

# CONRAD EGAN

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## EXPERIENCE

### **DreamWorks Animation** *10.2015 - present | Glendale, CA* **Software Engineer - Shading R&D**

Designed and implemented libraries for the new core rendering software including a color space library, which required some derivation of equations.

Wrote map and material shaders for a physically based renderer that matched the project's framework and conventions.

Collaborated with team and artists to develop shading tools to meet production needs of achieving a certain look while still being user friendly.

Discovered a fundamental flaw in the base material and helped develop a solution. Also improved the speed of the noise library by 35x.

### **DreamWorks Animation** *6.2015 - 9.2015 | Glendale, CA* **Shading R&D Intern**

Developed camera utility shaders after meeting with artists that allowed production to render fur geometry 20% more efficiently.

Debugged shots for artists in proprietary 3D production software and fixed bugs in shaders that were halting production.

### **Texas A&M University** *1.2014 - 5.2015 | College Station, TX* **Graduate Research Assistant**

Project Overview: This NSF funded research project (1) develops principled algorithms for optimized integration of real and virtual elements in mobile AR based on user-attention (2) examines alternate AR interfaces which direct user attention (through a combination of eye-tracking and augmented elements) and (3) pursues novel, real world applications.

Conducted experiments with student participants to gauge the efficacy of reducing visual clutter of labeled objects through interactive eye tracking.

Analyzed data with MATLAB and modified initial experiment designs to try and find the scenarios that benefit most from eye tracking.

### **DreamWorks Animation** *6.2014 - 8.2014 | College Station, TX* **Summer Program** **Modeling and Rendering Lead, FX co-Lead**

Created a 30 second animated short titled "H2OH NO!" about a robot that lands on another planet to collect water and then encounters an obstacle. Worked with 4 other students under the advisement of DreamWorks Animation.

Created multiple FX shots with Houdini, designed and modeled the main character and environment with Maya and ZBrush, and composited shots and FX in Nuke. Contributed to story development, visual development, and animation as well.

Pitched concepts and works in progress to artists at DreamWorks twice a week. Learned how to steer critiques to get the needed feedback.

### **Texas A&M University** *8.2013 - 12.2013 | College Station, TX* **Graduate Teaching Assistant**

Provided one-on-one critiques of student work and provided technical help during studio sessions to help students improve their eye for quality and achieve their desired look for their projects.

Graded and provided feedback on course projects. Projects included a graphic design poster, creating a simple video game in Unity or Unreal, and creating a live-action shot with composited animation and FX.

### **Jet Propulsion Labs / Caltech** *6.2013 - 8.2013 | Pasadena, CA* **Interactive Data Visualization Intern**

Determined what visualization solutions would best help our clients, researchers at Caltech and JPL, through weekly meetings to understand their research objectives and through showing them iterations from paper prototypes to live interactive data visualizations.

Developed front end 3D graphics for a WebGL powered interactive web application that visualizes brain region connectivity. Worked with JavaScript and three.js.

Implemented edge bundling algorithm on hierarchical graph to vastly improve readability of brain region connections.

Designed visuals and interface for a fluid turbulence simulator and a model-based systems engineering visualization.

### **One Per Person** *6.2011 - 2.2012 | Santa Monica, CA* **Modeler and Shading Artist**

Modeled 80% of the set and the key props.

Textured painted and shaded two main props.

Collaborated with dozens of professional artists to create a Kickstarter funded ~7 min animated short film.

## SKILLS

### **Programming**

C++	JavaScript
Java	ISPC
Python	Processing
HTML	CSS
three.js	WebGL
OpenGL GLSL	D3.js

### **Software**

Maya, mental ray	Photoshop
Mudbox	Houdini, Mantra
Nuke	Illustrator
ZBrush	AfterEffects
3ds Max	Git
SCons	MATLAB

### **Operating Systems**

Linux	Mac OS X
Windows	

## EDUCATION

### **Texas A&M University** **MS Visualization**

*8.2013 - 12.2017 (expected)*  
GPA 3.921

### **University of California, Los Angeles** **BA Design Media Arts**

*9.2009 - 6.2013*  
GPA 3.858

## AWARDS

### **IPAX Sande Scoredos Memorial Scholarship, 2015**

Sony Pictures Imageworks

### **DreamWorks Animation Scholarship, 2014**

Department of Visualization at Texas A&M University

### **Departmental Honors Scholarship, 2013**

Department of Visualization at Texas A&M University

### **UCLA Regents Scholar, 2009**

Regents of the University of California

## PUBLISHED WORK

### **Investigating the Use of Eye-Tracking for View Management, 2014**

ACM SIGGRAPH 2014 Research Posters  
Ann McNamara, Laura Murphy, Conrad Egan

### **Deconstructing wall turbulence - visualization of resolvent modes, 2013**

Gallery of Fluid Motion of the 66th Annual Meeting of the APS-Division of Fluid Dynamics  
Daniel Barella, Sarah Churng, Conrad Egan, et al.