



P.O.E.M.A. at the Oi Futuro Flamengo museum in Rio de Janeiro, Brazil (Photo: Adriano Fagundes)

PEOPLE

SIAT art project at Rio Olympics takes your breath away

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By **Allen Tung**

As SFU students and alumni vie for gold at the 2016 Summer Olympics in Rio de Janeiro, two SFU students from the **School of Interactive Arts and Technology** are already winners.

P.O.E.M.A., an art installation created by PhD students **Mirjana Prpa** and **Kivanç Tatar**, is being showcased as part of the cultural programming at the Olympics.

They partnered with Regina Miranda, a choreographic theatre director based in New York, to create this one-of-a-kind installation and performance that brings together dancers, virtual reality, embodied interaction and generative music.

The project's goal is to explore the relationship between space and audience through advanced technologies, and to synchronize space and audience through breathing.

Their installation features an offstage performer who wears an Oculus Rift virtual-reality headset to interact with a virtual ocean environment through their breathing.

Depending on the wearer's breathing patterns, they can be underwater or above it looking at the waves, and the virtual environment and music can be meditative, or harsh and threatening. The artificial intelligence system also reacts to the breathing patterns and generates accompanying music in real-time.



Dancers perform as part of P.O.E.M.A. at the Oi Futuro Flamengo museum in Rio de Janeiro, Brazil (Photo: Adriano Fagundes)

The virtual environment is also projected onto a screen, and dancers perform choreography adapted to the environment, which brings the Oculus Rift wearer's experience to the audience.

For the most part, a computer determines the virtual environment. But what makes this piece unique is the wearer's ability for the to take control and change the environment through their breathing.

"The idea is, as you breathe slower, the audio and environment should become less eventful and things should settle down a bit," says Tatar. "And as you breathe faster, everything becomes more eventful."

Prpa says: "It is a very stimulating and personal experience, and it's up to you to decide where it's going take you. That's the most beautiful thing about this piece."

The exhibition opened at the Oi Futuro Flamengo museum in Rio de Janeiro on July 18, and continues until the end of the Olympics.

Prpa, who is supervised by SIAT professor **Bernhard Riecke**, conducts her research at the **iSpace Lab**. Tatar is supervised by professor **Philippe Pasquier** in the **Metacreation Lab**. Pasquier was also the AI system design advisor for the project. SIAT professor **Thecla Schiphorst** and staffer Larry Soo also supported this project.



A dancer performs as part of P.O.E.M.A. at the Oi Futuro Flamengo museum in Rio de Janeiro, Brazil (Photo: Adriano Fagundes)

SFU athletes competing at Rio

Several SFU students and alumni have earned berths at the Rio Olympics, including **Beedie School of Business** students Gabriel Ho-Garcia and Sukhi Panesar. Both will be competing on the Canadian men's field hockey team. Alumnus Scott Tupper also joins them on the team.

Other alumni competing include Nayo Raincock-Ekunwe, who was recently **named to the Canadian women's basketball team**, wrestlers Helen Maroulis (USA) and **Danielle Lappage** (Canada), and track and field 10,000-metre runner Natasha Wodak (Canada).

The Olympics take place from Aug. 5 to 31. SFU's **Surrey** and **Vancouver** campuses will be broadcasting select events. Visit the websites to learn more.