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## Culture City Online: Dances With Robots

In **Culture City Online**, arts reporter and columnist **Pia Catton** looks at the digital side of Greater New York's cultural landscape. Read [her weekly column](#) and [follow her on Twitter](#).

Robots take the stage at the Joyce Theater Monday, when the dance company Pilobolus premieres "Seraph," a dance for one human and two flying robots set to a Schubert piano trio. The work was created in collaboration with MIT's Computer Science and Artificial Intelligence Laboratory and its Distributed Robotics Lab.



Pilobolus

A scene from "Seraph", which features robots from an MIT artificial-intelligence lab.

The T-shaped robots with helicopter blades on each arm are remote-controlled by "pilots" offstage. "They are a little easier to stabilize than a traditional helicopter," said Will Selby, who graduated with a masters degree from MIT in June and worked with Pilobolus on the project. "If you have four blades, they are perfectly symmetrical."

The process of creating choreography for the robots began with members of Pilobolus coming to the lab to observe the movement. "We put on random music and flew them around. They made a list of about nine things they liked," said Selby. ([Here's more from Pilobolus on how they created the piece.](#))

The interaction between the dancers and scientists took some getting used to. "They're very artsy, and

we're very technical. We had to learn their vocabulary – upstage, down stage, crescendo. I think they learned a lot about robots," he said.

At times, Selby and his fellow MIT students had to keep the Pilobolus ambitions in check. "If a move was not repeatable, we had to tell them that," he said. "Sometimes it was too fast for us. I might be able to do it once out of ten times."

The moves also had to be designed so that new pilots could perform them once the MIT students went away.

When they're not appearing in dance pieces, the robots are typically flown for short periods of research or information gathering. For Pilobolus, extra lights were added to the robots and new software was created to sync the lighting with the lightboard that controls the visual cues onstage. The company describes the work as exploring "the relationship between human and machine in a pastoral fable."

"Seraph" will be performed on selected dates between [July 18 and August 6](#).

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A new iPad app shares the aesthetic of the Merce Cunningham Dance Company through photos and video that had

previously been given only limited distribution, mainly in print. The app is a collection of images that were developed with the late choreographer for the [visual and performing arts journal 2twice](#).

Editor Patsy Tarr and creative director Abbott Miller, a partner in the design firm Pentagram, featured the Cunningham dancers in 2twice multiple times between 2001 and 2007.

“Merce was extremely involved in every aspect of the scenography and choreography,” said Miller. “We generated this over quite a long time with Merce.” The free app is intended as an artistic documentation of the 2twice sessions, rather than an informational site.

“You can scroll through the dances and several of them feel like a continuous panoramic space,” he said. “It’s a new medium and a new space to present dance, but it’s not one with real clear economic opportunities. It’s more of a gift.”

The app comes as the Cunningham company is on the last leg of its Legacy Tour. It will give three performances at Lincoln Center Festival on Saturday, July 16. From December 7 to 10, the company will return to BAM, then will complete the tour at a \$10-per-ticket show on New Year’s Eve show at the Park Avenue Armory.

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In other app news: [Lincoln Center for the Performing Arts has launched a free mobile application](#) that allows users to view calendar information about shows and buy tickets directly. Performances are filtered by genre and can be posted to Facebook — so all your artsy friends know exactly what you’re getting up to at Lincoln Center.

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