BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Roger Alan Altizer

eRA COMMONS USER NAME (credential, e.g., agency login): ROGERALTIZER

POSITION TITLE: Associate Director, EAE; Director of Digital Medicine; Director Therapeutic Games and Apps Lab; Associate Professor Population Health Science

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

|  |  |  |  |
| --- | --- | --- | --- |
| INSTITUTION AND LOCATION | DEGREE*(if applicable)* | Completion DateMM/YYYY | FIELD OF STUDY |
| Northwest University | BA | 05/1997 | Religion & Philosophy |
| University of Utah | MS | 05/2005 | Communication |
| University of Utah | PhD | 12/2012 | Communication |

# A. Personal Statement

As the Director of the Therapeutic Game and Apps Lab (with 35 graduate students working on innovative software solutions), and the Director of Digital Medicine for the Center for Medical Innovation I am excited to be a part of this research team. I am a strong believer in theory driving practice; at The GApp Lab qualitative research methods and rigorous design methods drive my portion of the work. Over the past two years, The GApp Lab has worked on over two-dozen sponsored research games and apps. As a co-founder of the #1 games program in the nation, Entertainment Arts and Engineering, I have made it a central tenant of my work to enable faculty from Fine Arts, Engineering, Business and Health Sciences to work together to solve complex research questions and provide a world class education to those who wish to study interactive entertainment. As an investigator, I will oversee The GApp Lab’s development of patient engagement and education games and apps as well as serve as a facilitating work with the graduate students and project managers at the lab.

# B. Positions and Honors

**Positions and Employment**

1998-2001 Assistant Language Teacher, JET Programme, Hirosaki-shi, Aomori-ken, Japan.

2001-2011 Videogames Journalist/Reviewer, About.com, a New York Times Publication.

2003-2006 Teaching Fellow, Department of Communication, University of Utah.

2006-2008 Adjunct Assistant Professor, Arts Tech Certificate program, University of Utah.

2008-2009 Director of the Center for Interdisciplinary Art and Technology (CIDAT).

2009-2015 Director of Game Design and Production, Master Games Studio, University of Utah.

2013-1016 Associate Professor Lecturer, Entertainment Arts and Engineering, University of Utah.

2014-present Director of Digital Medicine, Center for Medical Innovation, University of Utah.

2014-present Director, Therapeutic Games and Apps Lab, University of Utah.

2015-present Associate Director, Entertainment Arts and Engineering, University of Utah.

2015-present Associate Professor, Population Health Sciences, University of Utah.

**Honors**

Top Poster, New Media Consortium (2014) – Dino Lab

Advisor, Serious Games Showcase Winner (2014) – Cyber Heist

Advisor, E3 Expo Student Showcase Finalist (2014) – Vinyl

Reynolds Lecturer (2014) – Mind, Body, Soul, a Grown-Up Conversation About Games

Creativity Award (2013) - Ubisoft Montreal Academia Game Lab. Co-coached the student team that won an award for their prototype “Reveal” at the Ubisoft Montreal Academia Game Lab competition. As a result, two students earned internships at Ubisoft.

Top Undergrad & Graduate Game Design Programs - Princeton Review (2013)
#1 - Entertainment Arts and Engineering, University of Utah
#2 - Master Games Studio, University of Utah

Education Track Paper Award (2012) - IEEE Games Innovation Conference. Presented on industry and games collaboration. Was voted a top paper in the education tract

Top Undergrad & Graduate Game Design Programs - Princeton Review (2012)
#3 - Entertainment Arts and Engineering, University of Utah
Honorable Mention - Master Games Studio, University of Utah

Unity Mobile Generation Great Education Giveaway (2010). Co-PI with Marty Clayton, Electronic Arts (now UVU). While we were not finalists we did impress with our proposal and were awarded four licenses of the Unity Pro, Unity iOS Pro and Unity Android Pro game development engines.

Top Undergrad & Graduate Game Design Programs - Princeton Review (2010)
#2 - Entertainment Arts and Engineering, University of Utah
#6 - Master Games Studio, University of Utah

Top Undergrad & Graduate Game Design Programs - Princeton Review (2009)
Top 50 (only top 8 were numbered) - Entertainment Arts and Engineering, University of Utah

# C. Contribution to Science

1. Interdisciplinary Process – Collision

In January of 2014 I founded the Therapeutic Games and Apps Lab (The GApp). The GApp was an effort to create a space on a health sciences campus where game design faculty and graduate students could solve pressing problems through collaboration between clinicians and games researchers. By building the lab in the Eccles Health Sciences Library it became a collision space where people, methods, and culture bumped against each-other. This energy is the key to creative innovation. The GApp has done over 1 million dollars in sponsored research and funded 20-25 graduate students per semester.

