Society, Washington, DC. Moderated by Maggie Stogner*, March 2019.

[46] Larry Engel, **Krzysztof Pietroszek**, Shapiro Arthur, Mike Treanor, and Bei Xiao. Virtual & Augmented Reality (VR/AR) in Teaching & Scholarship. *A panel presented during the Ann Ferren Conference. Moderated by Brigid Maher*, January 2019.

[47] **Krzysztof Pietroszek**. Artificial Reality Continuum – New-in-kind Communication Medium. *An invited talk presented at the Texas A&M University*, March 2018.

[48] **Krzysztof Pietroszek**. Generative Toolset Supporting Equitable Access to Creation of and Interaction with Virtual, Augmented and Mixed Realities. *An invited talk presented at the University of California Santa Cruz*, March 2018.

RESEARCH COLLABORATORS

- Naoto Kume (Kyoto University)
- Malgorzata Luszczak (University of Silesia)
- Darren Abramson (Dalhousie University)
- Michal Ankiewicz (University of Waterloo)
- Krzysztof Czarnecki (University of Waterloo)
- Sebastian von Mammen (University of Wurzburg)
- Keiko Katsuragawa (University of Waterloo)
- Nathan Harshman (American University)
- Art Shapiro (American University)
- Christian Guetl (University of Graz)
- Nathalie Japkowicz (American University)
- Larry Engel (American University)
- Maggie Stogner (American University)
- Toks Fashola (American University)
- Jessica Vega (University of Southern California)
- Pawel Synowiec (University of Silesia)
- Christian Eckhardt (CalPoly San Luis Obispo)
- Tetiana Koba (Nikolaiv State University)
- Anastesia Kuzminykh (University of Waterloo)
- Irene Humer (CalPoly San Luis Obispo)
- Edward Lank (University of Waterloo)
- Liudmila Tahai (George Washington University)
- James R. Wallace (University of Waterloo)

I have written a number of screenplays, some of which were produced. I also worked as a part-time journalist in Poland, writing reports for travel magazines about my backpacking trips to over 60 countries worldwide. I also wrote technology reviews articles. Recently, I wrote a series of books for young children.

Screenplays

- Vera, adaptation of Katherine's Mansfield short story (produced)

- Agape, half-off TV drama screenplay (produced)

- Daniel, short screenplay (produced)

- Greenscreen, short screenplay (produced)

- Split, short screenplay (produced)

- Eve, short screenplay (produced)

- Return, short screenplay (produced)

- Photographer, feature-length screenplay (not produced)

- Layla, feature-length screenplay, written with Anne Opotowsky (not produced)

- Ten, short film (not produced)

- 2BR02B, adaptation of Kurt Vonnegut's short story (not produced)

Children's Books

- Greeny, the Brave Oak Leaf

- The Lamp and the Candle

- The Knife and the Spoon

- The Stone in a Cave

Press

During my undergraduate and graduate studies, I worked as a student journalist. I published travel and technical articles. I have served as the Editor-in-Chief of *The Fencer*, the University of Wroclaw student magazine and worked as an investigative journalist for *The Cord Weekly*, WLU's student magazine. More recently, I write for Medium.com

- Free Will, a Homicide Case Re-opened. *Medium.com*

- Searching Mexico for Shamans. *The Cord Weekly*, WLU.

- Best Web Crawlers. *WWW Magazine*

- A Survey of Email Clients. *WWW Magazine*

- Hitch-hiking through the World: Ukraine. *The World of Travels*

- Mongols, Nomads of Wild Steppes. *The World of Travels*

- Mongolian savoir-vivre. *Oddysei Travel Magazine*

- The Adventures of Johnny Walker. *The Fencer.* University of Wroclaw

- The Limits of Art, monthly column. *The Fencer.* University of Wroclaw

To facilitate my research program at American Unviersity, I founded Immersive Designs, Experiences, Applications and Stories Lab (IDEAS Lab). The lab engages in human-computer interaction projects, game design projects, sensors and robotics projects, and machine learning projects – as they relate to virtual and augmented reality medium.

UniVResity – real-time classroom participation through VR

Uni*VR*esity is a VR app that allows for face-to-face participation in a class by remote classmates. Using only the instructor's voice as input, deep neural networks generate lip-sync and face-expression animation, non-verbal communication cues, gestures, and the teacher's avatar movement. The remote student is represented in class as an avatar projected onto the whiteboard. The whiteboard becomes a shared space of interaction between the instructor and the remote students. Collaboration on group activities is also possible, with the remote student using local student's tablet or laptop as a shared interactive surface. The project explores automatic translation of user representation and interaction when medium and modes of input used by each user are different.

Published at *2019 Immersive Learning Network Conference*

Ractive – participatory VR theatre

While traditional theater was a spectacle for an audience to watch, experimental theaters of Grotowski introduced a concept that the audience becomes part of the play. Using room-scale VR systems as a medium, we design and evaluate collaborative theater experience, where professional actors perform improvised or scripted stories along Artificial Intelligence actors.

