PHYSICS-BASED CHARACTERS

Digital Production of Folk Crafts
Color-Map Design
Teaching Mobile and Web Computer Graphics
Diving into the Flow

Gary Singh

Before the rise of PC technologies, Brenda Molloy was a mixed-media artist with a side interest in fractal imagery. As soon as the technology developed far enough for her to use it, she dove right in. Ultra Fractal became her program of choice. She says it lets her create fractals unique to her creative vision.

"I'm bringing something from a digital process into an analog world," she says of the final printed image. "It's a reversal. Normally art is analog first and then converted to the digital world. The print is analog, from a purely digital process. It is the most modern form of art that there is—today's modern art. It couldn't exist in another historical time frame. The existence and speed of computers are essential for this art form."

Molloy's images don't resemble the tired, overdone generic "fractal art" you see on a thousand websites, bookstore calendars, coffee mugs, or science museum gift bags. This somewhat proves that good fractal art is just like any other genre, in that there exists really good work and really bad work.

"If you give someone paints and a canvas, they won't necessarily make a masterpiece, like a Monet or a Renoir," Molloy declares. "It's the same with fractal artists. The art is in the artist, not in the tools. If you sit someone in front of a computer with Ultra Fractal 5, and say, 'Make art,' the computer won't do it on its own."

Of course, you could argue that after processing, manipulation, and added Photoshop layers, the resulting image is no longer truly a fractal image, but Molloy still chooses to use that term. The formulas are still there underneath the surface, she says.

"I usually have a concept or message that I want to make visible," Molloy explains. "It's a challenge to discover what formula would be best, and what coloring algorithm. Then masks and layers add so much to make the image distinctly mine. I always love to have some kind of change or transformation somewhere in the fractal, or even a surprise—something to break up the underlying mathematics of the image."

In the Flow

Molloy describes the cover image, In the Flow VII, as a philosophical piece about human nature. "Use the flowing energies of the universe to aid you on your journey," she instructs the viewer. "Be aware of rhythms in life. ... If possible, be aware of the energy flow in your body. Sense when work is going well, and be present; if something is a struggle, let go for that moment and do something else. Don't force. Try to work within your natural rhythms. Let the natural rhythms of the world aid you."

As with most of her images, Molloy created In the Flow VII in Ultra Fractal 5 and processed it in Photoshop. Based on a five-layer Julia set fractal, the image features numerous curves, masks, and layers.
About the Cover

colors, and textures. Molloy tends to go through much trial and error before getting the proper feel of the image. Specific color relationships are key in the final image.

“The coloring is important, not only the hue but also the luminance,” she explains. “Light is crucial. Each color has its own frequency or vibration, as does a musical note. I often think that art is music, and music is art. The underlying mathematics in the fractal also produces vibrations.”

Molloy often works in series, with one piece leading to another. *In The Flow II* and *In The Flow VIII* (see Figures 1 and 2) are two more examples from the same series as the cover image. Creating one particular image often leads to discoveries that carry over into the next image. She gets a lot of mileage from masking techniques.

“Masking can make all the difference in the world in a fractal,” she says. “They can look rigid with a sameness about them, but with the use of masks and layers, variations in the image will occur, adding interest. The use of many layers, each adding a dynamic to the image, is crucial in my work.”

Even though *Buddha Affects the Web* (see Figure 3) seems a different entity altogether, it’s still a fractal image, Molloy says. Created with fractal formulas and coloring algorithms and taking inspiration from the symbols of Buddhist Wisdom Eyes, the image comprises 12 layers and three formulas—one for shaping, another for coloring, and a third for background dimension.

The image references the universal consciousness, the field, the grid, Indra’s web, or similar concepts from Buddhist cosmology. She says these concepts are similar enough to the underlying mathematical structure of the universe. Interconnectedness is a key component of her work.

“The theme or concept of *Buddha Affects the Web* is the same,” she explains. “Everything is connected. And that being so, what would the energy of a Buddha do to the whole? Once that energy gets into universal consciousness, it changes everything, as one person’s energy changes everything.”

Everything Is Vibration

Molloy claims her images teach and heal on very subtle levels. In some ways, she says, her work is that of a translator. She converts thoughts into symbolism and brings it into an image that resonates with the viewer. Each color has its own frequency and vibration. A person responds to those frequencies, whether he or she is aware of it.

“Each viewer feels something different,” she says. “They’re reminded of something different through the various images. The conversation on teaching or lessons learned is a personal one. It’s between the artwork and the viewer. The audience interprets however they wish. My job is to love what I do, and pour that into my art.”

Currently, Molloy has more ideas than she knows what to do with. She already collaborates with musicians and authors and wants to collaborate with fashion designers. She wants to make skins for iPhones and laptops. She’s devising ways to print fractals on aluminum substrate and ceiling tiles.

“I’m working with the mysteries of life through mathematics,” she says. “The invisible organization of energy that underlies everything in the universe, which also includes my art.”

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