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Minnesota's Roman Verostko, the grandfather of computer artⁱ

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Photos by JOEL KOYAMA jkoyama@startribune.com

Former Benedictine Priest and an MCAD professor Roman Verostko, 84, writes algorithmic code to program the machines that produce his abstract drawings.

Two events this week spotlight the pioneering work of former MCAD professor Roman Verostko, the man who turned code into colors.

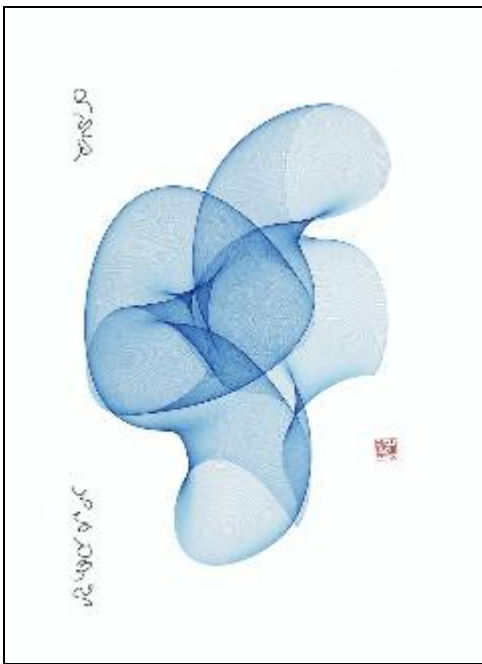
Long before most people had even heard of algorithms, [Roman Verostko](#) was writing them to program drawing machines.

A former Benedictine priest and professor emeritus at the Minneapolis College of Art and Design (MCAD), Verostko, 84, is internationally

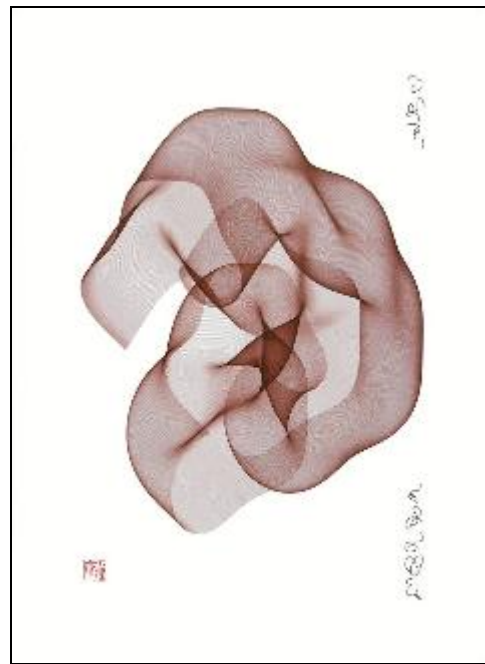
known as a pioneer in code-generated imagery, or algorithmic art as he calls it. Pens and brushes attached to his machines draw diaphanous veils of floating color onto paper and sketch seemingly hollow tubes that undulate like exotic life forms. Or create tangles of multicolored lines that suggest bizarre insects. Or brush ink gracefully across the page like calligraphic writing in an unknown language.

A fusion of human intelligence and mechanical precision, the drawings also involve the “Magic Hand of Chance,” as Verostko calls a computer-generated light show he invented in 1982. That early endeavor will be revived and projected all night onto a wall at MCAD as part of Saturday night’s Northern Spark celebration.

He will also discuss his work Friday at the sold-out Eyeo festival, a creative-coding and data-design event that is attracting more than 700 young aficionados from 14 countries to the Twin Cities for a four-day meet-up at Walker Art Center.



Verostko’s code guided pens that drew the transparent forms in his [“Floating Cloud”](#).



Verostko’s “August Bloom,” is from a series celebrating “the joy of digital.”

Self-generating magic

Though primitive by comparison with today’s computer graphics, Verostko’s “Magic Hand” has the virtue of being able to run for days without repeating itself.

An upgrade of the program generated fresh designs for a week across the 300-foot-long facade of the [Museum of Contemporary Art in Zagreb, Croatia](#), in 2011. In the original version, nautilus shell designs spiral outward into colorful, ever-changing abstractions that give way to nonsense poetry and Zen-like observations, all thanks to a 32 kb program written in the computer language BASIC for a first-generation IBM PC.

“The code works within powerful rules,” Verostko said. “It goes through filters that are my preferences, but within those parameters it is always allowed to do as it wishes, or do whatever the dice rolls.”

