

THE VORTEX

“Sternberg, Tromble, and Sumner have created a powerful and timely work...”

—Jeff Slayton, LA Dance Chronicle



Credit: Montage photos by Rose Eichenbaum

“The Vortex is a powerful combination of artistic vision with advocacy for reducing bias in the sciences. Centering the experiences of people who've been excluded by the status quo in STEM culture, and using images and movement as a creative vehicle to communicate these, it inspires new conversations about how to enact change.”

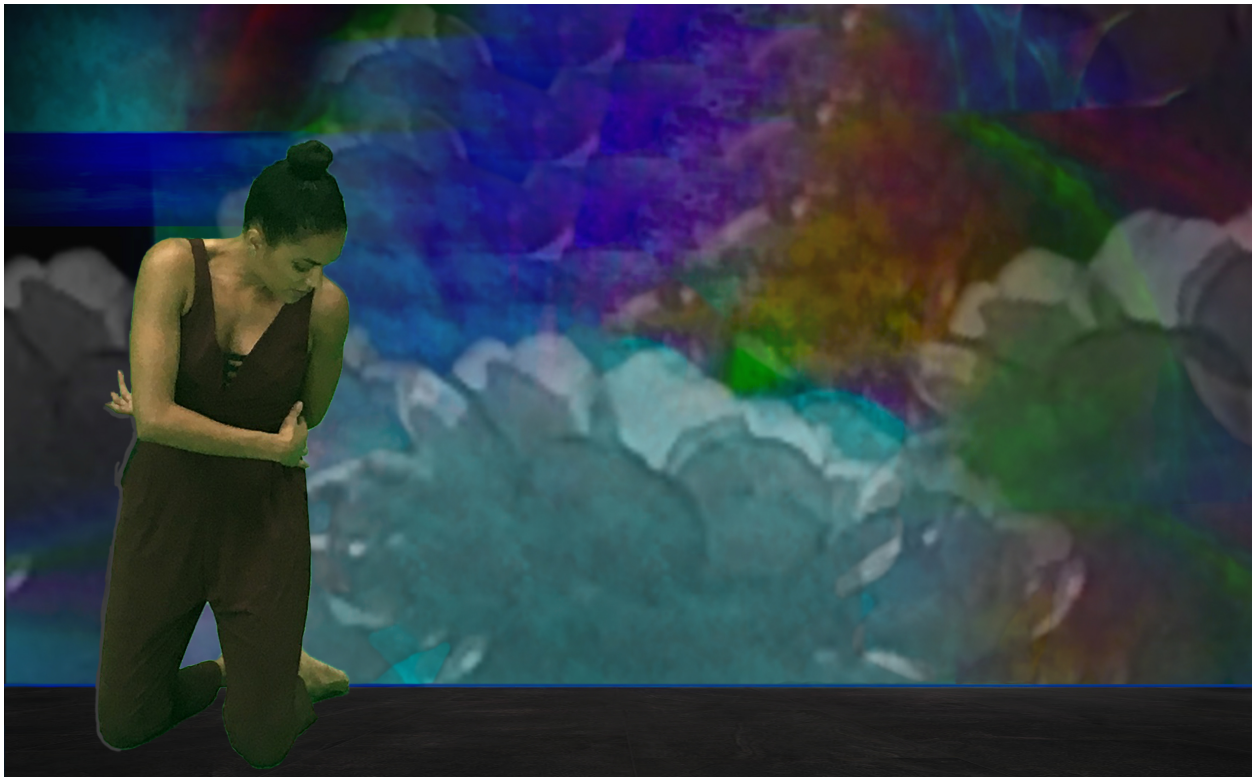
*—Kalindi Vora, Professor and Director, Feminist Research Institute,
University of California, Davis (UCD)*

***The Vortex* is:**

- a performance video using contemporary dance and art to tell true stories of gender, race, and creativity in science
- a dynamic visual image of the social atmosphere swirling around scientists who are female, of color, or gender-nonconforming
- a full collaboration between an artist, a choreographer, and a geobiologist
- a stirring experience capturing the emotional realities of scientific culture with humor, grace, and commitment to truth
- a vehicle for starting conversations about overcoming personal and institutional bias, resisting embedded stereotypes, and supporting great science
- supported by the Andrew W. Mellon Foundation through the SHAPE (Science, Humanities, and Arts: Process and Engagement) initiative at UCD.



Still from *The Vortex* performance video, Donna Sternberg & Dancers (DS&D) with Meredith Tromble and Dawn Sumner, 2020.



Still from *The Vortex* performance video, Donna Sternberg & Dancers (DS&D) with Meredith Tromble and Dawn Sumner, 2020.

Description: The Vortex is a kaleidoscope of dance, drawing, and spoken word about researchers who don't fit old scientific norms of gender, race, or sexual orientation. Dancers bring to life the emotional impact of the scientists' experiences, which are introduced by a dynamic vortex of drawings based on true stories. The dance idiom is contemporary, with music composed for the work incorporating influences from different musical genres. The performance is followed by an invitation to the audience to talk with the artists about the work and its content. The work energizes discussion of art, dance, knowledge, social pressures, and power, encouraging people, including scientists, to reflect on their own experiences.

"Watching The Vortex was thrilling, engaging, and extremely moving—all of which is difficult to capture in virtual performances! It was absolutely a highlight of my online learning experience, as an artist and a student."