Published at *2018 Symposium on Virtual Reality Software and Technology (ACM).*

Flex – wearable sensor enabling VR/AR interaction

In this project, we design an open-source low-cost muscle extension and flexion sensor capable of recreating movement of the missing part of the limb. We apply the sensor to enable spatial interaction in VR/AR by providing users with a virtual limb they can control.

Published at *2017 Symposium on Spatial User Interaction (ACM).*

AHMED – Ad-hoc Mixed-reality Exhibition Designer

In this project, we created a prototype of system for the creation of mixed-reality museum exhibitions that can be deployed at any location. The system was used in mixed-reality exhibition for the Museum of Peace Corps Experiences.

Published at *2019 Symposium on Spatial User Interaction (ACM).*

Scalebdirge – Improving proportional reasoning in children

In collaboration with School of Health and Health Systems, University of Waterloo, using low-cost EEG Brain Computer Interface (BCI), this project aims at improving proportional reasoning of children. The game adapts the difficulty of the proportional reasoning, LEGO-balancing task based on the attention level of the player as provided by the BCI device.

Published at *2019 11th International Conference on Virtual Worlds and Games for Serious Applications (ACM).*

Below, I list games that I have designed and/or developed either at university or in the private industry.

"The Human Condition" VR game, a.k.a. Cube VR

Game designer/developer: Krzysztof Pietroszek
Platform: PC, Oculus Rift

You are stuck in a Rubik cube and you hold the Rubik cube in your hands. Can you escape? The game explores the human condition and the loneliness embedded in it. The game is just a prototype for now, but it hopefully will grow into a full, two-player game in the future.

Prototype available at: http://studentgames.itch.io/cube-vr

"Vera" (VR Game)

Game Designer/Developer: Krzysztof Pietroszek
Arts: Akash Vasishtha

"Vera" is a transmedia project based on Katherine Mansfield's shorts story, a "Dill Pickle". One component of the experience is a game, in which the player, taking a role of the main character, Vera, must find a letter hidden in a London bar, a film set reconstructed using photogrammetry. To do so, the player must solve a haptic puzzle..


"The Royal Game Of Ur"

Game Designer: Krzysztof Pietroszek
Student developers: Sophia Rose, Ryan Blakeman, Morgan Johnson
Arts: Pawel Synowiec

The Royal Game of Ur is one of the oldest known board games, popular during the reign of Assyrian empire, its rules recently deciphered from a cuneiform tablet by the curator of the British Museum, Dr. Irving Finkel. In this project, the player plays the Royal Game of Ur in VR against Sargon of Akkad, Assyrian king, in a historically accurate setting.
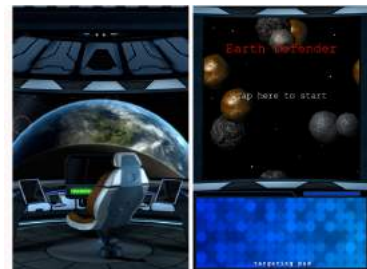
"Earth Defender" Mobile Game

Game design: Krzysztof Pietroszek
Developer: Krzysztof Pietroszek
Arts: Krzysztof Pietroszek

The first mobile game to use spatial correspondence targeting interaction technique designed and published by me at the MobileHCI'12. The game purpose was to collect a large experimental data set on spatial correspondence.

"Castles"

Game design/development/art: Krzysztof Pietroszek

I started implementing "Castles", when I was twelve, and owned no computer. To implement it, I used a computer in my mother's office. The game was written in Pascal programming language and consisted of about 12 thousands line of code. There was no Internet in Poland back then, so I learned coding from a book. The only copy of the game on a 3.5' floppy drive was lost long time ago, although I still hope to find it one day in a dusty box in the basement. The game was heavily influenced by Dune 2, but happened in middle ages. Few months later a similar game, known as Warcraft, was created and became a worldwide hit, and then a classic. It was a moment when I was close to make history.

Below, I list games I designed, developed, or inspired as a CEO of Cineclick, a startup company focused on mass interaction games for movie theatres using mobile devices as game controllers.

"Little Red Riding Hood" Interactive Cinema Storybook

Game design: Krzysztof Pietroszek
Developers: Krzysztof Pietroszek, Kurt Schwarz
Arts: Michael Jeong, Daniel Manzali, Julia Jang, Karen Benetzen

An interactive storybook for young movie theatregoers. Released at the *Children's Film Festival* in Waterloo, Canada.

"Trivia Time" Interactive Cinema Game

Game design: Krzysztof Pietroszek
Developers: Krzysztof Pietroszek, Kurt Schwartz
Arts: Michael Jeong

Developed in HTML5 + JavaScript + AIPFramework for the CineClick Audience Interaction Platform. Customizable trivia game developed for movie theatre audiences. Financed by Canada Media Fund.

