Plutonian Sunset ©

FAVIO'S FRACTALS

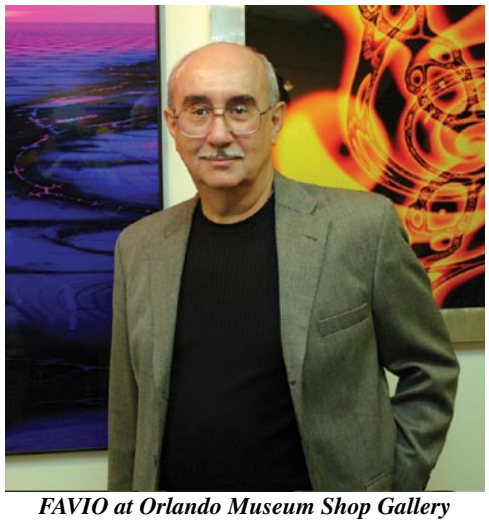
Seeking the Ultimate Mathematically Based Visual Experience

Tornado Spawning ©

FAVIO explores the mathematical Fractal space of infinite structure and complexity. The more chaotic the mathematical structure, the richer are the artistic possibilities and the probability that some image will exhibit an abstract potential, as opposed to the classical repetitive pattern of most fractal images. Both styles, however, will yield beautiful, intriguing and mind challenging works of art.

FAVIO's non-traditional Fractal images are abstract in form but the contours and linear flow of these images softens the perception, even though the colors are vibrant. They exhibit the self repetitive nature of Fractals, but most images are unique. There is a complete selection as well as an introduction to Chaos and Fractal Theory and their relation to art.

FAVIO has created his own form of computer generated art which he calls



FAVIO at Orlando Museum Shop Gallery

Annihilated (or Fractured) Fractals ™. Starting with a basic Fractal image and through many different types of additional mathematical manipulations, it is transformed into a new form of abstract art. Close inspection will generally yield pieces representative of the original Fractal image, providing another mental challenge as one tries to envision the original.

He spends many hours looking for the previously mentioned chaotic (or non-linear) regions within the many varied types of Fractal spaces that he explores. The process is not random because experience has allowed a focusing in on certain mathematical regions that have a high potential of chaos. Once in the region, FAVIO manipulates the equations, sometimes changing a variable by .0001 (i.e. one ten thousandth). At times, multiple variables are changed in combination to further enriching the image possibilities. After many hours of manipulating this mathematical space, an image structure will emerge which is refined and varied in color resulting in preliminary image parameters saved in a computer file.

The next step is the generation of a final color palette and the mapping of it to the number of iterations associated with each image point. Thus, red could be assigned to a single iteration point, blue to a double iteration point, green to a triple iteration point and so on. The palette can be non-repetitive or repetitive so that every tenth iteration could have the same color. The color variations are virtually infinite and depend on the mapping and color repetition. An image can transform from the flat two-dimensional image to a visually intriguing 3D structure.

After FAVIO is satisfied with the color palette associated with the preliminary image, a small 15 megabyte 10" x 7" image is calculated and printed for inspection. Inspection and final image tweaks may result in the decision to calculate the image for a large format laser printer.

The generation of a 40" x 28" image requires a computer file of approximately 550 megabytes. The image calculation is given a "go" and FAVIO then prays that his computer does not fail or he does not lose power because the image will require eight to 20 hours of processing. The image is expanded to full size on his computer monitor and every square inch is inspected for consistency. At times, minor flaws are discovered that require slight changes in the mathematical and/or color settings and a recalculation of the image. FAVIO has also produced 48" x 72" and 144" x 96" images that further stress the calculation and inspection process. A 144" x 96" image requires almost a 2 gigabyte file.

At this point FAVIO is "half way home," because now the image must be professionally printed. The key to printing FAVIO images is a process that provides the maximum possible image resolution. His images are produced utilizing Laserchrome™ which is a state-of the-art process. Laserchrome™ defines every detail, lifts every color and is archival. FAVIO's printer, Paul Kubica, is an image processing expert and their synergy produces the final color-enhanced image printed on a special metallic paper that adds an extra level of vibrancy and visual impact.

