

**ABSTRACT OF THE PROPOSAL****Digital Imaging in Singapore: The Integration of digital imagery with traditional art media and techniques for site specific architectural, urban and landscape settings of Singapore**

When the digital print combines with traditional painted medium of what importance is the significance of the surface? The proposed research project will delve into an innovative approach toward image creation methodologies, researching and integrating emotive and subjective abstract imagery in digital, traditional and non-traditional forms. Implementing the latest technologies in image creation this research project will attempt to document emotive spaces and impressions of Singapore to build illusions of three-dimensional creative vision; moving forward to using this imagery as a resource for more creative work that will comprised of an exploration of manipulated surfaces and mixed media structures in site specific settings.

With a focus on exploring techniques for integrated image generation, painting with digital technologies and integrating traditional art and materials, the emphasis is on exploring the limitations of the digital medium, painting and reactive imagery and then pushing to achieve greater creative levels. This research will look into how the image combined with digital and traditional painted and drawn mediums, affect the significance of the surface. In part, by exploring commercial and custom-coated substrates and an assortment of special surfaces such as metal, plastic laminates in a digital printmaking approach as well as an interactive prototype depicting the illusion of surface.

Of major interest is the assimilation of the newly developing digital tools into the artist's studio, layering images expressing the complexity of abstract imagery, combining the traditional paint media with under-printing and over-printing and advanced pre-coats generating both still imagery and a moving, emotive interpretation of space configurations.

**Details of Research Proposal (not more than 10 pages)**

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**a) Specific Aims**

Project aim is to explore abstract imagery in the Singaporean context using techniques commonly used in the feature film visual effects industry and advertising, e.g. high quality large-scale image creation for banners, posters and projection.

There are four basic problems that I wish to explore in this research project, 1) oversized image creation using algorithmic paint strokes, 2) high resolution computer rendering techniques, 3) over-painting techniques and 4) reactive painted surfaces and imagery integrating animation and physical motion

**b) Significance**

Contemporary painting is not taking advantage of integrating traditional painting methods and art materials with available visual effects industry software and digital devices to create high impact artwork. Usually outcome of digital painting is dull digital print that lacks traditional art forms physical presence interest and excitement.

Customizing unusual materials and transferring images to absorbent, non-absorbent and three dimensional surfaces, layering paints of digital painting with actual paint, and with it creating extraordinary visual effects with this approach is a challenge to overcome.

An even greater physical presence of digitally generated images is created when working on an architectural scale. When digital images are combined with outsized and multidimensional surfaces, the creative possibilities are vast and always expanding as new technologies emerge. For example, a numerous large individual panels can be printed and hinged together, transparent layers of printed light film and plastic can create moving image in large architectural space, printed metal can be transformed into sculpture. Prototyping and experimenting with wide range of materials is now possible to create multidimensional objects directly with the help of specialized digital printer. Cutting into three-dimensional surfaces, folding and assembling something flat into three-dimensional structures, Flatbed printers and other specialized equipments may print directly on the surfaces up to twelve inches deep.

This research will investigate these forms of expression in imagery creating dense layers of expression. Furthering this goal the plan is to repurpose the imagery into projected imagery that encompasses reactive performance and choreography.

**c) Approach**

Using computers to generate and create textures for digitally painted imagery as well as painting in three-dimensional space needs large storage space in both virtual and physical memory. High-end graphics computers are necessary to create this imagery. I plan to utilize students by training them with skills that I have acquired to create imagery generated with algorithmic paintbrush strokes.

There are many needs in accumulating photographic textures, generating library of painted textures by using different software packages. Generating algorithmic custom made brushes with which to create actual digital paintings, photo documenting of spaces that generate feeling in Singapore for creating virtual art pieces specifically for significant environments, making a visual statement about cultural and historical context these places evoke will take the time and effort of a highly skilled team of artistically inclined students.

We will then move forward and explore display approaches including surface materials and projection.

**d) Originality/Evidence of novel innovation**

Creating beautiful rich visuals and bringing them into public spaces by using existing tools of visual effects, high resolution over-sized printing with additional over-painting. Integrating this imagery with choreographed human movement and other immersive projected work will define this work as novel and innovative.

**e) Investigator**

I am experimenting for last 20 years with large-scale mixed media art. My early work, large-scale *Gobelin* style tapestries, created after my own abstract paintings, enabled me to pursue public commissions for large architectural spaces and led me abroad to continue my studies at University of California Los Angeles where she received her MFA in 1989.



“Seekers” large scale soft sculpture in space,

1989 White Art Gallery University of California Los Angeles, USA

Continuing studies in Tokyo as a Japan Foundation Fellow 1991-1992, my artistic research delved into Traditional and Contemporary Japanese Fiber and Textile Art at Tokyo National University of Fine Arts and Music and Kyoto Seika College. Artwork became recognized as soft pliable sculptures deployed in space in the form of porticoes of rounded counter-point gold and red masse and were exhibited in Japan, and commissioned for the World Trade Centre in Ljubljana, Slovenia, Europe.