"The Saurus" Interactive Cinema Game

Game design: Krzysztof Pietroszek, Michael Jeong
Developers: Krzysztof Pietroszek, Mike Patterson, Kurt Schwartz
Arts: Michael Jeong

A mass-interaction word-finding game for movie theaters. Mobile phone serves as a second screen on which the player finds a word. The results are visualized on the cinema screen.

"Banzai Ball" Interactive Cinema Game

Game design: Michael Jeong, Krzysztof Pietroszek
Developers: Krzysztof Pietroszek, Mike Patterson, Kurt Schwartz
Arts: Michael Jeong

A mass-interaction action game for movie theatres. Audience is divided into two teams. Mobile phone serves as a game controller from which the users eject a banzai. The action is shown in real time on the cinema screen.

Ninja Robotos vs. Zombie Pirates

Game design: Michael Jeong
Developers: Krzysztof Pietroszek, Kurt Schwarz
Arts: Michael Jeong

In this mass gaming experience for cinemas, players first define a path for their character (either a Ninja Robot or Zombie Pirate) and then observe how the gameplay unfolds on the cinema screen.

I have recently published a paper at *2019 Symposium on Spatial User Interaction*, describing novel game interaction discoveries made during the creation of the interactive cinema games. Video showing the gameplay can be viewed at CineClick Youtube Video. I gave a short talk about the technology at OMDC Tech Crunch Lunch (video link).

As a designer and lead developer at KPicture Production, Opticomp, CineClick, Netclikk, Everyslide, and Think-Off Films LLC, I created a number of new media projects, ranging from interactive cinema platform to immersive telepresence systems. Each project had both technical and artistic elements.

CineClick – Audience Interaction Platform

Designer & Technical Lead: Krzysztof Pietroszek
Developers: Kurt Schwarz, Mike Paterson, Steven Vincent

CineClick enables second screen experience. Moviegoers actively participate with a theatre display playing mass interactive games during the pre-show period using mobile devices as game controllers.

MixMasher – Research Collaboration App (iOS)

Design & development: Krzysztof Pietroszek

Developed for the University of Waterloo, MixMasher is an iPad app allowing for easy sharing of research materials: videos, data, charts, and documents, between members of a research group or a wider research community. MixMasher enhances collaboration between researchers, and increases research results dissemination.

Apptui.com prototype – Mobile Remote Controller

Design & prototype: Krzysztof Pietroszek, Pavel Sakun
Graphics: Dan Clark (client)

In this project, developed for Moonray Studios, I have designed a functional prototype of a browser-based mobile remote controller for computer screens. The interface adapts to the app currently running in the browser, enabling a custom user interface for any website.

EverySlide.com – Interactive Slideshows Online

Design & prototype: Krzysztof Pietroszek
Developers: Kurt Schwarz, Thomas Perunsky

Online presentation tool that synchronizes slides across all connected devices. Each slideshow creates a unique URL, which anybody with a browser can use to connect to slides, interact, answer quizzes, and provide a feedback.

NetClick – Student Response System

Design & prototype: Krzysztof Pietroszek
Developers: Krzysztof Pietroszek, Thomas Perunsky

Webapp designed to replace iClickers with mobile devices. It allows for the creation of ad hoc quizzes, check students' attendance, define regions of slides that constitute a correct or incorrect answer. The tool gained significant popularity.

Glass – Immersive, Interactive Telepresence System

Design & prototype: Krzysztof Pietroszek

Developed with the support of Christie Digital Systems, Glass Telepresence is about making remote communication feel natural, as if the participants were in the same room. The uniqueness comes from a proprietary synchronization system that provides true eye to eye contact and life-size scale and perspective, which allows communicators from remote locations to feel more "present".

To date, I have produced a theatrically-distributed feature film, and written-directed a number of short films and documentaries. Currently, I am working on one of the world's first period volumetric films.

Waiting for Summer

Feature film, written & directed by Senthil Vinu
Starring Caleb Verzyden and Virginia Leigh
Produced by Krzysztof Pietroszek and Senthil Vinu

A story of the intertwined destinies of Zach and Chantal who are each looking for a new beginning in their life, while trying to overcome difficult childhoods. Their lives collide, becoming inexplicably connected in ways neither could have imagined. Along the journey, they discover that healing wounds comes at a cost.

Best Drama, Hamilton Film Festival
Best Actress, Hamilton Film Festival
Best Feature Film, Film North Huntsville International Film Festival
Official Selection, Edmonton International Film Festival
Official Selection, Canadian Film Festival
Official Selection, Mississauga Independent Film Festival

Limited theatrical distribution in Canada

Return

3 min, experimental
Written, directed & filmed by
Krzysztof Pietroszek
Starring Boaz Berri

Experimental exploration of the memory of lost time. Filmed in a continuous shot played backward.