He wrote his first code in punch cards at Control Data in the late 1960s and spent the summer of 1970 at MIT studying “the humanization of new technologies” with a grant from the Bush Foundation. “But my real coding work began with the first personal computers, the Apples we had in ’78 and the IBM that came out in August 1981,” he said recently.

He still writes in BASIC and uses his first program, much modified and expanded, to generate drawings that have been featured in more than 30 exhibitions in the past 15 years from the Victoria and Albert Museum in London to shows in Rome, Berlin, Istanbul, Lima, Tokyo, New York and elsewhere. Computer-generated murals by him are permanent fixtures at Spalding University in Louisville, Ky., and the Frey Science and Engineering Center at the University of St. Thomas in St. Paul.



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Roman Verostko on the “algorithmic revolution”.

The machines his code drives are “plotters” of the sort used by mathematicians, architects and medical personnel to create graphs and to record, for example, electrocardiograms.

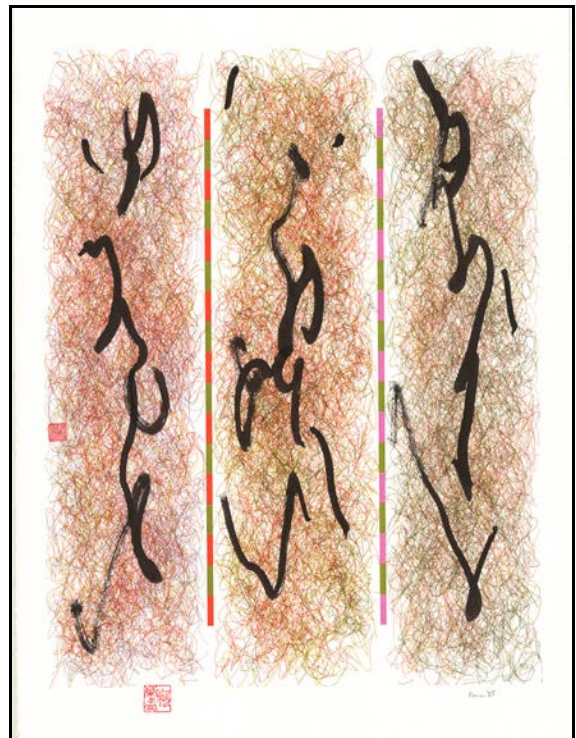
“You can sort of see the machine influence in some of Roman’s drawings, but with those that are asymmetrical, you wonder how anyone could ever write a program to create something that is so non-machine-like,” said Jay Coogan, president of MCAD, where Verostko taught from 1968 to 1994. “He considers himself the grandfather of digital art, but his work is still really relevant, even if he feels it’s at the simpler end of what can be done with computers these days.” [See note](#)



Photo: Joel Koyama

Roman Verostko examines a 1988 art work.

This work includes code driven brush strokes reflecting influences from his 1985 experience [teaching in China](#). The red seal bears his Chinese name, *Ke Róng Mèng*, 柯荣孟 (bottom left).¹



Reunion of the pioneers

Relevance got Verostko onto this year’s Eyeo festival program along with two other digital pioneers: Frieder Nake, a professor at Germany’s University of Bremen known for his algorithmic and generative work in the 1960s and his current research in computer graphics, hypertext and digital media; and Lillian Schwartz, an early innovator in computer-generated art, graphics, film, video and special effects who was a longtime consultant to AT&T’s Bell Labs and IBM’s Thomas Watson Research Lab.

“We invite people because of the work they’ve done, so we have NASA people but ... this year we also have three people who have

¹ The full image of the pen & brush drawing and its caption were not included in the published version.

been at it since the 1960s,” said Dave Schroeder, a Minneapolis-based sound designer who founded Eyeo in 2011 with three friends.

The '60s were a turbulent time in [Verostko's life](#). A coal miner's son, he grew up poor in Tarrs, Pa., where kids amused themselves by sliding down ash heaps on sheets of tin.

He earned a diploma in illustration from the Art Institute of Pittsburgh in 1949 and the following year joined St. Vincent Archabbey in Latrobe, Pa., intending to become a Benedictine monk. Haunted by the World War II death of an older brother, he wrestled with theological questions, continued to make art, and was ordained in 1959.

