

Geometric Design

Home of the Year

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by miriam raftery

photography by jim brady

Editor's Note: This home is another Ken Kellogg designed home recently featured on HGTV's Extreme Homes. The text of the TV interview can be read in Kellogg's column, Organic Architecture.

When two mathematicians found a circular home designed by architect Kendrick Bangs Kellogg in La Jolla, they treasured their unique discovery.

"This house has strong mathematics," says Ron Graham, PhD, professor of mathematics at the University of California, San Diego. "It's round. Circular - and it has good ceilings. That's important for what I do," he adds, tossing juggling pins high into the air.

Past president of the International Jugglers Association, Graham is an accomplished acrobat and former circus performer who finds strong parallels between his two chosen disciplines. "The patterns are the same in math and acrobatics," he observes.



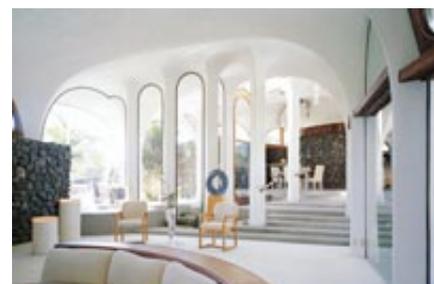
A sunken, circular living room and massive hearth provide an ideal setting for warm conversation amongst nature's surrounds

Fan Chung Graham, PhD, a professor of mathematics and computer science at UCSD, shares her husband's appreciation of their home's geometric patterns.

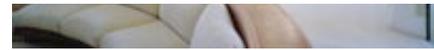
"When I first came to see this house, I was quite amazed," she recalls. "It was quite unbelievable, because there is no one single straight line. If you really think about it, a circle is a more efficient way, a minimum curve, to enclose a given site. It's the tightest, most efficient and most beautiful way ... So we are living in this circular universe!"

Though built 23 years ago, the home has a timeless quality that makes it seem ageless.

Kellogg, a proponent of organic architecture, designed the distinctive home to suit its site. "It was a corner lot that lent itself to the shape," says Kellogg, who wanted to orient views inward rather than



outward toward the street. "So we sunk it down to create a sense of privacy and a sound barrier," the architect explains.



Graceful arches, lava rock, and floor-to-ceiling glass blend, yet contrast, with outdoor water features and landscape



Swiveled, rather than hinged, patio doors open to the circular home's pool and back yard. A sunken kitchen area is defined by the fossil stone counter and skylight

From its low-profile front elevation, the partially-buried home steps down the hillside in the rear. "We call it our mushroom," Ron notes. "Others call it a Hobbit."

A series of towering, arched glass walls form the interior of the circular form (technically a semi-circle; the home encompasses about 3/4 the circumference of a complete circle).

A scalloped-edge roof crowns the home, arcing upward in each segment, evoking a resemblance to a giant, curled caterpillar wrapped around a pool. Circular steps descend to the pool - combination of geometric forms - and elevated circular spa. Concrete washed with power hoses retains the weathered look created by Kellogg a quarter of a century ago. Tropical landscaping, mature trees and a built-in barbecue complete the backyard paradise.

Two-foot-thick black lava rock walls add exotic yet rugged appeal, symbolic of the home's location on Blackgold Road. Water spills from a free-form metal sculpture designed by artist James Hubbell into a moat guarding the home's front entry. Step across it and pass through an enormous, wood-framed glass door which swivels open, hingeless, admitting visitors to the home's interior.



End-cut, 2"x6" fir floor tiles have a whitewashed finish in contrast to the black lava rock interior wall



"I do nothing traditional. I try to avoid it," Kellogg says. "Why be ordinary when we really aren't ordinary, any of us. Why not express what we really are?"

Doors and window frames were constructed on-site, and each is unique. The home has no paint; colors are expressed through natural materials including lava rock, wood, and plaster.

In the living room, a circular built-in sofa wraps around a lava rock fireplace with round, fossil-stone hearth. A tree grows through the floor and into the room - admitting an occasional tree frog. "It's like living outdoors," Ron declares. To accentuate the



Mosaic tiled tub and shower share a private courtyard of rock and succulents, separated by floor to ceiling glass

circular theme, the Grahams have added a rounded metal sculpture titled Umbilictorus.

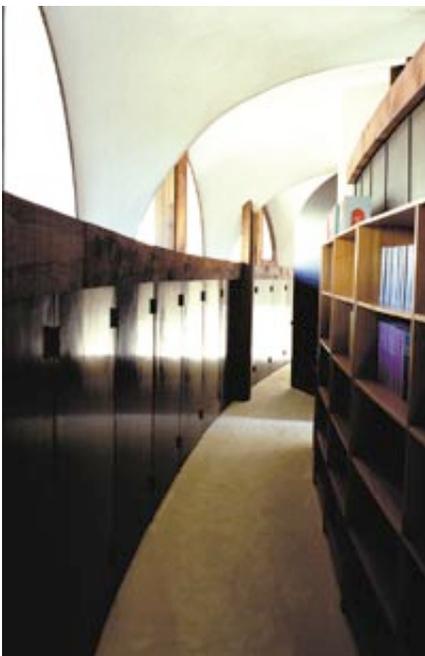
"We are always on the lookout for interesting round or circular things," says Ron, stepping up into the dining room, where floating round pedestals display mathematical sculptures and games. Ron motions toward a spherical chess board, which poses difficulties for players at the poles. "I played a game with my son and realized I'd been in check for three moves," chuckles the mathematician, who always savors a challenge.

