Art, science
cross over customary chasm

Interactive show previews workshop

By Antonio López

When Steina Vasulka bows her electric Zeta violin, it sends an MIDI (musical instrument digital interface) signal to a powerful Silicon Graphics supercomputer that controls a laser disc of stored video images.

The notes and pitch of her playing effect the video. In the heady language of art talk, she's exploring the interaction among machines, humans and the physical spaces they occupy.

Along with composer and experimental vocalist Joan La Barbara, Steina Vasulka performs from 6 to 7:30 p.m. Saturday, May 22, at The Paramount in an effort to generate interest in this summer's Techne and Eros: Human Sensory Space and the Machine interactive media-arts workshops sponsored by the Santa Fe Art Institute, Santa Fe Media Institute and the Santa Fe Institute.

Phenomenologist David Dunn, assistant professor for The College of Santa Fe's contemporary-music program, and Steina Vasulka's husband, videomaker Woody Vasulka, came up with the idea of Techne and Eros. Six one-week workshops July 5 through Aug. 14.

In addition to the Vasulkas, Dunn and La Barbara, the summer workshops will include physicist James Crutchfield and composer, teacher, and electronic-arts innovator Morton Subotnick.

According to Dunn, the creation of the workshop is the result of Santa Fe's community of cutting-edge artists and scientists coming together in a long-overdue dialogue.

"We have been talking about (the convergence of art and science) for a long time," Dunn said in a recent phone interview from his Santa Fe office. "The climate is appropriate to put this in a more public forum."

Unlike Leonardo da Vinci's days during the Italian Renaissance, when art and science intersected, over time, the two disciplines have moved into differing camps.

"With Western culture, there has always been a dialogue between two distinct cultures, the arts and sciences," Dunn said. "These have been more tightly related in the past than currently.

"To some extent, there is a level of..."
distrust now. There are good reasons to criticize the scientific realism view of the world and also to critique the poverty of the art world in terms of lack of ideas relevant to the evolution of the human species.

"Where these two things have been tightly connected in the past, they now stare across the chasm at each other, realizing that they once again need to be linked in some fairly profound ways."

Citing contemporary photography and music, where artists increasingly are relying on digital technology, Dunn said art and science have been converging without general awareness.

"In the climate of distrust between these two, there is a dance that's taking place through digital technology," Dunn said. "I don't think a lot of people are aware that there is an extraordinary exchange between the two cultures in digital technology."

Leading-edge science can be abstract to the average person, making the traditional role of the artist as interpreter an important link between theory and practice.

"For the most part, fields like chaos theory, complexity theory and cosmological physics do not make it into the general understanding of the larger culture," Dunn said.

"There is a process where science gets popularized. Sciences also need metaphors that make it vital to the larger public. The arts can provide a richness of understanding."

Artists whose creations reflect mathematical theory, for example, utilize fractal imagery, which visually articulates complex mathematical theory.

"There is an obvious public interest in the use of these tools and their expansion into the art world, whether it's photography, sonic arts or performing arts," Dunn said.

Techne and Eros will examine fundamental connections between scientific and artistic metaphors and where they cross boundaries; and the physicality of space, how the technologies are impacting the concept of space, and how the body and technology interface.

"When this kind of topic emerges in the general culture, a lot of catch words arise, things that are marketing ploys, like 'interactivity,'" Dunn said. "We are interested in where the interactivity really exists and how things connect in physical relation and control. (Technology) is not just a keyboard and monitor but extends the human dimension of the body into space."

A real-world example of that is Steina Vasulka's live performance, in which her physical playing of the violin causes a computer to generate video.

"She is actually performing the data," Dunn said. "There is a tactile relationship. Video becomes a performance art."

In the end, the Techne and Eros workshop is part of Woody Vasulka's goal to create a "liaisonship" and "spiritual rapport" within the established Santa Fe community of artists and scientists, taking art to a purer level of creativity.

"Rather than struggling with the gallery system, which is equal to the entertainment or tourist business, it's much more rewarding, more lucid, to think of science as a liaison (for artistic expression)," Woody Vasulka said.

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Workshop space is limited to 10 individuals per session. The application process is highly selective. For applications and more information about the Techne Eros workshop, contact the Santa Fe Art Institute at 424-5050 or e-mail info@sfai.org.

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Videomaker Woody Vasulka