1. Bills, P., Zagal J., Shipman, J, Moody, S. Larson, E., Bhavsar, S., Jarvis, C., Casucci, T., Rethlefsen, M., Lombardo, N, Altizer, R. (Under Review) (2015) “Saved Games: Librarians Levelling Up With Games For Health”, Submitted to Medical Library Association Annual Meeting and Exhibition (MLA ’15), May 15­20, Austin TX
2. Casucci T, Shipman JP, Langell JT, & Altizer, R. (2014) Beyond Borders: Partnering with Medical Therapeutic Devices & Apps Innovations. Poster for Business & Finance Division Poster Session at Special Libraries Association 2014 Annual Conference & INFO­EXPO, Vancouver, Canada, June 10, 2014.
3. Shipman JP, Casucci T, Langell J, Altizer R. (2014) Information Future: Partnering with Medical Therapeutic Device & Applications Innovations. Poster for Medical Library Association, Chicago, IL, May 19, 2014
4. Novel Qualitative Design Methodology – The Design Box

The Design Box was a method I developed over the years to solve two critical problems in design. First, those unfamiliar with design methods always begin projects with an idea rather than a careful analysis of the problem and the people involved with the problem. Second, ideation is difficult. The design box quickly allows groups, without formal design training, to dive into a process that has them analyze problems and create elevator pitches as a group. It is an inductive process that looks like a focus group where the group codes its own data and creates a grounded design (similar to a grounded theory) together.

1. Zagal, J.P., Altizer, R. , Zeng-­Treitler, Q., Shipman, J., Lake, E., Aiono, H., Malheiro, M., Christensen, C., (2014) “Doodle Health: Games as Cultural Probes”, Workshop on Entertainment in Serious Games and Entertaining Serious Purposes @ 13th International Conference on Entertainment Computing (ICEC), Sydney, Australia, September 30, 2014. pp 11-12
2. Altizer, R., Zagal, J. P. (2014) “Designing Inside the Box or Pitching Practices in Industry and Education”, 2014 Digital Games Research Association Conference (DiGRA), August 3­6, Snowbird, UT
3. Altizer, R., Zagal, J. P., (2014) Pitch Perfect or Exploring Pitching Practices in Industry and Games Education, 2014 Foundations of Digital Games Conference, April 3­7, 2014, Fort Lauderdale, FL
4. Participatory Design as Social Justice

Users and stakeholders are at the heart of games and apps. Two problems motivate a guiding value in my work and much of my public speaking. First, one of the reasons many games and apps have low adoption rates is that the end user was not represented in the design process. By incorporating end users we create solutions they are more likely to use. Second, people can, and should, be able to advocate for the healthcare they want and need. Sadly, our healthcare solutions are created in labs and in settings that patients or end users cannot access. Fortunately, via the Design Box we can bring patients and end users into the design process from the very beginning, empowering them to help build the solutions they will be using and enabling researchers to collect data to use in the design at the same time.

1. “Doodle Health: Games as Cultural Probes”, Workshop on Entertainment in Serious Games and Entertaining Serious Purposes @ 13th International Conference on Entertainment Computing, Sydney, Australia, September 30, 2014. pp 11­12
2. Injecting Play Into Conversations About Health

Many of my national and international presentations are on dispelling commonly held myths about games and demonstrating the usefulness of games and apps for human good, and health in particular. In addition to academic conference presentations and publishing, I have made over 75 media appearances, predominantly answering questions about the value of games and play.

1. Bruggers, C., Altizer, R., Kessler, K., Caldwell, C., Coppersmith, K., Warner, L., Davies, B., Paterson, W., Wilcken, J., D’Ambrosio, T., German, M., Hanson, G., Gershan, L., Korenberg, J., Bulaj, G. (2012) Patient ­Empowerment Interactive Technologies. *S* *ci. Transl. Med. 4, 152 ps 16*
2. Caldwell, C.; Bruggers, C.; Altizer, R.; Bulaj, G.; D’Ambrosio, T.; Kessler, R., Christiansen, B. (2013) The Intersection of Video Games and Patient Empowerment: Case Study of a Real World Application. IE'2013, September 30 - October 01 2013, Melbourne, VIC, Australia
3. The Intersection of Video Games and Patient Empowerment: Case Study of a Real World Application. IE'2013, September 30 ­ October 01 2013, Melbourne, VIC, Australia

5. Pushing the Boundaries of Games Education

I am the co-founder of the top ranked, as measured by the Princeton Review, games program in the nation, the Entertainment Arts and Engineering Program. In addition to having written over 10 new courses for the program, I helped design the curriculum as well as developed our three-track pedagogy. We believe that graduate education is served best by deep academic experiences, industry experiences, and student driven projects. In support of this we have a third of our classes taught by industry professionals, and a third be project-based learning coached by faculty, in addition to our traditional classes and seminars. This philosophy not only prepares our students for exciting careers but espouses the virtues of interdisciplinary education.

