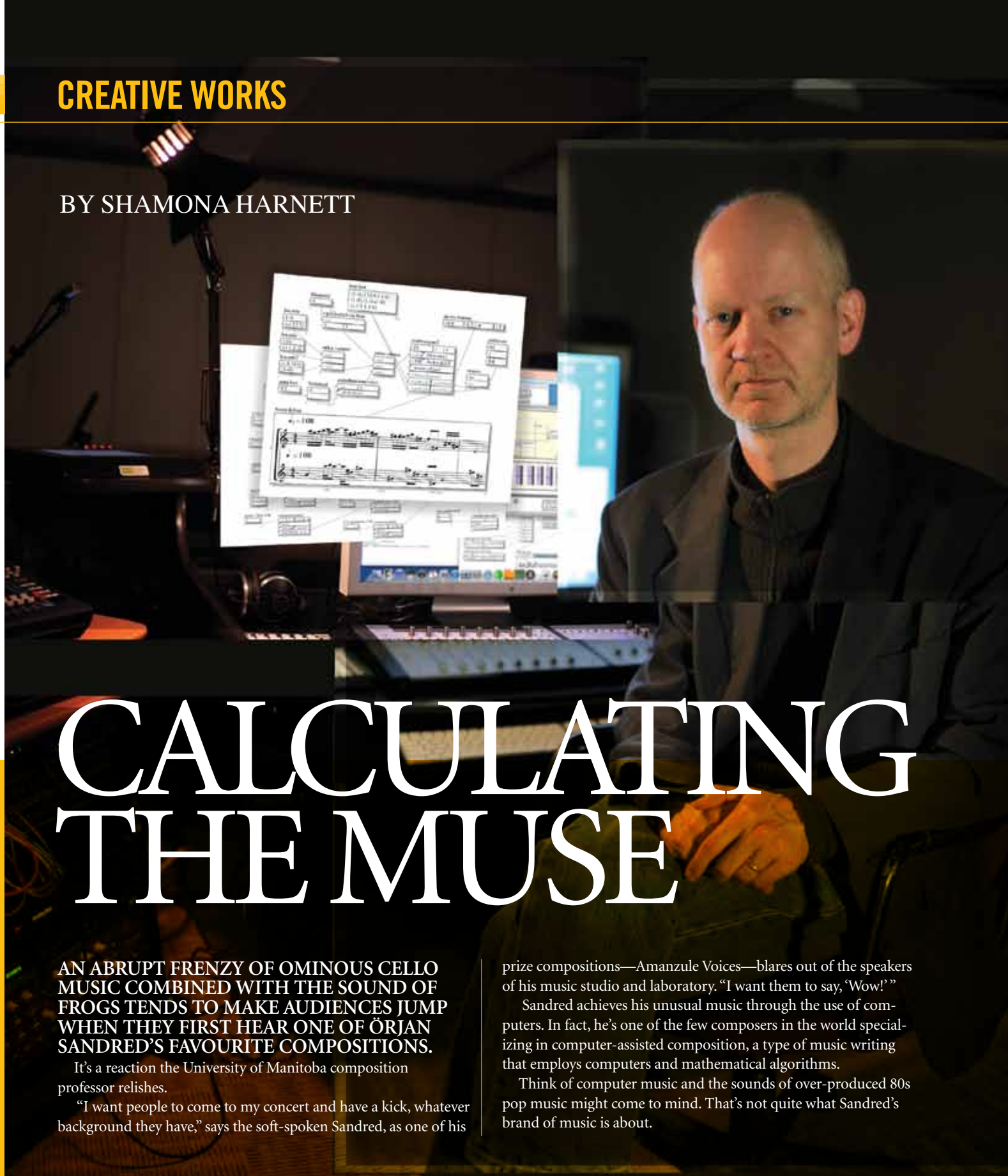
BY SHAMONA HARNETT



Mike Latschislaw

# CALCULATING THE MUSE

**AN ABRUPT FRENZY OF OMINOUS CELLO MUSIC COMBINED WITH THE SOUND OF FROGS TENDS TO MAKE AUDIENCES JUMP WHEN THEY FIRST HEAR ONE OF ÖRJAN SANDRED'S FAVOURITE COMPOSITIONS.**

It's a reaction the University of Manitoba composition professor relishes.

"I want people to come to my concert and have a kick, whatever background they have," says the soft-spoken Sandred, as one of his prize compositions—Amanzule Voices—blares out of the speakers of his music studio and laboratory. "I want them to say, 'Wow!' "

Sandred achieves his unusual music through the use of computers. In fact, he's one of the few composers in the world specializing in computer-assisted composition, a type of music writing that employs computers and mathematical algorithms.

Think of computer music and the sounds of over-produced 80s pop music might come to mind. That's not quite what Sandred's brand of music is about.

He focuses on what he calls 'art music,' a contemporary, experimental music genre based on advanced, complex structures.

Where most composers might sit down at an instrument and write music using their instincts, Sandred tries to push the limits of composition by creating computer programs that identify the structural compositional patterns of a composer.