Naming the image can be a challenge because most images are "seen" differently by each individual viewer. For example, one image evoked the following different titles from FAVIO clients: *Eye of the Hurricane, Into the Worm Hole, Genie Out of the Bottle, Spaghettification* and *Waterfall*. Such title variation means one will experience varying emotions and visual experiences as they study these intricate and varied images. "If one of my images provides that variation," says FAVIO, "then I have met a basic premise of art — which is to challenge one's mind!"

Frank Milordi (aka FAVIO) has led a dual life for the last 25 years. He is an Engineering Director of a 1000 person unit of a major Aerospace company and has recently accepted a dual assignment as Director of Technology Development. In addition, he has been an artist representative and publisher who now has morphed into producing and representing his own art.

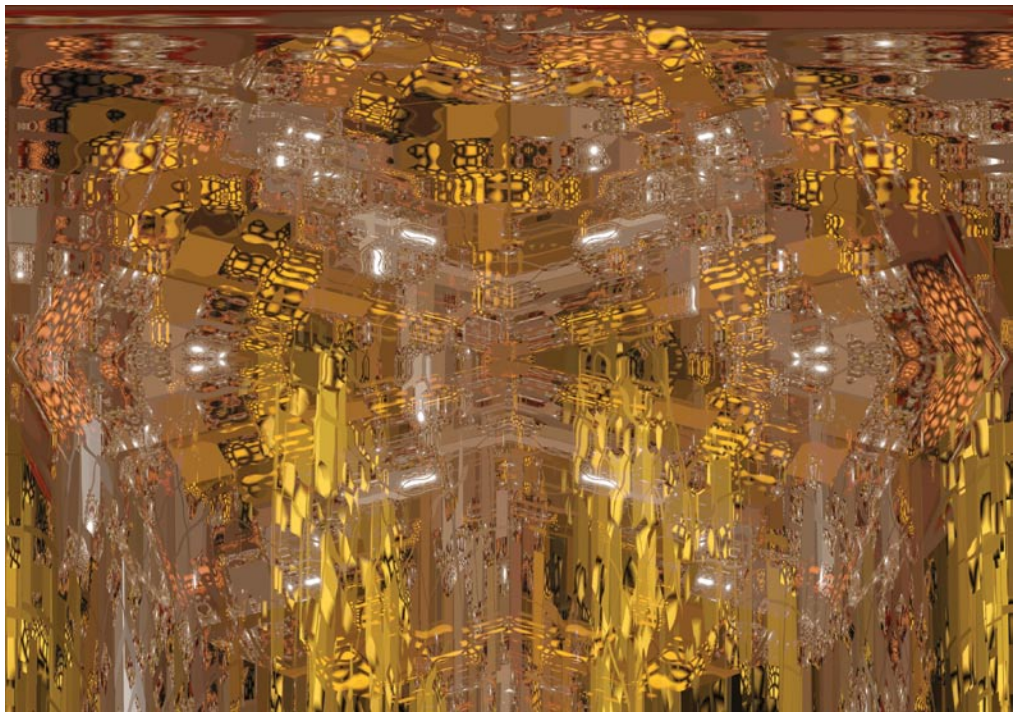
Milordi has a BA in Electrical Engineering (1964) and a Master's in Engineering Science (1967). In the late 60's, he was a group leader in real time testing and analysis of sophisticated military aircraft. He then worked on a real time signal and data processing facility focused on advanced airborne radar modes for the detection of moving targets at extended ranges.

***Spaghettification* ©**

Fractal Definition

- If the estimated length of a curve becomes arbitrarily large as the measuring stick becomes smaller and smaller, then the curve is called a fractal curve

- Fractals describe the roughness of the world, its energy, its dynamical changes and transformations. Fractals are images of the way things fold and unfold, feeding back into each other and themselves. The study of fractals has confirmed many of the chaologists' insights into chaos, and has uncovered some unexpected secrets of nature's dynamical movements as well.

