

Going GEOMETRIC

The three artists featured in this exhibition are inspired by geometric shapes. Geometry is a branch of mathematics that measures space such as the size and position of two-dimensional (2D) flat shapes like circles, squares and triangles. It also measures three-dimensional (3D) objects like cylinders, cones and boxes. Some of the geometrical forms seen in this exhibition include fractals, spheres and polyhedrons.

FRACTALS are complex shapes which often appear in nature. Common examples include spiral fractals which have spiraling patterns that grow from small to big in size. Examples include nautilus sea shells and sunflowers. Branching fractals expand and grow out like tree branches and include things like broccoli and lightening.

SPHERES are objects that can often be found in the everyday world. A sphere is a round 3D shape that has no edges or corners. All points on its surface are the same distance from its center. Perfectly round examples include basketballs, bubbles and planets.

POLYHEDRON is a 3D shape with outer flat faces. The number of sides can be different from shape to shape as long as the object has flat sides. Common examples include pyramids, bricks and soccer balls.

TRY THIS! Look closely at the art in this display. Pick out examples that resemble geometric shapes like fractals, spheres and polyhedrons.

Eric Boos, Prescott

Boos was born in California. He received a Bachelor of Arts degree from the University of California, Santa Cruz and a Master of Fine Arts degree from California State University, Long Beach. He has lived in the Prescott area for more than 30 years and has made a living in the arts making ceramics and digital art. He also teaches at Yavapai College.

For this exhibition, Boos presents 2D examples of digital images he created using repeating forms. He chooses images from the dozens of photographs he has on his computer and digitally removes the backgrounds. Then he can copy, paste, move and/or resize images as needed to layer and construct new creative shapes.

Boos says, "I've been making art for decades.... I like taking ordinary things and changing them into something unique. I like colors, simply because they're colorful. I like disorientation, playfulness, and fragmentation.... It is slow work [the process], but well worth it. The photos are of iconic, commonplace objects placed in unusual and complex contexts. Food and toys are current obsessions, but that could change at any moment."

ericboos.com

Robert Fathauer, Phoenix

Fathauer originally majored in physics and mathematics in college and went on to earn a Ph.D. in electrical engineering from Cornell University in 1987. He later worked on the research staff of the Jet Propulsion Laboratory in Pasadena, CA. Fathauer's interests have always included the arts and some of his favorite art is by M.C. Escher who made mathematically inspired art that featured complex puzzle-like designs.

In 1993, Fathauer founded *Tessellations*, a company that produces puzzles, brain teaser games and books based on math and art. In the 90s, he also started making digital art that comes together like a puzzle. He enjoys playing with geometrical forms that appear in nature. Most recently, he has been making clay forms inspired by the branching structures found in coral reefs, trees and plants.

Fathauer says, "Mathematical structure is evident throughout the natural world. My work explores the mathematics of symmetry, fractals, tessellations and more, blending it with plant and animal forms as well as inorganic forms found in nature. This synthesis allows me to create innovative prints and sculptures that derive their beauty from a combination of complexity and underlying order."

robertfathauer.com

Aida Hatem, Phoenix

Hatem started her professional career in engineering. She studied industrial engineering and earned a Bachelor of Science degree from Rensselaer Polytechnic Institute in Troy, NY and a Master of Science degree from Purdue University in West Lafayette, IN. She worked for the Hewlett Packard Company for several years and later as a design and ergonomics consultant for large companies like AOL and the Library of Congress. In recent years she's worked in arts and science related outreach programs in schools. Currently, she owns and operates a company called *Pop Up Science and Art* that develops hands-on STEAM (science, technology, engineering, arts and mathematics) classes for youth.

Hatem says she has always loved patterns and structure in the arts and sciences. She started doing origami at age 11 and has been creating forms from paper ever since. Some of her latest works are geometric shapes made from recycled paper strips from magazines, old books and origami paper.

Her sculptures are complex mathematical forms that take advantage of paper's qualities of pliability and stability. She says of her sculptures, "They are arranged in a variety of polyhedral shapes that bring Art, Math and Engineering together in elegant, ordered beauty."