—Arden Siadek, UCD undergraduate



The DS&D company performing *The Vortex* at the Odyssey Theater, Los Angeles, 2018
Photo: Rose Eichenbaum

History: *The Vortex* emerged from the first art and science session of the Djerassi Resident Artists Program, a retreat in the Santa Cruz Mountains where choreographer Donna Sternberg met visual artist Meredith Tromble and geobiologist Dawn Sumner. They were working on *Dream Vortex*, a virtual, interactive 3-D installation based on the dreams of researchers. The trio's conversations sparked a new project, exploring the culture of science and its impact on scientists who are also women, people of color, or gender nonconforming. The scientists' stories of difficulty and discovery feed a moving investigation of society and creativity. The live performance has been presented four times in Los Angeles since 2016, and a *Vortex* workshop featured at the Leonardo Convening in San Francisco in 2019. The performance video, with new drawings and choreography, was created for presentation in pandemic conditions in 2020.

*"I had the pleasure of watching *The Vortex* this evening — quite impressive and most thought provoking!... I very much look forward to more conversations about the future of this kind of learning for our students, and the larger impact on the campus at large as illustrated tonight."*

—J. David Furlow, neurobiologist & Associate Dean, Undergraduate Education, UCD

The True Stories: The full suite of vortex story drawings includes more than thirty drawings. Some are based on historical figures such as African-American biologist E.E. Just and female physicist Lise Meitner, others use material from living people such as Ken Phillips, aerospace science curator at the California Science Center, MIT geologist



Meredith Tromble, *Dorothy Hodgkin*, mixed media performance drawing, 2020

John Southard, and UCD botanist Wendy Silk. The bold drawings echo the messy emotions embodied in the work, compressing the stories into nonverbal form. The drawing shown here is of the chemist Dorothy Hodgkin, who discovered the structures of insulin and penicillin. The first story came from conversations about creativity with cognitive scientist Pireeni Sundaralingam and immunologist Devavani Chatterjea, whose stories of scientific practice were entangled with stories of social barriers based on gender and race. Tromble's further work collecting stories revealed what has recently come to national attention, that attitudes about gender and race hamper work even in supposedly "objective" endeavors. (2017 statistics from the National Science Foundation show that science in the United States is still majority male and 75% white.)

The Collaborators



Choreographer Donna Sternberg, founder and artistic director of the Los Angeles based company Donna Sternberg & Dancers, has professionally premiered more than 90 works since 1975, many of them collaborations with artists of other disciplines. The work has been presented at the Venice Biennale, in solo and collaborative concerts, collaborative concerts, in dance festivals, on programs of Donna Sternberg & Dancers and in schools (Artists-in-Schools programs).

Choreography has been commissioned by the California Science Center, Dance Moving Forward Festival, California Choreographers Dance Festival, SIGGRAPH, New Dance Ensemble, and Alleluia Dance Theatre among others. In 2005 and 2007 Ms. Sternberg was named one of the most outstanding choreographers of the year by the Beverly Hills Outlook. www.dsdancers.com



Geobiologist Dawn Sumner is a professor at the University of California, Davis. She is interested in how early life evolved on Earth and explores life in many ways, from describing the ancient remains of bacteria to characterizing modern bacterial communities living in ice-covered Antarctica lakes, and helps run the Curiosity rover on Mars. She was a co-founder of KeckCAVES, a 3-D visualization facility that provided an intellectual and computational framework for the visual exploration and

manipulation of data and models. In 2009 she worked with Sideshow Physical Theater to create an interactive environment for the performance COLLAPSE (suddenly falling down). Sumner earned her B.S with honors at Caltech and her Ph.D. at MIT.

<http://mygeologypage.ucdavis.edu/sumner/Home.html>



Artist and Writer Meredith Tromble has made drawings, installations and performances, often in collaboration with other artists or scientists, for dozens of exhibitions ranging from the Yerba Buena Center for the Arts in San Francisco, to the National Academy of Sciences in Washington, D.C. and BioBAT Art Space in Brooklyn. She has been artist-in-residence at the Complexity Sciences Center at the University of California, Davis (UCD), since 2011. Her ongoing collaboration with UCD

geobiologist Dawn Sumner has been presented internationally and was chosen as an "Exemplar Project" of interdisciplinary research by the Association for the Arts in Research Universities (a2ru) in 2015.

www.meredithtromble.net

The Company



Stephanie Cheung started dancing at the age of 13, beginning her training in classical ballet, studying with Marat Daukayev, David Wilcox, and Vera Ninkovic. She received her Bachelor's Degree from California State University, Long Beach. She has attended intensives with Alvin Ailey American Dance Theatre, Long Beach Ballet, Marat Daukayev Ballet School, and West Side Ballet.



Ani Darcey has trained and performed with Philadanco, the Martha Graham Dance Company, and Black Grace dance company from New Zealand. She was a showgirl in Donn Arden's Jubilee! in Las Vegas and is a member of Cabaret Versatile in Los Angeles. She has also performed at the Billboard Awards, on Jane the Virgin and been a part of numerous commercials and films as an actor.



Joseph Lister began his training in dance at Florida Dance Theatre in 2005 becoming a trainee with their professional company in 2008. Later he joined Smoke, Lilies and Jade in Philadelphia under Zane Booker and studied at the Alonzo King LINES Ballet training program. He has collaborated with and danced for many artists including Earl Mosley, Brigette Dunn-Korpela, and Ferdinand DeJesus among others.



Moises Josue Michel started his dance training at the age of 16 at Los Angeles County High School of the Arts, training in both Horton and ballet. After graduating he went to attend the University of the Arts (Philadelphia, PA) for his BFA in Dance. He has performed in works by Douglas Becker, Sidra Bell, Roni Koresh, and many others.



Rein Short earned a degree in Dance Performance from Towson University and moved to New York City where she was a freelance dancer. Rein has worked with companies and choreographers along the East Coast including American Dance Institute, Baltimore Ballet, Alexandra Rose and Katya Danko.