With the monastery's endorsement he earned an MFA at Pratt Institute in 1961, followed by two years in Europe, where he studied at the Louvre and at Atelier 17, Stanley Hayter's famous print studio in Paris. Back in the United States he continued making abstract expressionist paintings while editing the New Catholic Encyclopedia in Washington, D.C., and touring an avant-garde sound-and-light show he'd created based on the Psalms.



Roman's "[New City Series](#)" represent his mature monastic style in 1968 when he left the monastery.

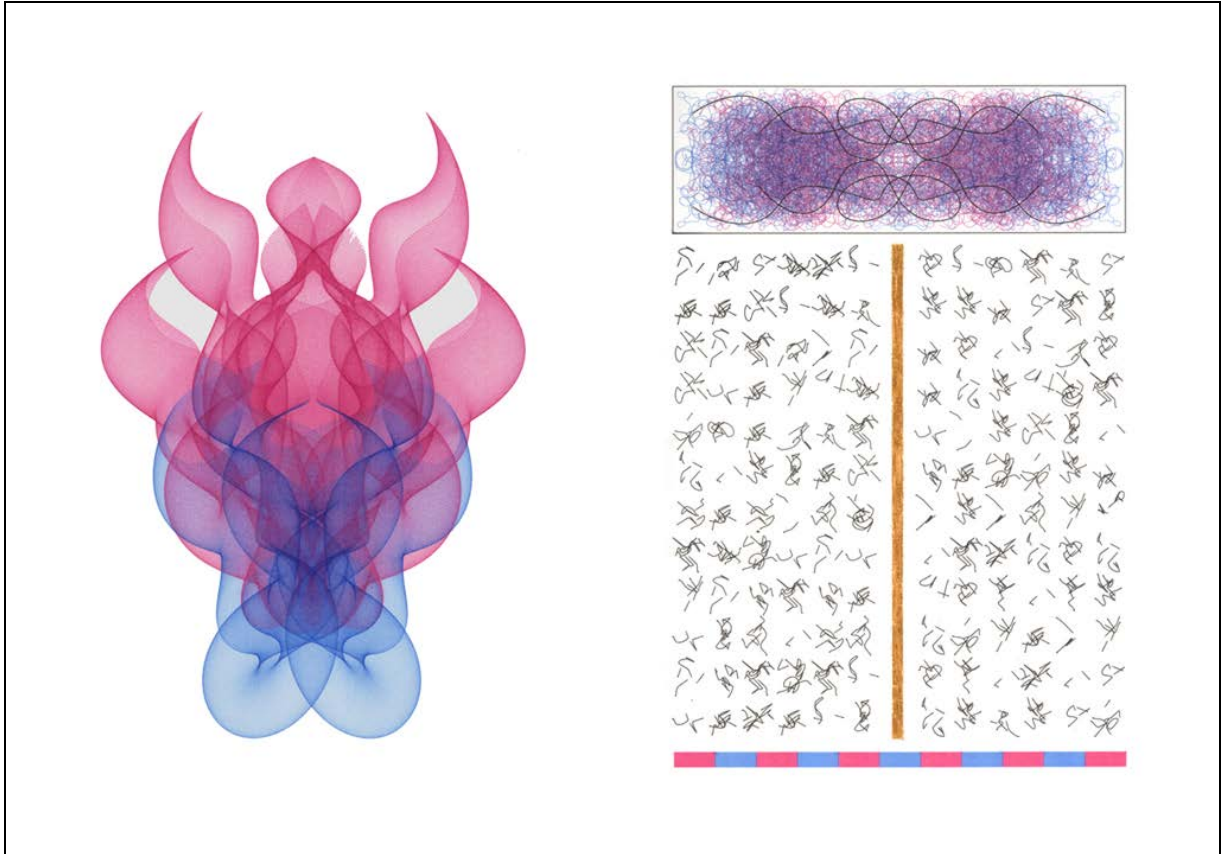
materials: gesso, acrylic & crayon on wood panel,
size: 4 feet by 4 feet.

Though still living a monastic life, his worldly milieu prompted a Washington Post reviewer to describe him in 1965 as “a scholarly priest at home with the beats” (meaning beatniks).

By 1968 he was beset by spiritual tensions. After a long “dark night” of doubt, he decided that he could “no longer, in my deepest self, honestly embrace scripture as a divine revelation.” He left the monastery, and that August married [Alice Wagstaff](#), a psychologist he'd met when she gave seminars at the monastery. They

moved to [Minneapolis](#) and he began teaching at what is now MCAD. She died in 2009.

