

**PROFILE**

**NAME:** IAM  
**LOCATION:** Toronto, Canada  
**FOUNDED:** 2020  
**WEBSITE:**  
[www.radhachaddah.com](http://www.radhachaddah.com)

**CHALLENGE**

Taking microscopic visuals and scaling them to create vastly magnified landscapes, leveraging elements of nature as backdrops with no light other than projection.

**SOLUTION**

Epson Pro Series projector offered flexible, reliable and adaptable, large-scale projection with brightness and light output needed for natural, living surfaces.

## Science Meets Projection Art in The Darkness

### Visual Artist and Scientist Radha Chaddah Maps Evolution on Natural Spaces

Studying Film and Art History at Queen’s University (BAH), and Cell and Molecular Biology at the University of Toronto, Radha Chaddah is a visual artist and scientist inspired by invisible realities. Using light as her primary medium to explore the materiality of living cells and tissues is what ultimately led Radha into her current visual art practice.

Finding endless inspiration throughout her academic journey as a stem cell researcher, Radha became fascinated by the interconnectedness of our material reality from the micro to the macro.

Combining a love for photography and science, Radha’s photographs of cells and light installations have been exhibited across Canada. However, Radha had a much larger vision to take these experiences up a notch – being able to take something so small such as a microscopic image and turn it into a massive, immersive image to draw the audience in – and this is what led to the start of her projection mapping art.

### Art Inspired by Science

Drawn to the art of projection mapping over a dozen years ago, Radha was hosting one of her early shows at the Spadina Museum in Toronto, which had a four-acre dark park. While everyone was crowded around a small section of the museum, Radha found herself looking into the darkness and thinking about how she could invite guests into this natural open space, rather than crowding around the urbanity of the buildings on the property.

“It was such a romantic space that I wanted to explore at night and share with others, and projection really allowed me to light the dark and draw people in,” said Radha.

Through projection mapping, Radha was able to bring light to natural spaces and this is what inspired one of her biggest projects yet – IAM (ee-yam).

“My love is to project onto natural living surfaces to speak to how we are all interconnected,” Radha added.



### IAM Project Inspiration

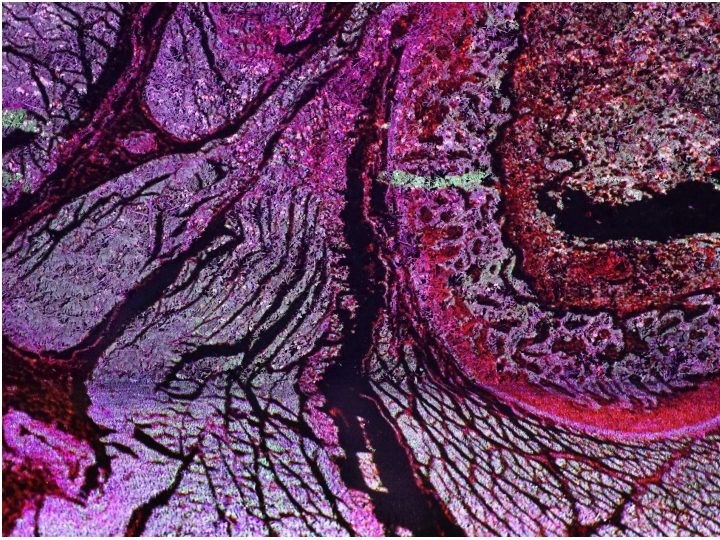
When all of Radha’s upcoming exhibitions were canceled during the pandemic, she became curious about the virus, co-evolution of viruses and humans in general, which led her to experiment with three-dimensional models of the Coronavirus (COVID) molecules.

Radha brought her vision to life during the pandemic, creating IAM, a COVID story told through dance and light, inspired by the changes to our inner and outer lives as humans living through an unprecedented time.

Radha worked with a team of talented collaborators on IAM. Open Fortress dance collective created the choreography.

***“When projecting on living surfaces, you run into some challenges. For example, covering a large area with high-impact visuals, the appearance of imagery on costumes, and overall working exclusively outdoors.”***

- RADHA CHADDAH, VISUAL ARTIST



Jaclyn Blumas composed the score tailored to the show, and Call and the Response clothing, an art-minded, music-influenced design studio, did the costume design.

