

Texas Higher Education Coordinating Board  
October 25, 2018



# Visualization Laboratory

**Merging Art & Science**  
Department of Visualization, College of Architecture  
Texas A&M University

**Tim McLaughlin**  
Head, Department of Visualization  
Associate Professor, Dept. of Visualization

**Jorge Vanegas, Ph.D.**  
Dean, College of Architecture  
Professor, Dept. of Architecture

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**Ergun Akleman, Ph.D.**  
Professor, Dept. of Visualization

**Ann McNamara, Ph.D.**  
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Dept. of Visualization

**Bill Jenks**  
Director, Visualization Laboratory  
Assistant Dept. Head, Dept. of Visualization

**André Thomas**  
Director, LIVE Lab & Instructional Asst. Prof.  
Dept. of Visualization

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## Academic Philosophy



the science of art and the art of science

# Academic Philosophy: STEAM



STEM + Art, Architecture & Design

## Bachelor of Science in Visualization (2009)

- 391 students (Fall 2018) [65% Female]
- CIP: 11.0803 Computer Software and Media Applications - Computer Graphics

## Master of Science in Visualization (1989)

- 50 students [62% Female]
- CIP: 11.0803 Computer Software and Media Applications - Computer Graphics

## Master of Fine Arts in Visualization (2011)

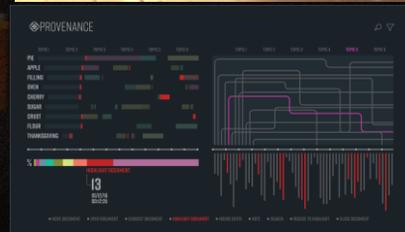
- 26 students [80% Female]
- CIP: 50.0706 Fine and Studio Arts - Intermedia/Multimedia



# Learning Objectives

## Hard

- Traditional arts
- New media arts
- Technology
- Programming / math
- History & theory of visual communication



# Learning Objectives

## Soft

- Design thinking
- Idea presentation
- Collaboration
- Leadership
- Engagement



## Why Create Viz?

Impact of computing on design

Inspired by the Bauhaus idea of bringing all creative works together

Commitment to instilling fearlessness



## Why is Viz Successful?

Timing

Dedication of professional staff

Success and support of former students

Faculty freedom in the approach

A great fit for left brain / right brain students



# Areas of Emphasis

## UI/UX Design

- Graphic design
- User experience design
- User-interaction design
- Human-computer interaction
- Immersive design (AR/VR)
- Interactive installations
- Information visualization
- Design for web & mobile
- Embodied interaction
- Wearable computing

## Animation

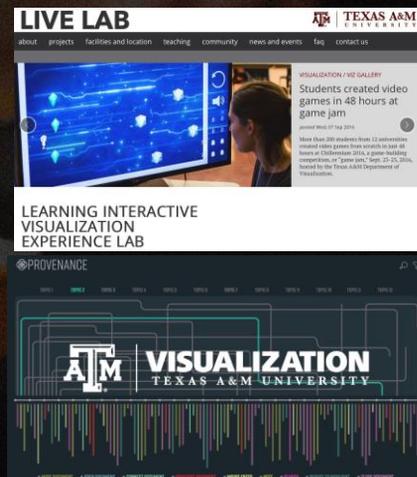
- Visual storytelling
- Shape modeling
- Simulation
- Environment modeling
- Image synthesis
- Rendering & shading
- Generative & procedural systems
- Animation systems
- Virtual cinematography

## Game Design & Development

- Interactive storytelling
- Interface design
- Game mechanics
- Interactive graphics
- AI
- Multi-user environments
- Learning technologies
- Game-based learning

# Teaching & Learning Environment

- Project-based learning / studios
- Student-centered learning
- Software agnostic
- Integration of lecture, recitation, lab, studio, and research (e.g., LIVE Lab)
- Continually straddle practice and theory



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# Research



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# Industry Support



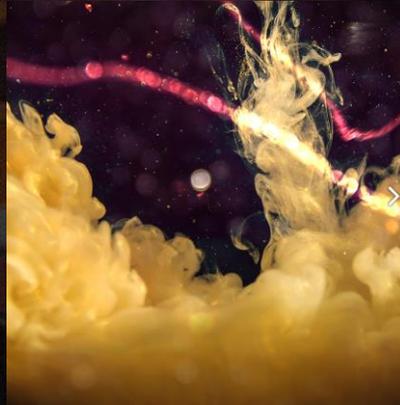
# What's Next?

Trans-media experiences

Connectivity

Making

Creativity revolution



# Questions?

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