“The new scripture”



“Diamond Lake Apocalypse: Burning Bush”, algorithmic pen & ink plotter drawing with gold leaf enhancement by hand.²

“With this electronic revolution, I could see the landscape change and knew that it would change our lives,” he said, ruminating on his career. “I was immersed in the idea that new technologies were expanding our knowledge and how we did business, and would eventually be extensions of human intelligence.”

“For me this was the new scripture, opening up areas of visual form and knowledge that weren’t accessible to us before we had these machines. I saw them as a form of revelation.”

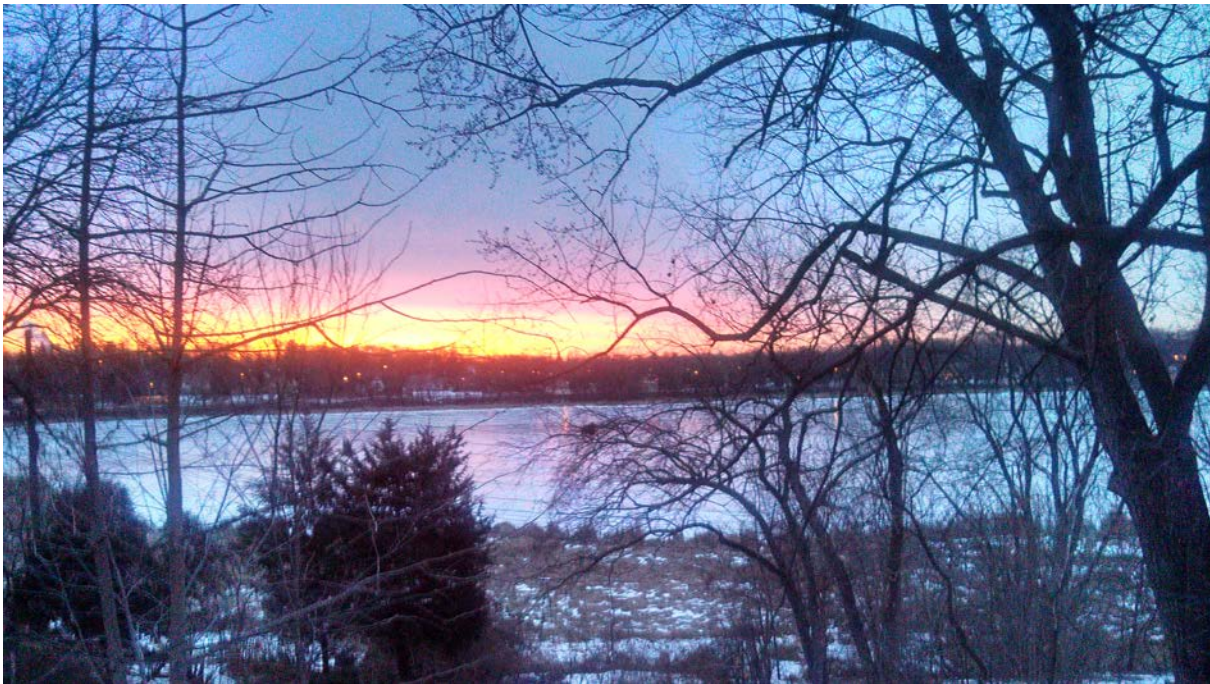
² The “Diamond Lake Apocalypse” series was code-generated with drawing machines Roman viewed as “scriptors” in his 20th Century “electronic scriptorium” overlooking “Diamond Lake”. (This image & caption did not appear in the published article.)

Thanks in part to his advocacy, digital literacy is now so central to MCAD's mission that this summer the school is building a \$3.2 million media lab with facilities for analog and digital printing, film and animation production, sound recording and mixing, Web and multimedia work. And it recently added another coding instructor.

"If I were starting today, I would be on social media," Verostko said recently. "But I'm not. I'm still a 20th-century person. I have a very hard time seeing myself as a 21st-century person."

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Supplementary photo: Sunrise over Diamond Lake, January 24, 2013.



View from my home-studio (my electronic scriptorium). *Roman Verostko.*

ⁱ *While some have viewed me as "The Grandfather of Computer Art" I do not see myself this way.*

Note: *If we were to name the "Grandfather" we might think of pioneers like Christopher Strachey, who composed the "Love Letters" program on the Manchester University Computer in the UK about 30 years before I exhibited my "Magic Hand of Chance".*