Marina Bers, a pioneer in building online communities for youths and a professor at Tufts University, and her husband, Josh, enjoy spending time with their children, (from left, Alan, Tall, and Nico) in the backyard of their Arlington home.

Zora and the explorer

Can cutting-edge technology foster a sense of humanity?
A pioneering child development researcher says yes.

By Barbara F. Meltz
GLOBE STAFF

ARLINGTON — With her youngest son, Nico, 3, hanging around her neck, Marina Bers greets guests in her backyard. She's a bundle of gracious energy, introducing strangers to one another, shepherding people toward food and chairs. The occasion is Sukkot, a Jewish holiday of harvest, which involves building a small structure with a roof partly open to the sky.

For this celebration, Bers (pronounced “Beers”) and her husband, Josh, have invited people they don’t know, fellow members of Temple Isaiah in Lexington who, like them, live in Arlington and have young children. As Carey Brown, assistant rabbi, leads a few simple prayers, Bers surveys the scene. It’s just about dusk on an early autumn day, and the air is turning cool, but Bers, in a sleeveless blue summer dress and sandals, exudes warmth.

"Isn’t this great? I don’t know any of these people," she says, gesturing to the group that includes a few exceptions: her mother, her father-in-law, her brother, and his future wife.

If there is one thing Bers, 37, likes to do, it is to create community. More typically, however, it is not the kind of community she can touch in the flesh. An assistant professor at Tufts University and an author whose new book, "Blocks to Robots," threatens to turn computer education upside down, Bers has set out to prove that computers can be our children’s
Harnessing the power of technology for the children's sake

Continued from Page F1

friends.

That flies in the face of current thinking in child development and education. For years we've been hearing that the computer detracts from young children's socialization because they don't learn to negotiate with real-life playmates; that it interferes with learning because it bypasses critical connections in the brain; and that it takes time away from physical exercise. As children grow older, the real world gets scarier and more for the virtual one, there's the risk of computer addiction and antisocial behavior.

These concerns weigh heavily on Bers. They're why her three young children — in addition to Nico, there's Tall, 7, and Alan, 4 — each spend less than an hour a week on the computer.

The risks are also what drive Bers professionally. "Today's kids use computers so much, if we don't turn that use to a positive outcome, we are lost," she says.

Bers, who last year was among 20 US scientists to receive the Presidential Early Career Award for Scientists and Engineers in a ceremony at the White House, is pioneering technology that marries two independent disciplines — child development and computer technology. From the former, she brings the widely accepted tradition of Jean Piaget, which posits that children learn best by interacting with their world. From her mentor at MIT, Seymour Papert, comes the theory known as constructivism, that if children create their own technology they will learn more than if they simply swallow information technology spits out.

The software she created is called Zora. Children's Hospital Boston and the CAST Center for Children with Special Needs use it in a pilots program involving 22 transplant patients, ages 11 to 16, log on daily from around the country to build a virtual community.

Consider the population: As teenagers, they are at a stage of development where fitting in is all-important. As transplant patients, they must take medicines to stay alive. The meds can have side effects, including physical ones, so most of them cannot drive.

Other pilot of Zora called the Computer Clubhouse launched this month, connecting 110 after-school programs around the world with the idea of discovering similarities across cultural divides.

With its social connections and avatars, Zora may sound like a cross between Facebook and Second Life. But Zora has a curriculum — and not math or science, the traditional bread and butter of traditional classes. Zora was born out of technology education. "The curriculum of Zora is to explore issues of identity, values, and community," says Bers.

It happens subtly. Bers's research students monitor the site. One afternoon, a student noticed teens chatting about their transplant. The student suggested creating a place for their stories, so they built the Transplant House. Stories now cover the walls.

Marina Bers, the author of the new book "Blocks to Robots," has developed software that is part of a pilot project at Children's Hospital Boston in which young transplant patients around the country are helping each other stay healthy.

other pilot of Zora called the Computer Clubhouse launched this month, connecting 110 after-school programs around the world with the idea of discovering similarities across cultural divides.

With its social connections and avatars, Zora may sound like a cross between Facebook and Second Life. But Zora has a curriculum — and not math or science, the traditional bread and butter of traditional classes. Zora was born out of technology education. "The curriculum of Zora is to explore issues of identity, values, and community," says Bers.

It happens subtly. Bers's research students monitor the site. One afternoon, a student noticed teens chatting about their transplants. The student suggested creating a place for their stories, so they built the Transplant House. Stories now cover the walls.

cutting-edge technology, but also humanity"

With Halloween around the corner, some teens are creating a haunted house filled with scary thoughts. One of them is the fear of dying at college, without parents around to remind you to take your meds.

Bers named Zora after a city in a story by Italo Calvino where people find their true identities. "When I think of Zora, I think of being in a synagogue on a Friday night," she says. "You are in the middle of a room of people — you're building community — but you are also creating this private space for yourself in your head. Zora is a place you go, a spiritual place in a virtual world that connects you to yourself and to others, because it's only in relationships with others that you really know who you are, who you are as a person who does good in the world?"

Indeed, Bers spent a year in a nunnery school. That was after she left law school and before a stint as a magazine journalist in Buenos Aires.

She may have been unsure about a career path, but she was always intrigued by computers. As an undergraduate at the University of Buenos Aires, she crafted a major that studied computer as tools of human connection. For her undergraduate thesis, she created interactive software based on the Book of Genesis.

"How can kids understand a concept like the beginning?" she asks. "I made it interactive, so others could write about their own beginnings of things. You have to put it on their level."

It was a symbolic beginning for her. Since then she has had a long and productive career in the academic world, teaching at the University of Pennsylvania and now the University of Kentucky. She has been an advocate for children's educational technology, and has published numerous papers on the subject.

"The culture of this place appealed to me," she says. The first year, she did some teaching, but then she focused on research. "I don't have the time to teach," she says. "I have to do what I want to do." She's now working on a book about the history of computer science, which she hopes will be published in the next year.

"I have a family," she says. "I have two kids, a boy and a girl. I don't have a lot of time for other things." She laughs. "But I do have time for this." She's not sure if she'll write another book, but she hopes to. "I would love to do that," she says. "I have a lot of ideas." She's already started work on a new project, which she hopes to publish soon.

Bers could have continued her career in any number of universities, but the offer six years ago from Tufts was too good to pass up. "It was a chance to have it all: family, research, and a supportive professional community," she says. "The culture of this place is amazing."

"You can live here and work here and be part of something bigger. It's not just about research, it's about making a difference," she says. "I love it." She smiles. "I love it."