"Gold Kosode" large scale soft and pliable sculptures

1991 GalleryGallery, Kyoto, Japan

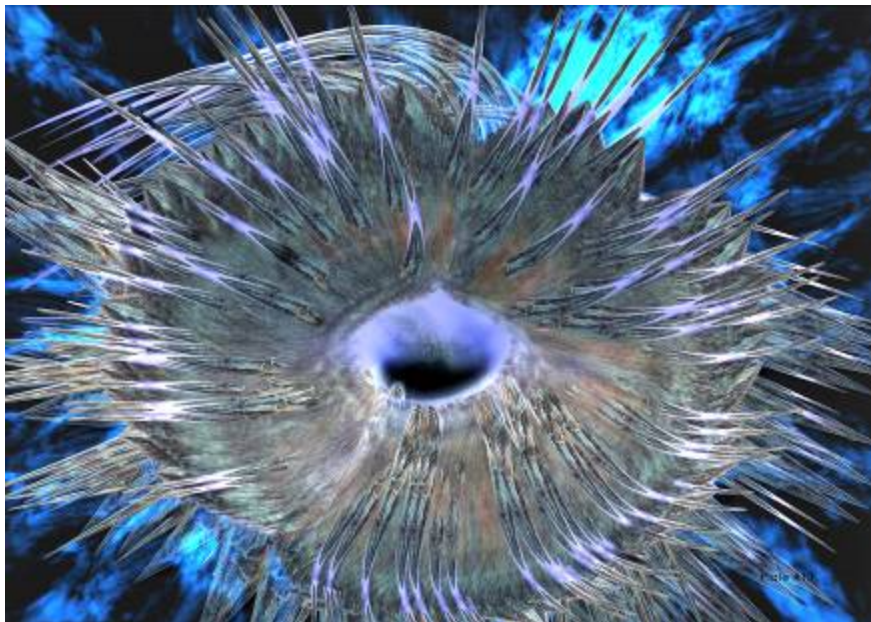
Since 1996, I have been experimenting with different software packages used in visual effects industry to create high impact imagery for virtual site specific installations frequently on a scale that dwarfs the observer. As result of this exploration, I have tried to radicalize and extend the definition of the site specific art transforming noon- glamorous and insignificant city spaces into alluring and fascinating attractions.



"Around the World in 80 Days: Eagle Rock Boulevard", Los Angeles, 2004



"Natural Systems: Elixir of Redness", digital painting ,Singapore, 2005"



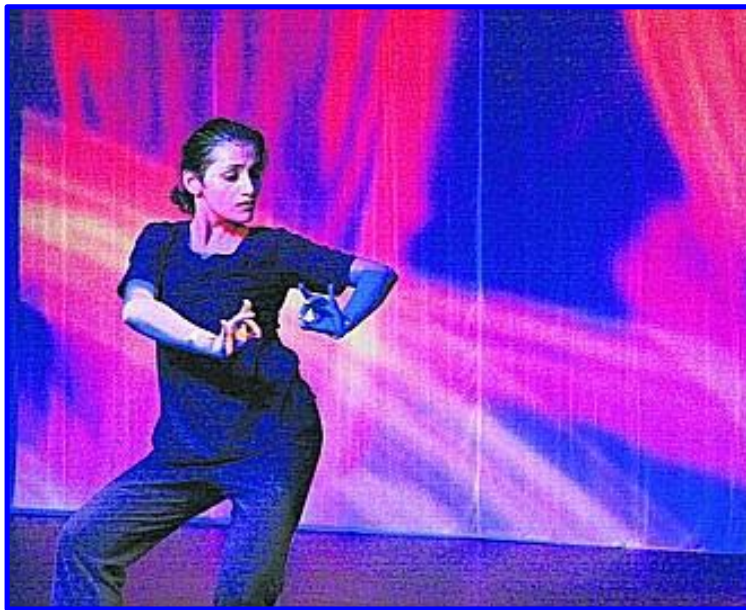
"Natural Systems: The Centre of Creation", digital painting Singapore, 2005

Algorithmic brushes using high resolution custom made textures highlights the extraordinary inventiveness and vision extending definition of digital painting.

**f) Environment**

This project will be partially developed with the help of students in the School of Art, Design and Media.

**g) Preliminary Studies/Progress Reports**



**STRETCHING THE LIMITS:** Raka Maitra is the intrepid explorer in her solo dance.

**PHOTO:** ODYSSEY DANCE THEATRE

I collaborated in a dance performance entitled “Boundaries,” by acclaimed Indian choreographer and dancer Raka Maitra and musician Philip Tan at the Gallery Theatre, National Museum of Singapore on August 17<sup>th</sup>. The performance was part of event Xposition “O” Contemporary Dance Fiesta 2007.

I created 10 original paintings generated from 3D using algorithms as paint strokes, having worked on these images for one year prior to joining ADM. Each image took 72 hours to render, were generated from 3D geometry that was painted, lit and rendered in Autodesk Maya at 14k or 350 megabytes each. I took these images and panned across them creating a “tapestry of mood” in this collaboration with a classically trained Indian dancer in her modern adaptation of dreams and reality entitled “Boundaries.”

ADM students Lam Yaocheng and Lim Yuan Wen helped with animation and video editing, Assistant Professor Mark Chavez collaborated as CGI and animation consultant.

*DVD Material to be included*



“Study in Space, Nanyang Technological University”, a virtual study of installation changing architectural space into space of the sculpture, Singapore , 2005

This virtual piece designed for entrance to one of many halls alike on NTU grounds. Here space is losing its original signification to being imbued with a new and splendid art form creating alternative exhibition space. Gently curved 3.5 m high wave soft in appearance would be constructed of light materials in order not to obstruct passage way yet to colour the space.



**8b. PROJECT DELIVERABLES**

<b>a. Manpower training</b>	
No. of M.Sc. students to be trained	
No. of Ph.D students to be trained	
No. of undergraduate/ Honours students to be trained	<b>4</b>
<b>b. Targets for research outcomes</b>	
No. of publications (please categorize: original research articles, reviews, letters and correspondence, others)	<b>2 exhibits 20 large scale prints 1 performance piece 1 Extensive report</b>
No. of Conferences	
No. of Patents (if applicable)	