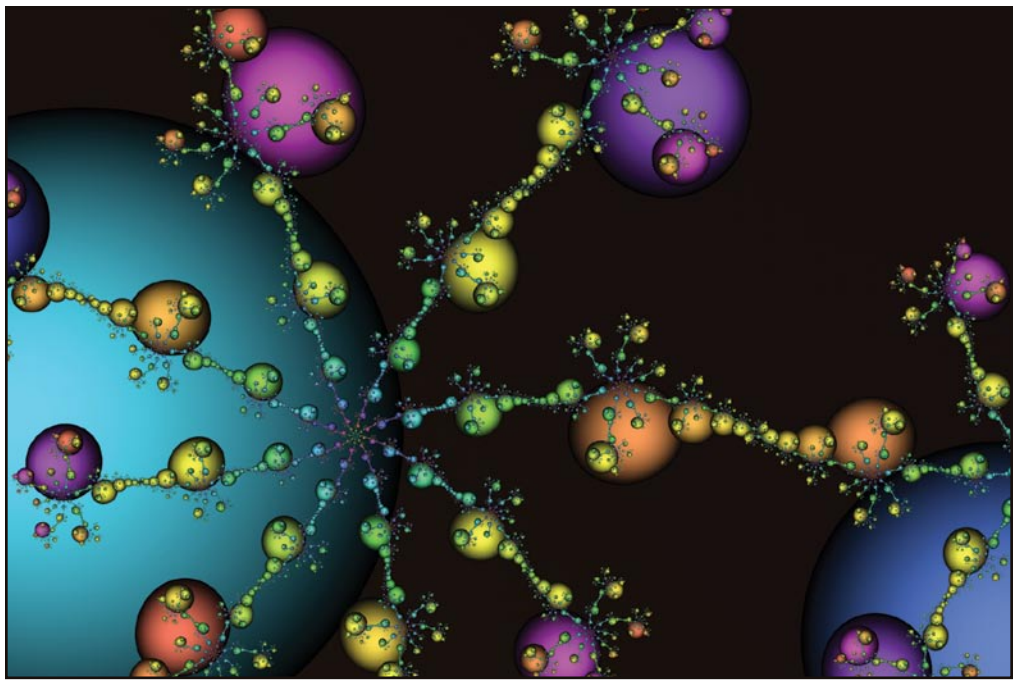


Homage to Da Vinci's Vetruvian Man

In 1982, art entered into his daily life, first as a collector of limited edition prints, then as a part time art dealer. Milordi represented and published several artists which led to participation in major art shows. Growing his art business while working 60-70 hour weeks preparing the proposal to the Air Force that led to Grumman's selection in 1985 as the Joint Surveillance Target Attack Radar System (STARS) contractor. This competitive victory culminated 10 years of development of advanced radar modes resulting in his assignment as Engineering Manager of the $700M, Joint STARS project.

***Mysteria* ©**

In the late 1980's, Frank joined a startup company focused on working with the estate of the late and great Dutch artist, M.C. Escher. Within a month they had a contract and Milordi transformed Escher images from lithographs into etchings, from woodcuts into laser cut wood, from delicate pencil drawings into