Split

5 min, mockumentary
Written, directed & filmed by
Krzysztof Pietroszek
Starring Alex Plakhov

An Iraq veteran tells his story at the Toronto Downsview Subway station to a random person. This social experiment mockumentary explores how humans deal with post-traumatic disorder.

The Magic of Shamans

30 min, TV documentary
30 min, TV documentary
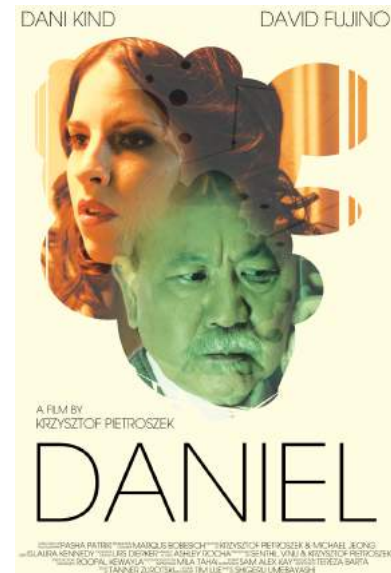*Written, directed and filmed by*
Krzysztof Pietroszek

This documentary explores shamanism across cultures, from Ukrainian "babushkas", to Japanese "itako", to Huichole's Peyote shamans.

10 min, comedy
Written & directed by K. Pietroszek
Starring Sean Cullen
Cinematography by Pasha Patriki

"Don't be yourself!" advises a handsome museum guard to a not-so-pretty one, when the latter tries to win the heart of beautiful Mila... Is there a way to stay true to your values (like daily hamburger and coke) and still get what your heart desires?

12 min, drama
Written & directed by Krzysztof Pietroszek
Starring Dani Kind and David Fujino
Cinematography by Pasha Patriki

"Daniel" is a story of the primordial fear of loneliness in face of death. This semi-comic and bitter-sweet film tells the story of an old, dying man, a young call girl and their encounter. Can intimacy be purchased? How far will a man go to avoid his loneliness?

Half-off war drama
Written & directed by Krzysztof Pietroszek
Starring Andrzej Chyra, Anna Cieslak
Cinematography by Bartek Cierlica

It is 1943 in Nazi-occupied Poland. Anna, a widow, develops a relationship with a Nazi Luftwaffe officer. Anna must decide whether to give up on basic human values and submit to her desire for the Nazi officer, or risk her life by saving a Jewish boy.

5 min, experimental
Written & directed by Krzysztof Pietroszek
Starring Jane Wong
Cinematography by Colin Akoon

Postmodern commentary on the biblical story of Eve and the Forbidden Fruit, and its use as a justification for the oppression of women throughout history.

Festivals Selections and Awards

- Short Film Corner, Cannes International Film Festival (representing Canada)

- Best Drama, Hamilton Film Festival

- Best Actress, Hamilton Film Festival

- Best Feature Film, Film North Huntsville International Film Festival

- Official Selection, Edmonton International Film Festival

- Official Selection, Canadian Film Festival

- Official Selection, Mississauga Independent Film Festival

- Official Selection Tulsa International Film Festival

- Film Producer Accreditation, Cannes International Film Festival

- Film Producer Accreditation, Toronto International Film Festival

- Official Selection, Crystal Palace International Film Festival

- Official Selection "In the Palace" International Film Festival

- Official Selection, Kratkofil International Short Film Festival

- Official Selection, Detmond International Film Festival

- Official Selection, Srebrena Traka International Film Festival

- 3rd Audience Award: Multicultural Film Festival, Canada (fine arts)

- 2nd Prize, Polish Theatre Competition

- Poland (arts) Grand Prix, International Festival of Young Theatre Artists, Poland

- Finalist of National Polish Language and Literature Olympiad, Poland

Theatre Acting and Directing

- Rehearsals, dir. Krzysztof Pietroszek

- Little Prince, dir. Kuba Abrahamowicz

- Crime and Punishment, dir. Kuba Abrahamowicz

- Cabaret of Elders, dir. Kuba Abrahamowicz

- The Song of Roland, dir. Kuba Abrahamowicz

Photographic Exhibitions

I am a hobby photographer. Some of my arts and travel photographs were exhibited in my home town gallery:

- Life and Death (2008)

- North India (2007)

- Mongolia (2006)

- Middle East (2005)

PRESS MENTIONS AND TV INTERVIEWS

- **"Welcome to the Holodeck" podcast**   Two Money Guys
  An hour-long podcast about volumetric filmmaking and Vera

- **"Virtual Reality 360-degree video: An empathy machine for conservation outreach?"**   MongaBay.com
  Report on use of VR in environmental activism, based on the panel I participated in at National Geographic

- **"Union City actor stars in "Vera," a "first for 5D and VR filmmaking"**   www.nj.com
  Interview with the lead actor from my film "Vera"

- **"Union City local explores cinematic frontier"**   Hudson Reporter
  The article discusses lead actor of my film "Vera" participation in the new type of film

- **"Beyond Gaming: Taking Augmented Reality to the Next Level"**   CSU News
  The article discussed uses of Augmented reality for applications other than gaming.