On a rectangular glass table illuminated by a sculptural chandelier designed by Hubbell, the homeowners display a traditional marble chessboard and Hex board. The latter, a game played with colored stones, can theoretically be won by the first player every time, Ron says, but adds, "No mathematician has every figured out how."

An unusual floor composed of four-by-six inch, end-cut Douglas fir is laid in a circular pattern, radiating into the kitchen and family room beyond.



Homeowner and accomplished mathematician, Ron Graham applies his balancing theories to every facet of his 64-year young lifestyle



The circular hallway of storage on left and book shelves on right leads to office and bedrooms

At the heart of the home lies a sunken kitchen laid out in a circular pattern complete with round island and semi-circular peninsula. A circular skylight provides natural illumination, as do a pair of seven-foot-wide doors which swivel open to the backyard. Cabinetry stops short of the ceiling to accentuate the room's spacious aura.

The kitchen's open floorplan posed a dilemma when the Grahams wanted to install a television set above the oven, since there were no interior walls to hold wiring. So the couple came up with a high-tech solution.

"The TV has an antenna and operates by remote control from a transmitter in the family room," Fan says, demonstrating.

The homeowners have opted for minimalist furnishings, allowing the home's dramatic architecture to function as art. In the family room, a Danish modern chair and writing desk nestled beside a



circular lava rock fireplace provides a cozy writing spot for Fan, who also utilizes an office elsewhere in the home. A round breakfast table, leather sofas, wide-screen TV and bookshelves complete the room's decor. Stained glass panels designed by Hubbell separate the family room from an adjacent bath.



A uniquely accessorized workout room is an important part of Graham's juggling philosophy of life

Ron's office, built into a frameless glass alcove projecting into the backyard, feels as if it's part of the garden itself, overlooking lush landscaping and the pool beyond.

Walls of cabinetry line curved halls throughout the home, a phenomenon made possible by omitting windows below ground level along the front facade. "Storage is amazing," says Ron, who brought 200 boxes of books from the angular home which he and his wife previously occupied in New Jersey.

The home includes two guest bedrooms, each with garden views, and a reading room. Each bath is unique - from a lava rock walled shower to several dramatic open tubs and showers adorned with mosaic swirls embedded with glittering jewels in emerald green and sapphire blue hues. One bath features a mirror which seems to float in mid-air - anchored in reality to the rear wall of an alcove behind the vanity.

The master bedroom, an addition built for a prior owner, resembles the interior of a ship's bow. Massive beams taper inward and the ceiling slopes down. Floor-to-ceiling windows occupy one side of the room; a hooded round fireplace serves as a focal point.

But the most unusual aspect of the master suite is a mirrored space which Ron utilizes as an acrobatics workout room. Gym mats and a leather beanbag chair are the only furnishings in this unusual space in a most unusual house.

The 64-year-old math professor ascends spring steel pedestals, balancing in a handstand with a spryness that belies his age. "For me, juggling is a philosophy of life," says Ron, who likens acrobatic performance to math. "Acrobatics is part physics, but a big part mental. Break down a difficult problem into small steps, then put small steps together to solve the problem."

To demonstrate, he spins a ball effortlessly on his fingertip. "It's really a gyroscope," he explains. "First you have to get it to spin on a vertical axis. Then you have to get it on your finger, and keep it on your finger. Because of physics, push on it and it moves at right angles ... but most people move the wrong way."

These days, Ron and Fan are juggling both professional accomplishments and leisure activities. In addition to teaching at the University, Ron is treasurer of the National Academy of Sciences and serves on boards of several corporations. The Grahams have patented several ideas and posed as cover models for Math Horizon magazine.

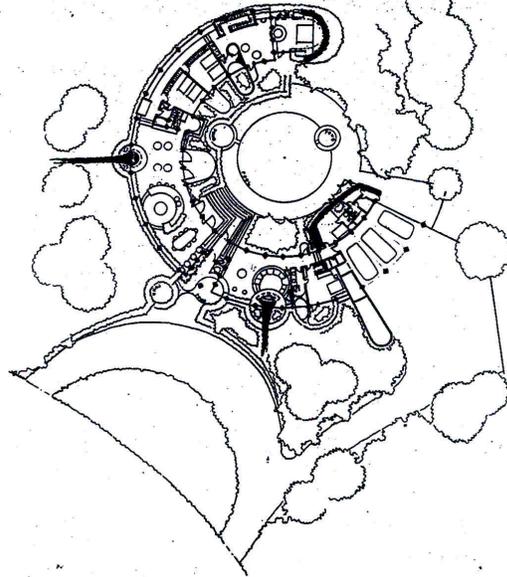
Every child dreams of joining a circus. Ron Graham has lived that dream - and now shares it with others. "There is a tradition to teach what you learn," says Ron, who now spends time instructing acrobats, gymnasts and athletes from the comfort of his home. Currently, he's setting up a bungee harness to train athletes on a trampoline. "It's a subtle skill to tie an elastic cord because they stretch at the rate of four to one," he notes.

To stay fit while retaining seemingly eternal youth, the Grahams play basketball and

tennis on their private courts, the latter equipped with a tennis ball machine. They also exercise on an unusual bicycle-built-for-two. "We have a side-by-side bicycle we ride around here. It's parallel, not sequential," notes Ron.

For the ultimate cardio-vascular workout, Ron enjoys running on the beach in the morning fog, then climbing up rugged cliffs to return home.

"Our home is very harmonious and peaceful," Fan concludes, citing qualities equally well-suited to the past and future millennium. "This house was clearly ahead of its time."



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