***Chain Reaction* ©**

FAVIO installation at NASA

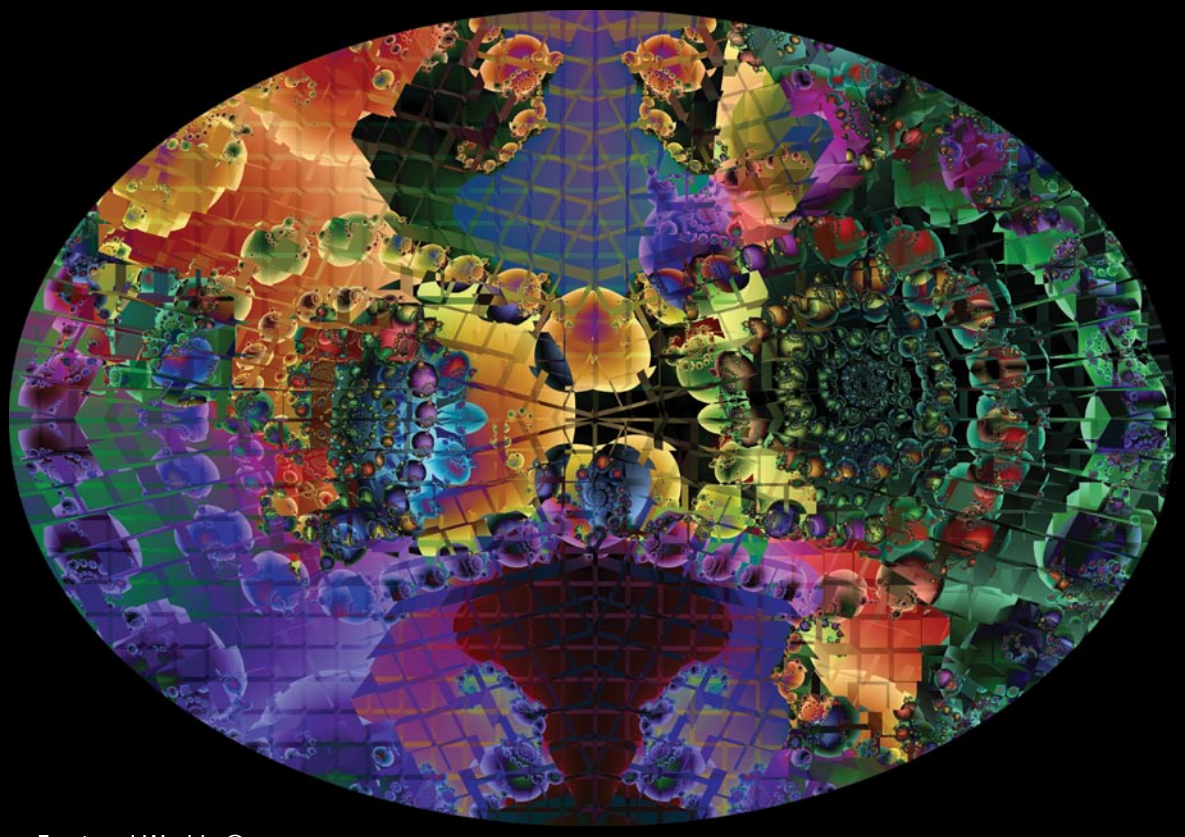
etched glass, from small water color planar images into large full color lithographs, from lithographs into bronze sculptures and finally from impossible visual images into 3 dimensional sculptures which were used as a basis for holograms.

Images of Escher and other artists such as Agam and Vasserely always had a fascination because of their mathematical and geometric roots. In the mid 1980's, Milordi was exposed to Fractal and Chaos Theory and the early computer programs that produced simple black and white images. This interest culminated in serious exploration of this infinite mathematical space in 1999. He produced "nice" images however, they were not different enough to set them apart from other computer generated art. Toward the end of 2002, these were replaced by very different images that passed the discerning eye of Milordi's art partner and wife, Peggy. Her encouragement was the final push that was needed to go public with his art (which he did in September 2003).

Milordi has quickly gained recognition. He was selected from 26 artists by the Orlando Museum of Arts Shop Gallery as a Florida Artist of the Month resulting in a 20 image, one person one month exhibit. Newspaper reviews have been very supportive with comments such as "imagination runs wild in computer-generated art", "strange and intoxicating" and "if you understand the math please explain it to me; either way this art is dynamic, fascinating and challenging!"

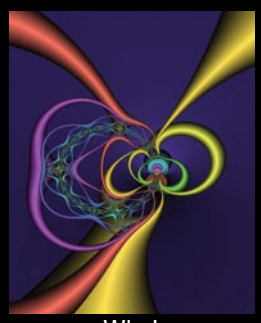
Milordi has spread the word on the marriage of math and art through a lecture titled *Chaos Theory, Fractals and Art,* which he has given to Aerospace companies and institutions such as Florida Institute of Technology. His personal challenge is exploration of an infinite mathematical space with only a finite amount of time. He will never explore it all, but will continue the search for the ultimate mathematically based visual experience.

One final note: FAVIO is an acronym based on his full name, Frank Walter Vincent Milordi.



Fractured Worlds ©

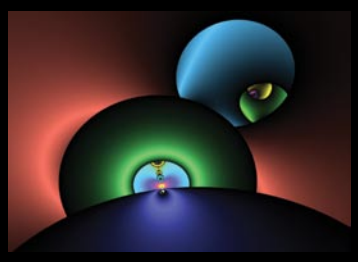
Start of the Storm



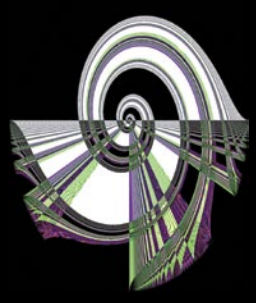
Why!