- **"New Reality"**   CSUMB Magazine
  The article features a number of research ongoing research projects of Game Research Lab

- **"Two New Businesses Ask Players to Ditch their Cellphones"**   Monterey Weekly
  The article confronts new escape room businesses with my commentary on the future of VR and AR

- **"Polish Producer Talks about his Canadian Feature Film" (in Polish)**   Gazeta Gazeta
  The article discusses "Waiting for Summer" film and my other movies

- **"Agape Attracts Crowds of Audiences" (in Polish)**   Ox.pl
  The review of the premiere of my half-off World War II drama

- **"Meet the Filmmaker" - TV Interview**   Ontario TV
  The interview with me about the reappearing themes in the films I make

TEACHING PORTFOLIO

To date, I designed and taught the following courses:

Communication (American University):

- COMM 420/620 Topics in Mass Media: Designing Immersive Experiences (designed)

- COMM 420/620 Topics in Mass Media: Immersive Filmmaking (designed)

- COMM 105 Visual Literacy (taught)

Game Design and Development (American University and CSUMB):

- GAME 625 Advanced Game Development (re-designed)

- CST 321 Game Design I: Entertainment Games (designed)

- CST 421 Game Design II: Serious Games (designed)

- CST 306 Game Engine Programming (re-designed)

- CST 326 Game Development (designed)

- CST 426 Advanced Game Development (designed)

- CST 495 Special Topics: Advanced Game Design (designed)

- CST 495 Special Topics: Adv. Game Development (designed)

Computer Science and Software Engineering (CSUMB):

- CST 238 Introduction to Data Structures (taught)

- CST 438 Software Engineering (taught)

- CST 336 Internet Programming (taught)

- CST 325 Graphics Programming (taught)

Visiting Scholar's Mentorship

Below, I list visiting scholars I sponsored at American University:

- Lual Mayen – game designer, refugee from South Sudan, while at American University won the LA "Game Award"

- Emma Mankey Hidem – film producer, helped me with Vera volumetric experience

- Edan Grossman – VR/AR artist and developer, works on uniVResity project (see above)

- Elif Bozkut Aldemir – a feminist researcher from Turkey, works on the history of Turkish feminism

- Edan Grossman – an animator and VR/AR developer, works on UniVResity project

Students' Mentorship

Below, I list students who worked on my research or creative projects, or whose capstone I supervised:

- **Carl Moore, undergraduate student, Audio Technology** — American University, 2019
  AHMED system for museum exhibitions

- **Benjamin Norris, undergraduate student, Computer Science** — American University, 2019
  Zorgan - 3D Printed Robot – face recognition module

- **Chuanguang Song, graduate student, MA in Game Design** — American University, 2019
  Zorgan - 3D Printed Robot - head module

- **Wesltey Thompson, graduate student, MA in Game Design** — American University, 2019
  Zorgan - 3D Printed Robot – hand module

- **Amelia Tyson, graduate student, MFA in Film & Media Arts** — American University, 2019
  Museum of Peace Coprs Experiences – Volumetric Recording and Photogrametry

- **Anselm Beach, graduate student, MFA in Film & Media Arts** — American University, 2019
  Tim's Apocalypse documentary

- **Thierry Gysler, undergraduate student, Film** — American University, 2018-2019
  Vera – volumetric experience

- **Delilah Harvey, undergraduate student, Journalism** — American University, 2018-2019
  Vera – volumetric experience

- **Carlos Macher, graduate student, MFA in Film & Media Arts** — American University, 2018-2019
  Vera – volumetric experience

- **Felipe Simas Magalhaes, graduate student, MA in Game Design** — American University, 2019
  Museum of Peace Coprs Experiences – literature review

- **Chao Cheng Lin, graduate student, MA in Game Design** — American University, 2018-2019
  Procedural Gesture Generation using Deep Neural Networks

- **Sophia Rose, junior, Marine Science** — CSUMB, 2017-2018
  Augmented Reality Application for Exploration of California coast underwater GIS Data

- **Phuc Pham, junior, Computer Science** — CSUMB, 2017-2018
  Dynamic Time Warping implementation on Compute Shaders

- **Theodore Ebenhoech, junior, Computer Science** — CSUMB, 2017-2018
  UniVResity.org – real-time classroom participation through VR

- **Mathew Thomberlin, junior, Computer Science** — CSUMB, 2016
  Gauntlet VR navigation technique