1. Kessler, R., van Langeveld, M., Altizer, R. (2009) Entertainment Arts and Engineering or How to Fast Track A New Interdisciplinary Program. *SIGCSE 2009*, *4* *, Mar. 2009.* (Article, published conference proceedings) http://portal.acm.org/citation.cfm?id=1509049

**D. Research Support**

**Ongoing Research Support**

1 R21 HD083832-01 Rothwell (PI) 03/06/2015 – 02/28/2017

Improved Prenatal Genetic Screening Decision Making through Game Technology

Designing and creating an interactive too to assist expecting parents clarify personal values to make

decisions regarding prenatal genetic testing.

Role: Co-Investigator

U of U Health Care Spinal Cord Injury Acute Rehabilitation Program Altizer (PI) 01/01/2015 – 12/31/2017

Tetra Controller

Designing customizable software to adapt to sip and puff controllers and joysticks for spinal cord injury patients to use with adaptive sports equipment. Creating a simulation so that users can set-up controls and practice at home.

Role: PI

**Completed Research Support - Partial List**

Private Grant Funding Altizer (PI) 01/01/2016 – 05/15/2016

Wearable Stress

Adapting commercial off the shelf wearable activity monitors for a biofeedback based stress management game.

Role: PI

Natural History Museum of Utah Altizer (PI) 08/16/2014 – 05/15/2016

Research Quest

Worked with a variety of teachers, students, and experts to design and develop a videogame based on paleontology to teach 6th grade students critical thinking.

Role: PI

College of Nursing, Utah Mooney (PI) 08/16/2015 – 05/15/2016

Avatar IVR

Developing an app-based coaching system that allows patients to find help for symptom management and report severe symptoms to their clinician.

Role: Co-PI

AVA Foundation Kessler (PI) 01/01/2015 – 05/15/2015

IV Port Nursing Game

Collaborating on a tool to help undergraduate nursing students learn proper IV insertion.

Role: Co-PI

NSF I-Corps Altizer (PI) 01/01/2015 – 05/15/2015

Kinect-ing PT and Kids: A two-way physical therapy videogame for patients and providers

Developing a prototype to help physical therapists work with children.

Role: PI

Health Sciences Research Institute Altizer (PI) 08/15/2014 – 05/15/2015

Collaboration Connect

Worked with faculty and medical data managers and clinicians to create an entertaining tool to make finding research collaborators easier at the University of Utah.

Role: PI

UCAIR Grant Altizer (PI) 08/16/2014 – 08/15/2015

Air-Play

Received a grant to create a videogame to educate high school students about actions they can take and the policies that affect air quality in the Wasatch Front.

Role: PI

University of Utah Grant Altizer (PI) 08/16/2014 – 12/31/2014

Medical Home Portal

Researched an innovative design and created an app to help distill information from the Medical Home Portal for parents of children with serious diseases.

Role: PI

Rockwell Collins Van Langeveld (PI) 08/16/2014 – 08/16/2015

Image Generation Tech & the Gaming Engine Tech

Worked with the flight simulation company to analyze and present on the merger of games and simulation technology and processes.

Role: Co-PI

Eccles Health Sciences Library E-Channel Zagal (PI) 08/16/2014 – 12/31/2014

Researched and created a tool to serve as an innovative portal for digital media artifacts, including games, for the Eccles Health Sciences Library.

Role: Co-PI

School of Music, U of U Altizer (PI) 08/16/2014 – 12/31/2014

Uplay Piano

Created an educational piano tool for classroom use. Designed a series of music videogames based on the Uplay piano system developed by the School of Music.

Role: PI

Natural History Museum of Utah Altizer (PI) 05/16/2014 – 08/15/2014

Canyon Explorer and Explore Your Environment

Performed design research and created to games to help children interact with the Natural History Museum.

Role: PI

Bio-Informatics, U of U Altizer (PI) 05/16/2014 – 08/15/2014

Doodle Health

Worked with our biomedical informatics group to create a drawing game that served as a cultural probe to help determine the usefulness of medical iconography as well as generate culturally situated medical icons.

Role: PI

Center for Medical Innovation Grant Kessler, Altizer (Co-PD/PI) 5/1/2013 – 5/15/2014

“Diabetes Game”

The goal is to investigate creating a prototype video game for adults Type 2 diabetes that uses dynamic glucometer readings to help motivate the patient to properly measure their glucose levels. Kessler oversees student work.

Role: Co-PD/PI