

## **Creative Research Statement**

In my research I examine both educational techniques for and the production of both digital and traditional art while also exploring conceptual boundaries. Specifically in regards to education, I explore the best techniques for teaching college-level students in 2D/3D digital art in addition to instruction in skills applicable to the more traditional arts such as life drawing, illustration and photography. In regards to production, I create my work using many of the same tools and techniques that I have acquired in my search for optimized instruction. My personal work in digital and traditional mediums is often built upon the ideas of technological advancement and the possible futures that could result from such technology. Ideas such as advanced artificial intelligence, nanotechnology, biological modification and the colonization of space feature heavily in my work. I also explore the idea of maps and diagrams of future technology as art. Not only do I gain insight into my production techniques through my educational research but often the process works in reverse allowing the skills I gain through artistic creation to enhance the educational experience of my students, creating a self-perpetuating cycle of exploration and innovation.

Instructional research in regards to digital art must be done systematically and through the use of many different sources. When researching new techniques for my students I make use of printed books, online tutorials, forums and the occasional tutorial video as well as firsthand experience and classroom feedback. I often research traditional pedagogical techniques as well that can be applied within the digital art classroom. I have also found that there are many printed and online sources of information on modern neurological science that can be applied within the classroom to enhance skill and data retention. Using a combination of traditional and modern instructional methods, neuroscientific insights and emerging digital techniques I am able to continue to offer a superior learning environment. When considering the complex and interrelated procedures necessary for the production of digital art, continuous research into technique and instruction is essential.

When producing digital artwork many different tools and skills are needed in combination to produce viable output. Because of this interrelationship much of my work cannot be accurately placed into any single designation, this is true for many digital artists. When producing 3D models for realtime applications I use a combination of Autodesk Maya, Pixologic ZBrush and xNormal to initially create the model and it's normal maps. For material and texture generation I use a combination of HDRI and cross-polarized digital photography for acquisition with Adobe Photoshop for manual alterations and Quixel Suite for material properties and application. I then utilize Marmoset Toolbag 2 to visualize the realtime rendered output. For non-realtime 3D output I employ the Mental Ray Suite within Autodesk Maya. When creating digital paintings or illustrations I frequently use a 3D render as my base and incorporate photographic elements into the image directly or through the use of custom brushes and textures. Many of my digital paintings make use of scanned sketchbook drawings as their base in place of the 3D elements, often my paintings are a combination of these techniques. I use digital photography as a method to collect source data for a variety of uses as well as producing photos as finished work. I employ HDRI and panoramic photography to create image-based lighting solutions in addition to traditional tone-mapping for conventional image output. I have also produced a large collection of stereoscopic pairs and stereoscopic arrays that consist of six or more spaced images for output as lenticular prints. I regularly experiment with stereoscopy and have been able to apply the results to much of my work.

When working in digital art it is easy to become lost in the technical details and to focus too intently upon the tools instead of the art. I consistently work to improve my traditional skills such as direct observation, life drawing and sculpting. The most advanced technology available is unable to create compelling unique visual art if the artist involved is not continually improving their craft. This cross combination of disciplines is one of the most fascinating aspects of being a digital artist. I have at my disposal a limitless combination of tools and techniques that I can employ in any manner that I require and its continually evolving nature just makes the process that much more intriguing.

My work can conceptually be organized into two somewhat fluid classifications. Some of my work, especially that created as educational examples, falls into the category of real-time asset creation. The primary goal of this work is to illustrate workflow and to produce a proper real-time asset. The remainder of my work can be categorized as fine art. The key purpose of this work is to create a completed piece suitable for display or exhibition. When creating exhibition work I typically focus on the idea of the future of human technology and the changes that will accompany it. I am fascinated by concepts such as advanced artificial intelligence, nanotechnology and human mind and body modification through biotechnology. I also explore things such as the colonization of space and the impact that our migration will have on ourselves and our birth planet. These ideas provide much of the inspiration behind my work. Much of my visual research is done investigating how these concepts can be conveyed through the use of diagrams illustrating potential future technology. In addition to diagrams I frequently attempt to convey how our distant future will appear in a literal sense and occasionally in a more whimsical fashion. My photographic work, when not of a technical nature, tends to be an exploration of surface and texture, often employing the use of a macro lens. Some of my technical images become exhibition work when the results are particularly striking. My tone-mapped HDRI photos and my panoramic work are commonly an exploration of an environment or surface. In contrast, my stereoscopic photography tends to focus on particular objects, animals or figures. Creating drawings by hand in a sketchbook is an essential practice for any artist. I choose to draw from life to enhance my ability to create form and texture and draw from my imagination to generate ideas and to explore my mental landscape. As with most artists, my sketchbook is a conceptual mirror to the themes and ideas expressed in my finished work.

I persist in my search for effective methods of instruction that create a classroom that is both interesting and productive. I will refine various learning strategies to foster interaction that allows new skills and information to be conveyed and retained efficiently. I will continue to produce digital assets that allow my exploration into emerging methodologies. My perspective on future human technology will persist in its influence as I grow my repository of tools and techniques applicable to both asset creation and my personal work. Ultimately I strive to create beauty, to educate and to entertain in order to enrich the lives of those I encounter.