- **Matthew Johnson, senior, Computer Science** — CSUMB, 2015-2016
  Low-cost latency compensation for VR

- **Kataryna Morayko, senior, Cognitive Science** — CSUMB 2016
 *Variable vs. constant latency study*

- **Brian Zimmerman, senior, Computer Science** — CSUMB 2016
  Variable vs. constant latency study
- **Brandan Lockwood, senior, Computer Science** — CSUMB 2016
  PinThought – EEG-based authentication
- **Xiuan Dong, senior, Computer Science** — CSUMB 2016-2017
  PinThought – EEG-based authentication
- **Joshua Shallow, senior, Computer Science** — CSUMB 2016-2017
  Low-cost Latency Compensation for VR
- **John Sullivan, junior, Computer Science** — CSUMB 2016-2017
  Activity Recognition in VR
- **Brian Geiger, senior, Computer Science** — CSUMB 2016-2017
  UniVResity open VR education platform
- **Brandon Woodard, junior, Computer Science** — CSUMB 2016-2017
  TickTockRay – 3D pointing interaction technique
- **Daniel Kharlamov, sophomore, Computer Science** — CSUMB 2016-2017
  TickTockRay – 3D pointing interaction technique
- **Kevin Brock, senior, Computer Science** — CSUMB 2016-2017
  "The Third Law" Virtual Reality Game – capstone project
- **Marcus Dixon, senior, Computer Science** — CSUMB 2015-2016
  "Knock-off" Virtual Reality Game – capstone project
- **Alexander Shechy, senior, Communication Design** — CSUMB 2016-2017
  "Tainted Sea" Virtual Reality Game – capstone project
- **Jackson Culp, senior, Communication Design** — CSUMB 2016-2017
  "Tainted Sea" Virtual Reality Game – capstone project
- **Robert Macias, senior, Computer Science** — CSUMB 2015-2016
  "Knock-off" Virtual Reality Game – capstone project
- **Harrison Oglesby, senior Computer Science** — CSUMB 2015-2016
  "Knock-off" Virtual Reality Game – capstone project
- **Ian Kindal, senior, Communication Studies** — CSUMB 2016-2017
  "Riotous Space Brawl" Virtual Reality Game – capstone project
- **Peter King, senior, Communication Studies** — CSUMB 2016-2017
  XIX century Paris – 3D modelling in VR – capstone project
- **Ariel Weingarten, senior, Software Engineering** — University of Waterloo, 2014-2015
  Watchcasting: using smartwatch to interact with large screens
- **Steven Vincent, senior, Engineering** — University of Waterloo, 2014-2015
  Games in Movie Theatre: Android-based cinema gaming server
- **Meisam Mohammadtaheri, freshman, Engineering** — University of Waterloo, Spring 2013
  Quality Assurance for NetClick Student Response System
- **Sandeep Patel, freshman, Engineering** — University of Waterloo, Spring 2013
  Testing of NetClick Student Response System
- **Amir Tavakoli, freshman, Engineering** — University of Waterloo, Summer 2013
  Quality Assurance for CineClick Interactive Cinema
- **Hermon Gebremariam, freshman, Engineering** — University of Waterloo, Summer 2013
  Testing of CineClick Interactive Cinema Platform

To date, I have supervised 26 student games projects. Below I present notable examples, most of which were developed for mobile or desktop virtual reality systems.
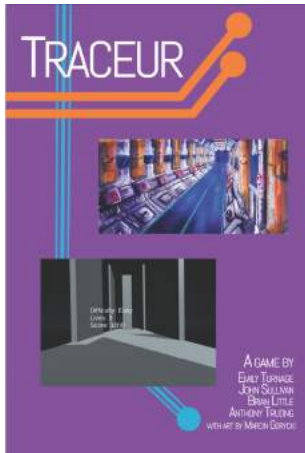
"Traceur" – Mobile VR Exer-game

Game Designer: Emily Turnage
Developers: John Sullivan, Brian Little, Anthony Truong
Arts: Marcin Gorycki
Hardware platform: Samsung Gear VR, Samsung Galaxy S7

Traceur is a mobile VR exergame that combines the fun of more traditional 'endless runner' games with the get-up-and-go nature of the Gear VR. The game is designed to encourage physical exercising. Using the built-in motion sensors of the phone Traceur tracks player movements and, once calibrated, lets the player navigate an endless runner style gauntlet by jogging, dodging in place, and jumping.