"You take your idea and bring it further than you would be able to do yourself," says the Swedish-born Sandred, who came to the University of Manitoba from Stockholm in 2005. "Otherwise, I have to trust my intuition. And if I just trust my intuition, I tend to fall back to what I did before."

Sandred's main goal is to create music that's never been heard before.

Is that even possible? "No," says Sandred, laughing.

"If I can make something that no one else thought about before, I would be very happy. But it's very, very hard. That's where the research comes in, I think."

Most of Sandred's work happens at Studio FLAT in the Marcel A. Desautels Faculty of Music, containing computer equipment, mixing boards, electronic keyboards and speakers. The set-up of this unique research lab was funded by the Canada Foundation for Innovation and the Manitoba Research and Innovation Fund.

This is where Sandred—who started composing at age 13 on the piano—teaches some of his composition students and where he comes up with his research.

On a computer screen filled with boxes, notes and numbers, he plays with pitches and beats with the click of a mouse.

He can generate sounds that emulate any number of instruments—or he can write music that sounds computer-generated until a musician plays it.

He admits that the computers are excellent at identifying and creating music structures—but they leave out the emotion that can only come from the heart of a human composer.

"My role as a composer is to figure out how they are related. Why do certain types of structures work better and trigger certain emotions?"

He says his goal of creating music that no one has heard before is " very risky" because people are more comfortable with music structures they recognize.

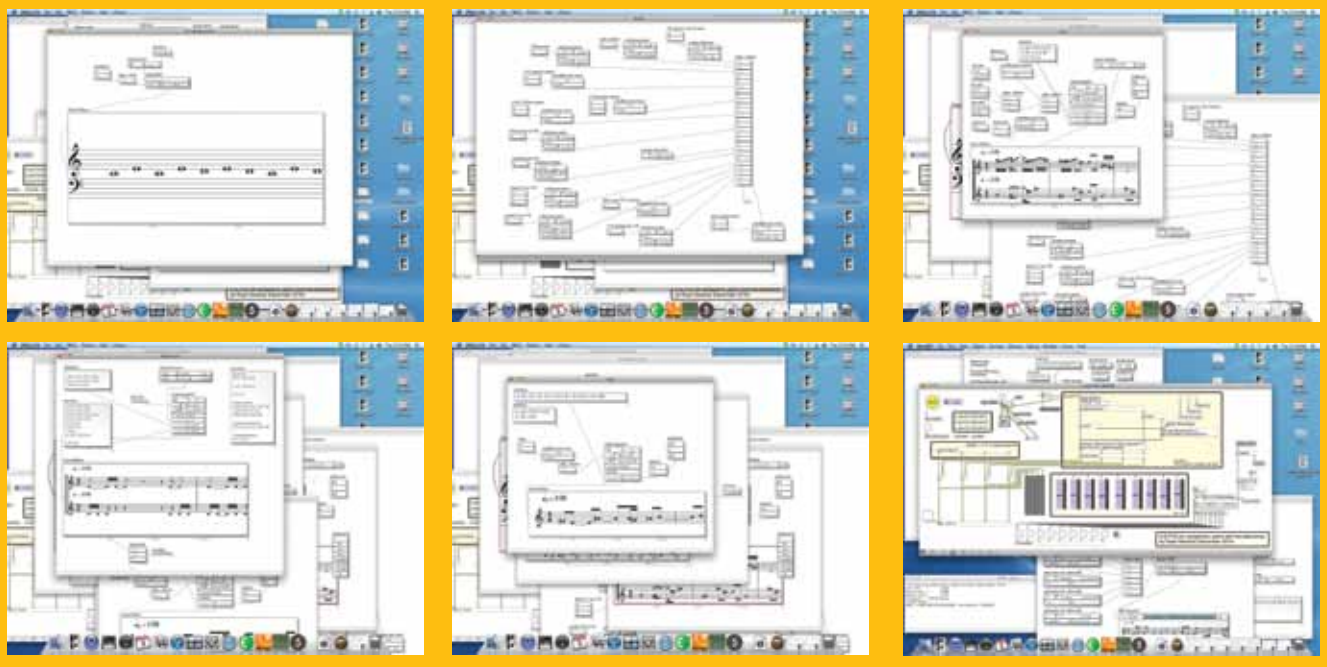
But he's willing to take the risk. And so are art music audiences around the world. Audiences and music researchers from Shanghai to Paris follow Sandred's work.

This fall, he's slated to perform at Paris' Auditorium Saint-Germaine. (He will operate his computer while instrumentalists play the piano and saxophone).

He hopes other composers can use his research and his compositions to push their own creative boundaries.

Meanwhile, he listens closely as his interviewer reacts to his Amanzule Voices. He points out the symphony frogs in the composition's fade-out—sounds he recorded while canoeing in the West African country of Ghana.

"It's crazy, I know," says Sandred, who admits that he "wants to wake people up" with his creations. "It's all about communication. If I was the only person on earth, I would probably stop writing music."



Images depicting the computer composition process (provided by Örjan Sandred)