A 3D immersive light performance created by animated projections of microscopic images of eyes, nerves, muscle, bone, gut, blood vessels and kidney, IAM is shown through four acts taking place at different scales of material reality, from micro to macro.

Dance of the Molecules is the first of four acts of IAM, telling the story of human and viral enmeshment in the molecular realm. “We wouldn’t be human without the millions of years of coevolution between viruses and humans – this is what the first act explores,” said Radha. The dancers play molecular characters compelled by the forces of attraction, similar to the chemistry of attraction humans have for one another.

The second act, Of Body and Mind, takes the story into the human realm, where it explores the suffering, struggle and pain of isolation and loss during such a dramatic time societally and politically.

Taking audiences further into the material world, they arrive in the third act, Earthly. The story of COVID was a happy one for the planet, as human activity dwindled, and nature ascended from the shadows of human dominance.

“Nature breathed more easily when humans were quarantined” adds Radha. “Animals and creatures began to reinhabit the spaces humans chased them away from, the air became cleaner, and nature began to flourish again.”

In the final act, Cosmos, Radha explores the electromagnetic energy that ripples outward into the blackness of space.

As the universe is unmoved by human struggle, the third act explores a realm where individuality is inconsequential. Taking a closer look at what we are made of as individuals, what our planet and our universe is made of and our human place in nature is a way to understand and overcome suffering.

## Choosing Epson Projection

Sitting in her studio, Radha had an [Epson Pro L1500U](#) laser projector that was lent to her for another show. Looking at the projector and then at the beautiful natural space outside.



A manicured lawn and 200-year-old trees – a preferred projection surface – this is where Radha started experimenting with three dimensional molecules and projection. And something wonderful emerged – Radha realized the IAM project was a dance. A dance that needed to be projected outside just as gatherings were done during the pandemic.

With the IAM performance being held in an outdoor setting, there was a need for a bright, high-resolution projector to create wide angle shots onto the natural environment. A high brightness solution built to adapt to a range of vigorous environments, an Epson Pro Series projector was ideal for the IAM project.

“I chose Epson for this project because I was really excited to try a high lumen, high resolution projector system, and I needed interchangeable lenses to create light in a space that has some limitations on depth,” said Radha.

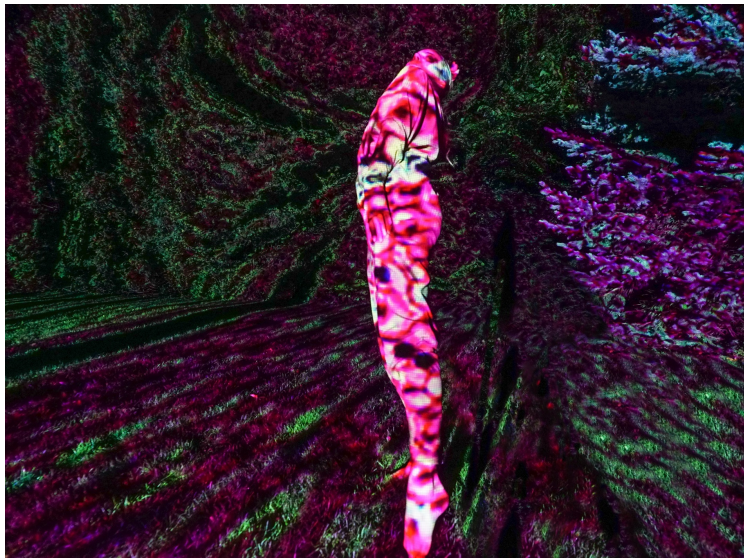
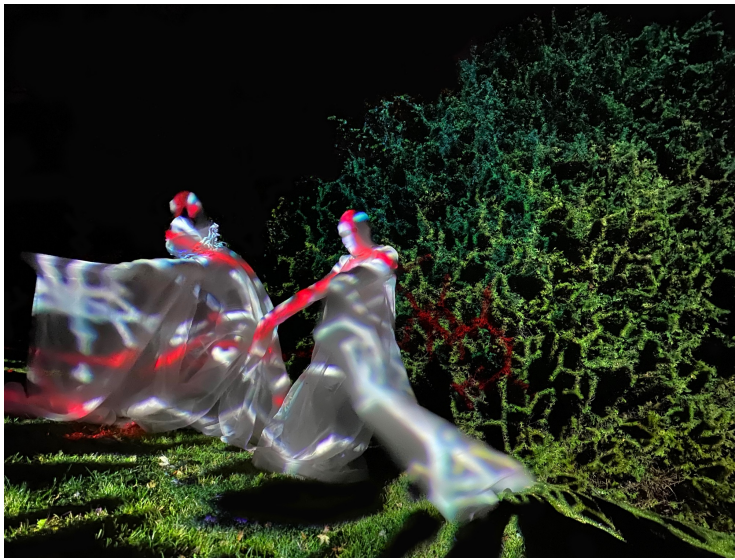
With a projected stage about 80 feet wide, 50 feet high and 50 feet deep, Epson’s [Pro Series projectors](#) offer built-in software and tools for easy installation along with simple design and reconfiguration. The Pro Series interchangeable lens feature also allowed Radha to customize positioning and scale, while maintaining smooth, colorful and bright images with Epson’s proprietary 3-chip, 3LCD technology.