Available at: http://studentgames.itch.io/traceur
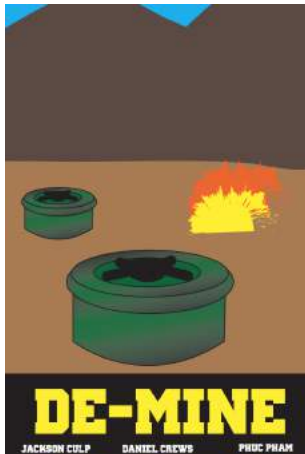
De-Mine – VR Mine Defusing Simulator

Game Designer: Jackson Culp
Game Developers: Daniel Crews, Phuc Pham
Hardware platform: HTC Vive

In De-mine, the player is charged with the task of clearing out minefields to prevent harm to the local animal life. From the first person perspective, players experience the tension of navigating a dangerous minefield, removing the mines from the ground, and then carefully disarming them.

Available at: http://studentgames.itch.io/de-mine

Tainted Sea VR – an exploration of imaginary underwater world

Game Designer: Alexander Sheehy, Jackson Culp
Game Developers: Morgan Johnson
Hardware platform: Oculus Rift CV1

Tainted Sea is a simulator/action game that takes place in a future where a deadly super-organism, known only as the "Tainted One" threatens to destroy and consume all life on the planet. Using an advanced sub, players will embark on a series of missions that take them into the tainted sea's dark depths. With only their sub's headlights and sonar to guide them, players will need to keep their wits about them as the tainted organism is about to attack any time.

Available at: http://studentgames.itch.io/tainted-sea

Most of the games listed above and below can be downloaded at http://studentgames.itch.io

The Third Law VR

Game Designer: Kevin Brock (currently at Human Head Studios)
Hardware Platform: PC (Cryengine), HCT Vive

Players take on the role of the world's first scientist, who seeks to understand the generated laws of their world. Players are tasked with diagnosing the properties of objects they recover, learning the process of scientific discovery. With each game execution, new sets of physics laws are generated.
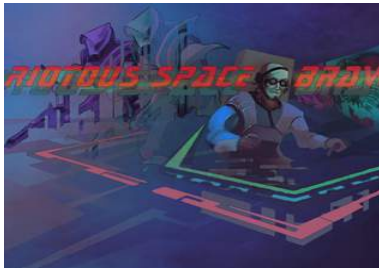
Riotous Space Brawl VR

Game Designer: Ian McKillop
Hardware Platform: PC, Oculus Rift

The objective in Riotous Space Brawl is to protect the player's home planet from invasion. The player proceeds through a stage of the game, shooting down enemies along the way, until they reach the end of the level. Upon arriving at the end, a boss will appear and the player destroys them.

Don't Blink

Game Designer: Jessica Vega

This 2D puzzle platformer relies on the player to memorize a path to the exit and then navigate through the level in total darkness. The player will be able to memorize the level for as long as they are able to refrain from blinking, but once they do, the game – and the challenge – begins.

The Marauder Wolves

Game Designer: Benjamin Kung
Hardware Platform: PC

The Marauder Wolves is a platformer game, where two warriors face off against monsters in a post-apocalyptic world. All of the artwork and sound design were done by very talented visual design students from the University of Silesia, while design and programming were done by CSUMB students.

Aircycle VR

Game Designer: Alexander Sheehy Developers: Daniel Kharlamov, Bianca Jaramillo

Aircycle is a mobile VR exergame in which players fly a human powered aircraft through a canyon. By using a custom-designed strap-on Bluetooth sensor, users directly affect the craft's speed through leg movement.

Chromosphere

Game Designer: Christine Ladra
Platform: Android and iOS, procedurally generated levels

Chromosphere is a bright, fast paced, side scrolling shooting game It is a classic fast paced arcade game that makes the player engaged, excited, on edge, yet comfortable at the same time. The mechanics and rules of the game are fairly simple and straightforward, making it easy to get into.

Enkindle

Game Designer: Emily Turnage
Hardware Platform: PC,

Enkindle is a 3D, procedurally generated open map RPG in which the player takes on the role of a phoenix that blooms to life in a forest held in winter's icy grasp. The heart of Enkindle lies in how the player chooses to transform the landscape to their liking.

Rouge World

Game Designers: Jacob Esquivel, Riley Peralta
Platform: PC

Rogue World is a battle for humanity against an alien force. Explore a tunnel system while fighting enemy aliens armed with only a gun and knife. Defeat the aliens, solve puzzles, and find secret rooms, all while exploring this underground maze.

Gourmet Quest VR

Game Designer: Toutoua Vang
Hardware Platform: Oculus Rift + Leap Motion

Gourmet Quest is a virtual reality-cooking simulator. The player starts as a street side vendor who cooks up delicious and challenging dishes and pursues their dream of becoming an owner of restaurant franchise. With the application of Leap Motion, the player uses their own hands through the entire cooking process.

Galactic Explorer

Game Designer: Jackson Culp
Hardware Platform: PC

Galactic Explorer is a science fiction game that captures the thrill of exploration. The player must fly a spaceship through an uncharted solar system in search of habitable planets for colonization. There are dangers within space, but the explorer is equipped to counter all the threats.

