

# Curriculum Vitae - Jeremy Johnson Ph.D.

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## Education

Ph.D., Atomic, Molecular, and Optical Physics, University of Texas at Austin, 2016

Dissertation: Toward higher-intensity positron beams : investigations in moderation efficiency and beam design

B.S. Physics, University of Texas at Arlington, 2005

B.A. Classical Studies, University of Texas at Arlington, 2005

## Academic Appointments

Assistant Professor of Video Game Development, St. Edward's University, 2020 - Present

Visiting Assistant Professor of Video Game Development, St. Edward's University, 2018 - 2020

Adjunct Professor of Physics, St. Edward's University, 2018

Adjunct Professor of Physics, Art Institute of Austin, 2017-2018

Adjunct Professor of Physics, Austin Community College, 2017-2018

Research Scientist, HZDR, Dresden Germany, 2012

Associate Instructor, The University of Texas at Austin, 2008-2011, 2014-2016

## Additional Professional Experience

Cofounder, Artist, Game Designer - 4th Wall Games LLC, 2016-present

Scriptwriter and Storyboard Artist, Journal of Visualized Experiments, 2017-2018

Designer, Contract Artist, Demonstrator, ACCHaoS (Austin Community College Hands-on Science), Austin Community College, 2017-2018

Staff Comics Artist, The Daily Texan, The University of Texas at Austin 2006-2011

## Current Courses

VGAM 2318 World Building

Introduction to world building, story structure, and critical analysis across media including film, television, novels, short stories, comics and graphic novels, and video games. Students analyze published works and create their own works set in unique worlds.

VGAM 3327 Advanced Digital Animation

Basic modeling and animation in 3D using Blender. Emphasis is placed on developing technical skills and applying those to create a body of creative work.

VGAM 3320 Game Design Studio 1

Introduction to video game design and development primarily using GameMaker Studio. Students combine visual art and animation, audio, and programming, to create their own games. The development process emphasizes feedback, iteration, and thoughtful evaluation of the works created. Students work as solo developers. Satisfies St. Edward's Mission Marker: Creativity and Making

VGAM 3330 Game Design Studio 2

Video game development in teams using the Unity game Engine. Students move from being solo generalists to performing specialized roles on a team. Industry best practices and development pipelines are introduced.

VGAM 4345 & 4347 Senior Game Studio 1 & 2

Video game development with emphasis on using industry-standard processes and tools and preparation for future employment in the games industry. Students take a game project from concept to "Gold Master" state with a team. When possible, the students works with a non-profit organization in need of game development. The HealthStart Foundation was one such client.

Satisfies St. Edward's Mission Marker: Experiential Learning for Social Justice

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## VGAM 1310 Beginning Coding for Non-Coders

Introduction to computer literacy and programming largely through developing games. The bulk of the course is devoted to programming using Python. Additional topics include: spreadsheets and computer literacy.

## VGAM 3328 Interactive Storytelling

Writing and storytelling in games and other interactive media. Students play narratively-rich games, analyze them, and then create their own interactive stories. Particular emphasis is placed on writing.  
Satisfies St. Edward's Mission Marker: Upper Division Writing Rich

## Curriculum Development

### Course Revision: VGAM 4345 & 4347 Senior Game Studio, Summer 2023

Summer 2023 Innovation Institute: Continuing to explore the new form of these courses and to build in a solid Experiential Learning for Social Justice component.

### Course Revision: VGAM 4345 & 4347 Senior Game Studio, Summer 2022

Restructured to account for the end of collaboration with HealthStart and to introduce the vertical slice as part of the development pipeline.

### Course Revision: VGAM 1310 Beginning Coding for Non-Coders, Spring 2020

Introduced spreadsheets and computer literacy components, and changed the course to be taught twice-per-week. Also organized the course slides to make it easy to give to another professor should that be necessary.

### Course Creation: VGAM 3327 Advanced Game Animation, Fall 2019

Created the course as a standalone class in 3D modeling and animation with brief introductions to related topics.

### Course Revision: VGAM 3330 Game Design Studio 2, Spring 2019

Revised the course to tackle a series of smaller games completed in teams.

### Course Creation: VGAM 3320 Introduction to Game Animation, Spring 2019

Created the course as an introductory class in 2D animation with emphasis on foundational concepts.

### Course Revision: VGAM 3320 Game Design Studio 1, Fall 2018, Fall 2022, Fall 2023

Restructured the course to use GameMaker Studio, with an introductory game using Bitsy.

### Course Revision: VGAM 3399 Computer Graphics and Animation, Fall 2018

Explored and revised in anticipation of splitting this into two courses.

### Course Revision: PHYS 1310 Physics for Future Presidents, Fall 2018, Paul Walter and Jeremy Johnson

Development of a hands-on, experimental component to accompany the reading and discussion.

## Service to the Professional Community

### Staple! Austin's Independent Media Expo 2024 - Organizer and Faculty Sponsor

Supported Chris Nicholson in determining and executing logistics, design and planning of signage, organized one of the panels, oversaw all talks, and recorded and edited them for upload to the internet.

### Portfolio Posse Spring 2022, 2023, 2024, Fall 2022, 2023 - Organizer, Graphic Designer

Worked with John Henderson to organize and facilitate each event. Designed posters, signs for the event, and standees for the reviewers.

