

Insight and Allusion

An exhibit of Science-inspired Art by Dr. Regina Valluzzi



Schlieren Chiarascuro, oil on linen, 12 x 12 inches.

Enjoy a bright idea in Brighton this Spring. The Athans Cafe and bakery is hosting an exhibition of Science inspired art April 11 through June 3. The exhibit features paintings by Dr. Regina Valluzzi, an artist with decades of research experience in the Physical and Biomedical Sciences. Independent curator John Quatrone has selected a group of engaging and intriguing works for the exhibit.

Art can make Science more approachable. A painting can capture a technical concept, and make it interesting and exciting. For the past three years, Valluzzi has increasingly explored art as a way to communicate scientific ideas. Many of the concepts encountered in the sciences are inherently abstract, and a creative painting captures and communicates different dimensions of these concepts. Valluzzi's abstracted paintings are vibrantly colorful. Her use of geometry, color, and pattern dances across the canvas. Many of the abstracted forms explore themes and ideas drawn from her experiences as a research scientist and science educator.

A small painting titled "Schlieren Chiarascuro" is a good example of how Valluzzi melds the two worlds of science and art in her paintings. In the painting, the dark lines and shaded colors suggest the appearance of a liquid crystal in polarized light, while details fancifully depict characteristic defect structures (disclinations) and patterns from a variety of liquid crystalline types. Liquid crystals are made of molecules that can line up like logs on a river, and when they do the liquid crystal will polarize light. The "schlieren" are dark lines where no light can pass through both the liquid crystal and the polarizer. Between the "schlieren" the liquid crystal is often brightly colored due to "birefringence". Birefringence creates a sort of chiarascuro of optical phenomena.

Valluzzi first realized that art had the potential to communicate scientific concepts while completing her undergraduate degrees in Materials Science and in Humanities at the Massachusetts Institute of Technology. As part of her Materials Science degree she collaborated with Catherine Judge, an artist in the CAVS program. Under the supervision of professor Michael Rubner, she helped deliver advanced polymer technology in a form that could be used by artists. She also completed a Minor in Visual

Studies as part of her Humanities degree, which focused on Music Theory and Composition. While at MIT she organized two successful student art exhibits; a group show with undergraduates from her living group and a two person show with Jerry McCarty, an MS candidate in the Center for Advanced Visual Studies.

During her PhD in Polymer Science and Engineering at University of Massachusetts Amherst, she began to intensively explore visual imagery as data. As a polymer morphology student working with professor Sam Gido, she spent much of her time working with advanced microscopies and visual data as well as developing graphics, figures and other forms of data visualization. These scientific visualization tools proved invaluable during her time as a Research Professor at Tufts University, where she trained, educated and assisted students through a variety of programs. She continued to create art through her PhD studies, and began to develop a quirky approach to creating art from Scientific concepts. Ideas from scattering theory, fourier analysis, statistical thermodynamics and other technical topics began to subtly worm their way into her artwork.

However it was during her time as founder and Chief Scientific officer of a venture-backed nanotechnology company that Dr. Valluzzi fully realized the power of visualization and potentially Art to communicate complex technical concepts to a wide variety of people. Founding a start-up was a process of continuous communication, where complex and dry technological ideas had to be made accessible and exciting. After the start-up Valluzzi began working as a technical consultant, but found her time and focus increasingly were spent on art. A few experiments in openly and directly incorporating science content into art convinced her that her science experience could act as a rich source of continuing artistic inspiration. At the same time the insightful reactions of non-scientists to her art demonstrated the power of art to reach people and to communicate science in a manner that is approachable, engaging, and exciting.

"Insight and Allusion" is a tour of three years of Valluzzi's science-focused painting. Concepts ranging through nanotechnology, polymers, physics, chemistry, and biotechnology are melded with contemporary abstract painting approaches in these paintings. Dr. Valluzzi and curator John Quatrale are delighted to offer this unique exhibition.

Where: Athans European Cafe and Bakery, 407 Washington Street, Brighton, MA 02135

What: An exhibit of recent science-themed abstract paintings

Who: Work by Dr. Regina Valluzzi, an artist with decades of experience as a scientific researcher and as a creator of science-based art and imagery. Show curated by John Quatrale, an curator bringing new life to the Boston area's local contemporary art scene

When: On exhibit, April 11, 2012 - June 3, 2012. Reception April 29, 6-8 PM

Gallery talks with the artist: April 12 7-8 PM, April 29 5-6 PM, additional to be annopunced

Why: For the art and for the science.