“When needing to project massive displays that originate as microscopic content, image quality was imperative for the IAM project, and the Epson projector didn’t fail me – delivering stunning detail along with impactful colors and brightness.”

***“This machine has been the foundation of the IAM piece and is a joy to work with. It has delivered exactly what we need in terms of adaptability, interchangeability, flexibility, image quality, and more. Epson really knocked this out of the park.”***

– RADHA CHADDAH, VISUAL ARTIST





“The lens shifting ability was also such a great feature as we developed IAM. We were able to make wide ranging casting adjustments without moving our mounting rig. For us this was helpful because the terrain was uneven, and we could save ourselves time consuming adjustments with the mount.”

In addition, Radha was pleased that the Pro L1500U served as a discreet and robust solution that could withstand outdoor environments as nature is one of the key factors in the IAM piece. The projector ensured that the audience would be immersed in the show without distraction from the technology behind it.

“When projecting on living surfaces, you run into some challenges. For example, covering a large area with high-impact visuals, the appearance of imagery on costumes, and overall working exclusively outdoors. Epson projectors are known for durability and this one was a reliable rock in our production. We just knew we could always count on that machine; it was golden.”

Since the show is going on tour, Radha was also able to create a cart with rugged wheels and a storage compartment to easily take the projector to all locations.

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Radha adds, “I have to say that, given all of the unknowns of this project, working with a team of likeminded, talented individuals, along with having access to projection technology we could count on was crucial in bringing IAM to audiences.”

## Technology Designed for the Artist Community

Epson strives to support today’s artist community, keeping specific visionary needs in mind as they continue to enhance projection technology.

1 4K Enhancement Technology shifts each pixel to surpass Full HD resolution on screen.

2 No required maintenance for the light source and filter up to 20,000 hours. Approximate time until brightness decreases 50% from first usage. Measured by acceleration test assuming use of 0.04 - 0.20 mg/m<sup>3</sup> of particulate matter. Time varies depending on usage conditions and environment. Replacement of parts other than the light source may be required in a shorter period.

While the views and opinions expressed in this article are those of the individual, Epson provided the projector in return for the testimonial.

“Epson’s continued efforts in innovating projection technology to better suit end users across so many applications, is allowing visual artists, like me, to truly focus on our art and elevate our projects like never before,” said Radha. “Brightness, durability and ease of use is important when incorporating a projector into your work. Epson projectors have been my go-to since I started projection mapping because of the reliability and the ability to take my art to the next level.”

Constantly listening and taking end users’ feedback into consideration, Epson’s latest EB-PU2200 and EB-PU2100 laser projector lineups enable ultimate creative flexibility. With a range of interchangeable lenses along with 3-chip 3LCD and 4K Enhancement Technology,<sup>1</sup> the projectors offer bright color output and detailed images with a range of mounts and frames available to transform any space.

Additionally, more compact – 60% smaller and 50% lighter – than their predecessors, the new series of projectors are easy to set up and built to overcome challenging space restrictions. Made with a low-maintenance laser light source<sup>2</sup> along with a mechanical shutter and sealed optical engine for high dust resistance and filterless cabinet, the projectors are ideal for large events and live shows and also offer 3G-SDI input and output to accommodate daisy-chaining and long cable runs.

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