



workshops

NeuroDance

A Duet Between Brain and Movement

Workshops for dancers, choreographers, and scholars of body and movement

Motivation

In dance—an art form mediated through the moving body—understanding how the brain and body work together is an invaluable asset for artists. Insights from human physiology, neuroscience, movement science, and consciousness studies can profoundly enrich and refine the messages conveyed through movement. By exploring these scientific foundations, dancers, choreographers, and movement scholars can open up new creative pathways and deepen their artistic expression.

The NeuroDance workshops offered here draw on over 30 years of multifaceted experience exploring the intersection of neuroscience and dance. As a dance faculty member, researcher, and former Dean at the Jerusalem Academy of Music and Dance, Dr. Vered Aviv has taught and mentored countless dancers, integrating insights from neuroscience and movement studies into both theoretical and studio work.

These workshops are designed as hands-on, practical experiences specifically for the professional dance community. They blend scientific knowledge of the brain and body with physical practice in the studio, enabling participants to more consciously understand, explore, and harness the mechanisms that shape our ability to create and respond to movement.

Workshop Topics

Below are five workshops developed by Vered Aviv over the past several years. Each workshop stands alone, devoted to an in-depth exploration of a specific theme. Together, they integrate knowledge about the brain, consciousness, and movement. Each workshop lasts 4-5 hours.



Dancing Empathy

Observing human movement evokes kinesthetic empathy in us: a visceral, embodied response that informs us and prompts us to feel as if we are moving similarly to the dancer we are watching. It also leads us to attribute intentions to the person we are observing. In this workshop, we will present the brain mechanisms activated during such observation of a moving person (e.g., the “mirror system”), and together with the participants we’ll explore different forms of empathic identification with the movement of others, and how to enhance such empathy in the audience.



Embodied Presence

This workshop explores the phenomenon of “presence” of a dancer during a performance. It is based on cognitive, neuroscientific, cultural, and somatic perspectives. “Presence” is a measurable quality; it depends on inter-relational, real-time interactions between the dancer’s body, the audience, and the space. All these factors will be brought into conscious awareness and explored in practice during the workshop.



Reduction and Abstraction in Dance

Reductionist and abstract processes occur across the arts (e.g., in visual arts). Such reduction provides a powerful tool to capture the essence conveyed by a particular art form. In dance, abstraction takes a unique form because it is executed by the concrete (and very present) body of the dancer—so on the face of it, it may seem that abstraction is inapt to dance. However, this workshop is dedicated to exploring the unique processes of abstraction relevant to human movement and offers hands-on experimentation with various forms of reduction in dance. Consequently, it offers new expressive ways to utilize the dancer’s body, getting as close as possible to abstraction of movement in dance.



Touching Touch

Touch is one of our most fundamental ways of perceiving and relating to the world. It plays a crucial role not only in physical sensation but also in emotional connection, communication, and embodied understanding. In this workshop, we will explore different types of touch and their role in dance: from light, affective contact to deep, proprioceptive engagement—uncovering the rich sensory and expressive possibilities that touch offers. We will then examine the unique role of touch in dance, both as a dynamic element in performance and as an important tool in training, correcting, and stimulating dancers. The workshop will shed light on how tactile interaction can shape movement and artistic expression.



Rhythms, Synchronization, Unison

We will begin by observing natural biological (brain) oscillations/rhythms, heartbeat, and breath, and then experiment with how these rhythms can be expressed through movement. After that, we’ll practice several techniques for achieving movement synchronization between individuals and creating unison at varying levels of precision. Finally, we examine how these collective dynamics affect both performers and audiences, revealing the emotional and aesthetic power of moving together in time.

• workshop details will sent by request •

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Dr. Vered Aviv is a neuroscientist and artist working at the vibrant crossroads of art and science. She holds a Ph.D. in brain research from the Hebrew University of Jerusalem (1988). A former faculty member at the Bezalel Academy and the Jerusalem Academy of Music and Dance (JAMD), she founded and directed the M.A. program in Choreography and Dance Performance at JAMD, where she also served as Dean of the Dance Faculty (2020–2023).

Vered Aviv designed and taught a range of interdisciplinary courses for artists, including Neurasthenics, Acquisition of Motor Skills, Body Perceptions for Dancers and Musicians, and The Brain and the Senses.

Her research explores how the brain perceives art, with a particular focus on movement and dance, and how neural and perceptual processes shape artistic experience and expression. [List of publications](#).

In addition to her academic work, Vered Aviv is also an active painter, and her works have been exhibited in Israel and Europe. Her paintings pay special attention to the visual perception of human movement. [View artworks](#).