



The Rhythm of the Lights:

In Miral Kotb's *iLuminate*, dancers in the dark form the moving light system

Playing in the East Village at Theatre 80 St. Marks this summer, *iLuminate* features the daring tagline: "The most fun you'll ever have in the dark." However each audience member personally assesses that statement, the show is undeniably a lot of fun—and quite bold from a design standpoint.

Amid a glowing visual design, *iLuminate* conveys adventure and romance dance styles that range from contemporary to popping to breaking, choreographed to popular and classic music by artists including Michael Jackson, Bruno Mars, James Brown, Janet Jackson, Chris Brown, LMFAO, The Wanted, and Sam Smith.

Thinking outside the black box to present a truly unique theatrical experience, *iLuminate* has no traditional scenery and no lighting rig. Yet it does feature moving lights of a sort: Most of the lights are on the dancers, who rarely stop moving during the 90-

minute show. And the lights on their costumes dance around as well.

iLuminate is the brainchild of Miral Kotb, founder/CEO/show director/occasional understudy, who created the show by marrying her two greatest passions: dancing and software.

Even while she was pursuing her degree in computer science at Columbia University, Kotb was studying dance at Barnard College. After graduation, she worked for seven years as a software engineer at Bloomberg LP. Then, while attending the 2009 Apple Worldwide Developers Conference, she envisioned the possibility of wirelessly controlling lights on dancers' bodies.

"I got the idea when Wi-Fi was still pretty new, and we were talking about how wireless units were getting so tiny that they could fit into really small devices," Kotb explains. "I wanted to

figure out what you could do if dancers wore wireless suits and you could communicate with them somehow live onstage. That could make a performance more interactive."

For this show, the dancers wear black unitard costumes and masks that are threaded through with electro-luminescent wire. Kotb, who likens the show to a live comic strip or cartoon, worked with a sketch artist to design the costumes. "We've actually been really lucky to have dancers who understand both aspects: the dancing and the visuals of it," she says. "So we start with a sketch and then the tech and wardrobe team turn it into a costume and work out the logistics of how it can come to life. Then we bring in people to stitch it and solder and do all the actual lighting. Everything is customized—even the unitards are made out of a special material to withstand the weight of the lights and the

batteries. It took years to get to the point where we are now as far as figuring all of that out is concerned.”

Kotb and her team built the *iLuminate* system themselves. “It’s all proprietary,” Kotb explains. “We use electroluminescent wire and LEDs. We created receivers and transmitters and the software that drives everything is all totally customized to the show. All of the other lighting—the signs, the strobes—is made of the same material.”

The system is controlled by Lenovo computers running Linux and on Macintosh computers. “It’s a one-button show,” Kotb says. “Each show we have done has had customized cues that are written using our programming software.”

To impress Ali and the others, Jacob decides to use his magic paintbrush to create whimsical creatures, including a pair of robots for them. But

Darius, who sees it as a way to get Ali back, steals it, creates some monsters, opens a special portal and whisks Ali away with him to another world, securing the passage with a coded lock. When the robots are unable to break the lock, an audience member is enlisted to help the crew unlock the code by playing an electronic game onstage.

“The game is brand-new for New York,” Kotb says. “That was a really fun idea that we wanted to incorporate, because we wanted to make the show a lot more interactive and kind of show the magic without actually showing the magic. We are still human beings behind the masks and I think the game helps bring the humanity out into the show.

“Technically, it was fun to do because it’s an iPad app that speaks to the controller on the game,” she continues. “The production manager



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also mans the game and calls it.”

Another new feature includes a rat that scurries out from some garbage cans. “The rat is just a puppet,” Kotb explains. “It was a just a fun little addition for New York.”

The most prodigious prop takes the form of a huge serpent Darius creates to menace the crew. “The snake is a labor of love created by our techs who actually had the idea for it,” Kotb says. “It’s a bit of puppeteering meets lighting—four of the dancers are actually manipulating the serpent onstage.”

Though there is no lighting rig by design, lighting is still a big part of the show. The electroluminescent wire outlines the club and the portal as well as the puppets and set pieces such as doorways, chairs, and boom boxes. “Oftentimes you will see the lighting around the dancers and not on the dancers, which can take away from what the artist is doing onstage,” Kotb says. “So I thought it would be cool to

just light up the dancers themselves and really focus on them—what they do and their talent, not just on the surrounding lighting that is meant to accentuate what they’re doing.

“It is really fun to use lighting to really show off the skills of the dancers,” Kotb says. “And then the wireless part gives us the ability to really go along with the choreography and keep it dynamic and in time by using other lights or lighting pieces.”

The magical paintbrush is made of LEDs. “They are on a fuse, so it’s not too bright,” Kotb says. “The paintbrush has gotten lighter over the years but batteries are pretty heavy. Luckily, we have strong dancers.”