### Participation with HealthStart Foundation in the development of *Monstralia* through Senior Game Studio, Fall 2018-Spring 2022

### Support VGMU! Talks at the Capital Factory, June and July 2020

Served as moderator for the online talks.

### Global Game Jam judge, University of Texas, Spring 2020

## Creative Works

### *Obelus Game Prototype*

A modern retro pixel art dungeon crawler. The prototype and concept won a Presidential Excellence Grant in 2024. The final game is currently under development with an estimated completion date of the fourth quarter of 2025.

### *What Lies Beyond the Standing Stone*

A fantasy/science fiction gamebook created and submitted for The Lindenbaum Prize for Short Gamebook Fiction 2022/2023 competition. In this work, I sought to explore a deeper connection between traditional

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narrative and game mechanics. This work won a Merit Award, which is essentially second place (though there are three awarded).

## *Awakening Aboard the Anastasia*

A science fiction horror gamebook submitted for The Lindenbaum Prize for Short Gamebook Fiction 2022/2023 competition. The exploratory foci of this book hinge upon: 1) using novel presentations of standard interactive structures to influence the player's experience, and 2) presenting multiple similar endings where the reward is not the outcome but how much the player learns about the internal mystery.

This work won a Commendation Award, which is essentially an honorable mention.

## *The Happy Fun Activity Book*

An interactive fiction and puzzle gamebook submitted for The Lindenbaum Prize for Short Gamebook Fiction 2021/2022 competition. The exploratory foci of this book involve: 1) reducing player/character separation to a minimum, and 2) requiring players to violate rules and conventions of normal gamebook play in order to win.

## *Harrowing Adventures*

A multiplayer interactive fiction video game created in Unity.

## **Facilitated Partnerships**

STAPLE! The Independent Media Expo

Working with the event organizer and with St. Edward's University to sponsor and bring back the long-running Austin event that showcases local independent artists. Expected to take place on St. Edward's Campus in April of 2024.

IGDA Austin

Partnering with the president of the Austin chapter of the IGDA, to sponsor events on campus.

## **Conference Presentations**

Asteroids Meets Snake: Facing New Design Challenges When Mashing Up Old Video Games, SWPACA 2024, Albuquerque, NM, February 23 2024

## **Invited Talks and Demonstrations**

*Harrowing Adventures*, NarraScope 2019, Cambridge, MA, June 15 & 16, 2019

*Harrowing Adventures*, Find Clues, Punch Nazis, Save the World, Interactive Storytelling, St. Edward's University, March 1, 2018

*Harrowing Adventures*, Game On!, The Bob Bullock Museum, Austin, TX, November 30 2017

## **Game Demos Presented**

*Harrowing Adventures*, NarraScope, Cambridge, MA, June 15 & 16, 2019

*Harrowing Adventures*, SXSW Gaming, Austin, TX, March 16, 2019

*Harrowing Adventures*, DreamHack Austin, Austin, TX, June 2, 2018

*Harrowing Adventures*, SXSW Gaming, Austin, TX, March 16, 2018

## **Schools, Conferences, or Workshops Attended (Without Presenting)**

The 2016 Out of Excuses Writing Workshop and Retreat, Fort Lauderdale, FL, September 17-24, 2016

## **Awards and Honors**

Presidential Excellence Grant, St. Edward's University, 2024

Distinguished Teaching Assistant Award, University of Texas, 2010

## **Physics Publications**

Positron Beams as Effective Nondestructive Tools for the Semiconductor Industry, Fink, Johnson, Nguyen, *Electronic Device Failure Analysis* Vol. 19, No. 3 (2017)

Flash Lamp Annealing of Tungsten Surfaces Marks a New Way to Optimized Slow Positron Yields, Anwand, Johnson, Butterling, Wagner, Skorupa, and Brauer, *Jour. Phys.: Conf. Ser.* 443 (2013)

First Experiments with MePS, Jungmann, Haberle, Krause-Rehberg, Anwand, Butterling, Wagner, Johnson and T.E. Cowan, *Jour. Phys.: Conf. Ser.* 443 (2013)

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## **Physics Research Presentations**

"Improving Slow Positron Yields", Atomic, Molecular, and Optical Physics Seminar, The University of Texas, 2015

"The Annihilation of Positrons in Matter", Atomic, Molecular, and Optical Physics Seminar, Helmholtz Zentrum Dresden-Rossendorf, Dresden Germany, 2012

"Fundamentally Re-designing Labs for Physics 117M," Physics Teaching Forum, The University of Texas, 2010

## **Service to St. Edward's University**

Interim Creativity and Making Coordinator 2023-2024

Member of Experiential Learning in Social Justice Committee 2022-Present

Member of AHMX Task Force on Recruitment and Retention 2022, 2023

Member of Maker Space Steering Committee 2022

Member of search committees for Visiting Professor of Graphic Design 2021, 2022, Visiting Professor of Animation 2021, and Assistant Professor of Animation 2024

St. Edward's Game Fair Organizer Spring 2018-present

Freshman Visual Studies Seminar, Fall 2019

National Video Games Day Livestream Participant, St. Edward's University, Austin, TX, September 12, 2018

Video Game Development Major Representative, Rooster Teeth Expo, Austin, TX, August 3-5, 2018

## **Professional Societies Membership**

International Game Developers Association (IGDA)

Special Interest Group on Computer-Human Interaction (SIGCHI)

Higher Education Video Game Alliance (HEVGA)