FAVIO

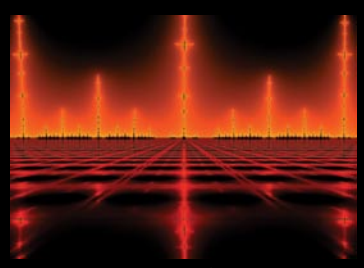
Missing Links



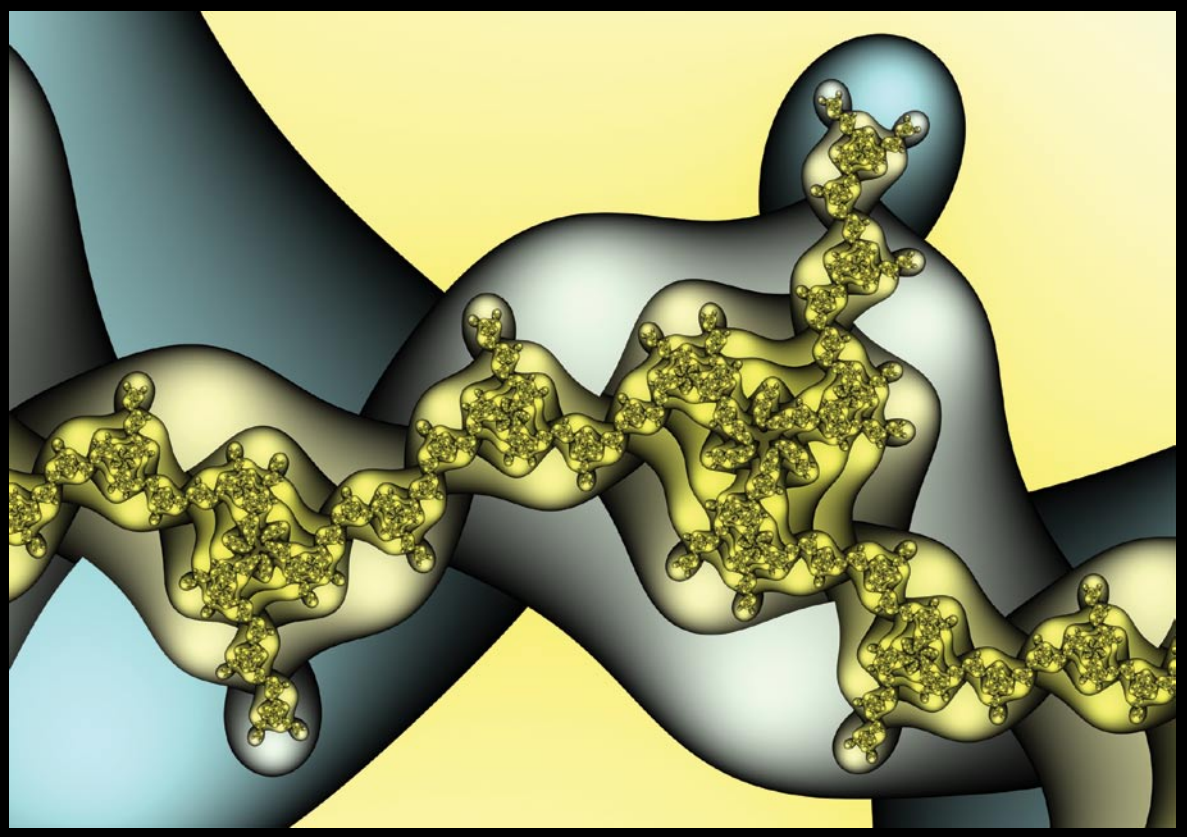
Inner Worlds



Pipeline



Red to Infinity



DNA (People within People within People within …) ©

Impressions Fine Arts

(321) 242-8884 • www.favioart.com

All editions are limited • sizes 40" x 28" & 72" x 48 • NASA size image 144" x 96"