Overall, the greatest challenges on the live show involve the technical difficulties of having live lights on the dancers’ bodies. “Electroluminescent wire is easily prone to shorting out if you bend it too much—especially in the same way, which is what happens

since the dancers are doing repeated movements,” Kotb explains. “So the lights just keep bending a certain way and once they break, we have to replace them pretty quickly. We stitch everything so there is a lot of wear-and-tear and ongoing maintenance that has to happen for the show to keep going—especially for such a long show.”

This means that each performer has his or her own pit crew. “I compare to a car race,” Kotb says. “You go in and you don’t really have a lot of time, so you get cleaned up by whoever is in your tech station and then you go back onstage.”

“We repair stuff during intermission and even during the live show, they’re crimping wires and soldering stuff,” Kotb continues. “It very much has that aspect of live repairs, which is the fun of it, too, because no show is ever the same. You are never on autopilot with this show—whether you’re a dancer or

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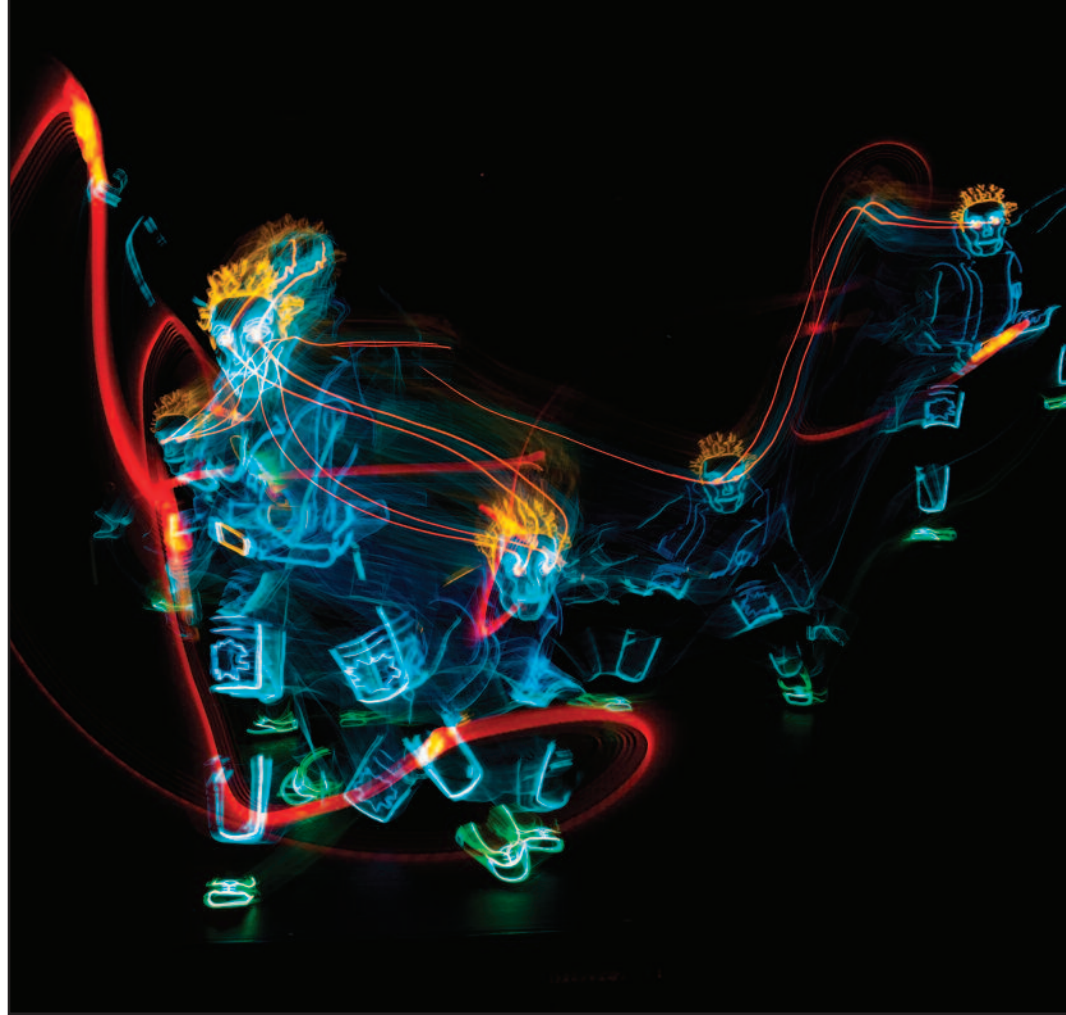
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a technician.”

iLuminate made its first big splash during the sixth season of *America's Got Talent* in 2011 when they made it to the finals and placed third. They recently returned to the show to collaborate with Fitz and the Tantrums who performed the song “HandClap” as the *iLuminate* dancers did a routine around them. This is the third New York theatre show the company has done, *iLuminate* has performed across the globe and been seen on concert tours, television shows, corporate gigs, and grand events. In 2012, the company opened the production arm of its brand and installed shows at Six Flags theme parks across the country and on Crystal Cruises. The company is also now focusing on its educational branch to bring the power of lights to students. —**Catherine McHugh** 📶



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