Just One Night VR

Game Designer: Victoria Arreola
Hardware Platform: Oculus Rift + Leap Motion

Just One Night is a virtual reality spatial input horror game. The player is trapped within a two-story mansion with only a flashlight to defend themselves against paranormal entities. The player must find keys in each room of the mansion, while remaining quiet to avoid provoking any malevolent spirits that may be lurking.

World 1-1

Game Designer: Jon Pacha
Platform: PC

The player must race to the end of the level before time runs out and the portal back to their home dimension closes. The Player must avoid the hazards and enemies and gather the collectibles to improve the final score. Each level has identical layout, but increased number of threats and obstacles.

GRANTS

- **Faculty Research Support Grant** — $22,500
  Funding for volumetric production — *2019*

- **Virtual Reality Research Grant** — $50,000
  Funding for virtual reality research — *2018*

- **Unity Pro Educational Licenses Grant** — $36,000
  Funding for 20 Unity Pro licenses — *2018, 2019*

- **SOC Research Support Grant** — $3,160
  Funding for volumetric production — *2018*

- **CSUMB UROC Researcher Program** — $80,000
  Funding for four undergraduate research assistants every year for 3 years — *2016*

- **Faceware Technologies Inc. (in-kind donation)** — $60,000
  Ten Faceware Live 2.5, and Faceware Retargeter 2.5 software packages for our research lab — *2016*

- **Voxel Farm Inc. (in-kind donation)** — $30,000
  Online voxel rendering service — *2016*

- **Faculty Incentive Grant** — $10,000
  Grant writing summer funding — *2016*

- **CSUMB Faculty Startup Funding** — $20,000
  Equipment and conference travel funding — *2015*

- **Ontario Centre of Excellence: Co-author, Principal Investigator** — $75,000
  Research and Development Funding for NetClick Inc. — *2014*

- **Imagine K12 (Y-Combinator) investment** — $100,000
  Research and Development funding for NetClick Inc. — *2014*

- **Canada Media Fund: Author and Project Lead** — $500,000
  Research and Development funding for CineClick Interactive Cinema Gaming System — *2013*

- **FedDev JumpStart investment** — $25,000
  Research & Development product commercialization funding provided by federal government — *2013*

- **Velocity: Amazon Startup Credit & Rackspace Startup Credit** — $130,000
  Server time and technical support credit — *2013*

- **Bravo!FACT: film production funding** — $40,000
  Funding provided to top ten emerging Canadian filmmakers — *2012*

- **Region of Waterloo Arts Fund** — $10,000
  Film production funding provided by regional arts fund. — *2013*

- **"Waiting For Summer" feature film (as producer)** — $200,000
  Private investor funding for award-winning theatrically-distributed feature film. — *2009*

- **WLU Investigative Journalism Grant** — $1,500
  Journalism funding provided by The Cord Weekly for investigative journalism projects — *2007*

SCHOLARSHIPS

- **University of Waterloo Graduate Studentship** — $19,000
  Annual funding for graduate students maintaining high GPA provided by the Dean's Office — *2014-2015*

- **Ontario Graduate Scholarship** — $45,000
  Highly-selective state-funded scholarship for graduate students in Canada — *2011-2014*

- **University of Waterloo President's Graduate Award** — $20,000
  Cash Award for graduate students — *2012-2014*
- **Natural Science & Engineering Research Council** — $30,000
  Research internship funding for an invention of Glass Telepresence System. — *2010*
- **Wilfrid Laurier University Graduate Research Assistantship** — $2,000
  Research assistantship funding — *2008*
- **University of Waterloo International Masters Student Scholarship** — $5,400
  Funding intended to mitigate the costs of international tuition — *2005*
- **University of Wroclaw Undergraduate Scholarship** — $10,000
  Merit scholarship for maintaining high GPA — *2000-2004*

PROFESSIONAL MEMBERSHIPS

- Academy of Canadian Cinema and Television (Canadian "Oscars" Academy) — voting member
- The International Association of Film and Television Schools (CILECT)
- Virtual Reality / Augmented Reality Association (VRARA)
- University Film and Video Association (UFVA)
- International Game Developers Association (IGDA)
- Digital Games Research Association (DiGRA)
- Association of Computing Machinery (ACM)
- IEEE Computer Society (IEEE)

PROFESSIONAL SERVICE

- Program Committee: ICTAI, ISS, FDG, iLRN
- Proceedings Reviewer: CHI, UIST, 3DUI, GI, CHI Play, ITS, TOMM, JERG
- Graduate Program Director for MA in Game Design at AU Game Lab (2018-2019)
- Member of SOC Curriculum Committee
- Member of FMA tenure-track Search Committee
- Chair of Co-Curriculum Subcommittee at CSUMB's ACE Internationalization Task Force

HOBBIES

Playing Piano, Horse Riding, Climbing, Mountaineering, Backpacking, Tennis, Volleyball, Swimming, Photography