

Approaches for Immersive Media Curriculum Implementation

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Figure 1: Students at Drexel University and the Ringling College of Art + Design working with Immersive Media technologies.

ABSTRACT

The rapid expansion of availability, affordability and implementation of immersive media technologies in the market place has spawned an increasing interest in integration of design and production methodologies into higher education curriculum, while simultaneously posing a host of challenges to educators when with regards to resources, pedagogy and identifying industry needs. This panel brings together the directors of programs from Texas A&M University, The Ringling College of Art + Design, and Drexel University who have integrated immersive media into existing programs in visualization, as well as launched entire degree programs focused on the teaching design and production methodologies, to share and discuss their experiences with fellow

CCS CONCEPTS

• **Applied computing** → **Media arts; Education**; • **Computing methodologies** → *Computer graphics*.

KEYWORDS

Immersive Media, Education, Virtual Reality (VR), Augmented Reality (AR), Curricular Development

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1 PANEL TOPICS

The rapid expansion of availability, affordability and implementation of immersive media technologies in the market place has spawned an increasing interest in integration of design and production methodologies into higher education curricula, while simultaneously posing a host of challenges to educators when with regards to resources, pedagogy and identifying industry needs. The very pace at which new technologies emerge in the market place alone makes traditional approaches to strategic resource planning, acquisitions, deployment and support a daunting task within an academic setting.

Further, while many aspects of the design and production process for Virtual Reality (VR), Augmented Reality (AR), 360 degree Video and other Immersive Media formats can be similar to more mature forms of digital media (i.e creative thinking, understanding of design, aesthetic sensitivity, and storytelling balanced with technical knowledge in areas such as 3D computer graphics, animation, visual effects, interactivity, optics and image processing technologies), immersive media has a very limited history of broad distribution and use, and comparatively few "accepted standards" have been established in addressing the unique design challenges, and opportunities, presented by immersive, interactive mediums.

The members of this panel have faced these challenges in the development of design and production curriculum within their respective institutions. Bringing together the directors of programs

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from The Ringling College of Art + Design, Texas A&M University, and Drexel University, this panel presents a variety of approaches and experiences in meeting these challenges from a diverse set of perspectives and institutional environments. Presented implementations include integration of immersive media into existing design and production programs in visualization, as well as entire degree programs launched to focus on preparing students, to enter this rapidly evolving market space.

2 PANELIST BIOGRAPHIES



Figure 2: Students at the Drexel University Immersive Research Lab

2.1 Nick Jushchyshyn Drexel University

Nick Jushchyshyn is the founding Program Director of Drexel University's Bachelor's Degree Program in VR & Immersive Media. His experience includes two decades of professional experience in visual effects, immersive media, and education.

He holds an MFA from the Academy of Art University, and a Bachelor's in Science degree in Commerce & Engineering from Drexel University, and his research focuses on the development and application of production pipelines for VR/AR and other immersive media formats in areas including education, cultural heritage, medicine and narrative experiences. More information these activities are available on the Animation Capture & Effects Lab website: <http://digm.drexel.edu/acelab>

2.2 Timothy McLaughlin Texas A&M University

Tim McLaughlin joined the faculty of Texas A&M in Fall 2007 and became the Department of Visualization's first Department Head in January 2008. Prior to coming to Texas A&M Tim worked in the movie industry at Industrial Light & Magic, a division of Lucasfilm Ltd. in San Francisco, California where he led teams of artists and engineers developing computer graphics techniques for digital creatures in groundbreaking award winning visual effects for films. His credit list includes 15 theatrically released feature film projects including Mars Attacks! (1996) Star Wars: Episode I (1999), Van Helsing (2004) and War of the Worlds (2005). The work of Tim's technical artists contributed directly to Science & Technology Awards from the Academy of Motion Picture Sciences

being given to teams of ILM researchers in 1998, 2001, and 2013. These awards represent the highest film industry recognition for technical excellence.

At Texas A&M, Tim's undergraduate teaching area involves collaborative student projects that include computer animation production techniques and visual storytelling. His graduate teaching and research work focuses on developing animation systems for character articulation and deformation. As Head of the Department of Visualization he has overseen the creation of the Bachelor of Science and the Master of Fine Arts in Visualization degree programs. He is active in a variety of research and outreach activities that involve blending art and science in STEM education. Tim grew up in East Texas. He earned the Associate of Arts degree from Kilgore College, and both the Bachelor of Environmental Design (1990) and the Master of Science in Visualization Sciences (1994) degrees from Texas A&M University.

2.3 Morgan Woolverton Ringling College of Art + Design

Morgan Woolverton, Virtual Reality Development Interim Department Head at the Ringling College of Art + Design, earned a B.F.A. from Hampshire College and an M.F.A. in Studio Arts from the University of North Carolina at Greensboro. Morgan joined Ringling College in 2015. He is an artist and game developer with over 20 years of experience, which has included roles with AAA console games and freelance illustration, as well as teaching college-level art courses. Most recently he was a game developer at Microsoft working on Halo 5. In the last 11 years he has shipped titles that vary in theme from: sci-fi shooter, action role-playing games (RPG), RPG, racing, and Multiplayer online battle arena (MOBA), as well as adventure games. He held a key role on Shadow of Mordor which won Game of the Year at the 2015 Game Developers Conference awards.