

Texas Higher Education Coordinating Board
October 25, 2018

ATM | TEXAS A&M
UNIVERSITY

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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Professor, Dept. of Visualization

Ann McNamara, Ph.D.
Associate Professor & Associate Dept. Head
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

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Academic Philosophy: STEAM



STEM + Art, Architecture & Design

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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



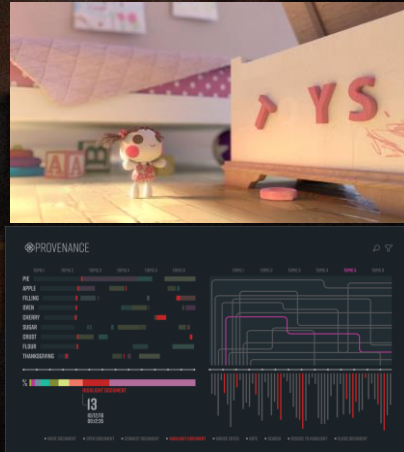
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Learning Objectives

Hard

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



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Learning Objectives

Soft

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



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Why Create Viz?

Impact of computing on design

Inspired by the Bauhaus idea of bringing
all creative works together

Commitment to instilling fearlessness



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Why is Viz Successful?

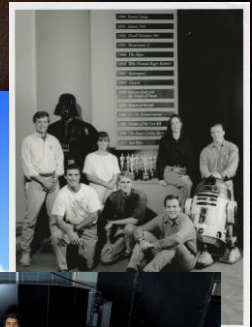
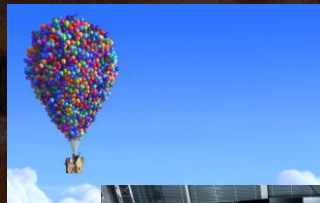
Timing

Dedication of professional staff

Success and support of former students

Faculty freedom in the approach

A great fit for left brain / right brain students



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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

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Teaching & Learning Environment

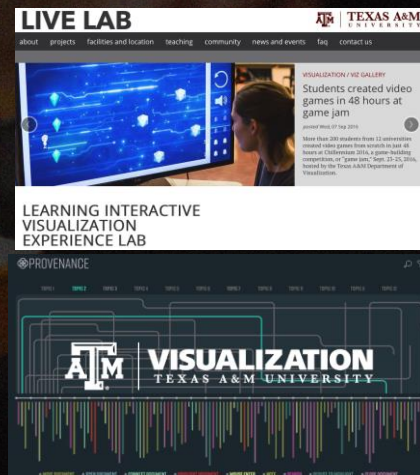
Project-based learning / studios

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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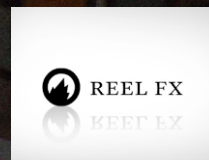
Research



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Industry Support



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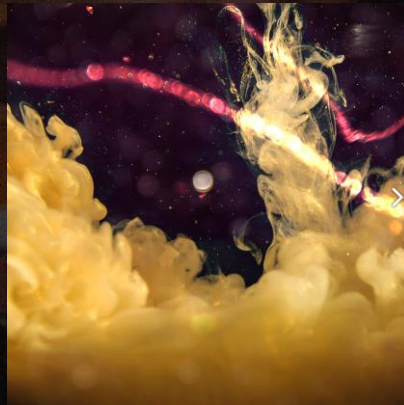
What's Next?

Trans-media experiences

Connectivity

Making

Creativity revolution



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Questions?

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