

Dance and the Brain

*A conference to explore the relationship
between Neuroscience and Dance*

December 8, 2017



Dance is an art form that involves whole body movement, precision of timing, balance, rhythmicity, learning and remembering movement, and emotional expression. Along with being a performance art, dance is used as a therapeutic form in patient populations such as those with Parkinson's disease, autism spectrum disorder, chronic pain and fatigue, and mental health disorders such as depression and anxiety. This conference will explore how researchers and clinicians are using dance to help heal such populations. Along with lectures from dance therapists and scientists studying the effects of dance on the brain, we will hear from dance scholars examining the use of dance as a way to heal communities, and see dance for video performances from choreographers based in and around the New York City area. There will be opportunities for open discussion on areas for new and exciting research and how to move the field forward. The conference is kindly hosted Virginia Davies (www.fasttwitchgrandma.com) and New York University.

Schedule of events

12:00-12:15 pm: Julia C. Basso

Dance to enhance brain plasticity – a multimodal form of exercise

12:15-12:30 pm: Šara Stranovsky

Cultural Crossroads: Creating new languages through choreography

12:30-12:45 pm: Aga Burzynska

The Dancing Brain: Different effects of dance training in young expert dancers and in amateur older adults

12:45-1:00 pm: Jody Oberfelder

Does Your Body Think? Do Your Neurons Dance?

1:00-1:45 pm: Lunch

1:45-2:00 pm: Gabrielle Revlock

Me, my hoop, and I

2:00-2:15 pm: Cecilia Fontanesi

Dance/Movement Therapy for Parkinson's and Alzheimer's disease

2:15-2:30 pm: David Leventhal

New directions: reimagining ways to explore the effects of live and virtual dance experiences on people with Parkinson's

2:30-2:45 pm: Emily Climer & Marie Lynn Haas

Emergent Forms

2:45-3:00 pm: Tamar Rogoff

BodyScripting: An Investigative Approach To Choreography

3:00 pm: Coffee and dessert

3:00-3:15 pm: Marijeanne Liederbach

Prediction of Injury among Elite Dancers: Three Years of Prospective Surveillance

3:15-3:30 pm: Ian Kremenic & Karl Orishimo

Effect of fatigue on landing mechanics in dancers compared to team-sport athletes

3:30-3:45 pm: Kathryn Butler

Surveys and Statistics: a numerical approach to measuring the dancer experience

3:30-3:45 pm: Tori Lawrence

Using Movement and Digital Media to Redefine Space

4:00-4:15 pm: Chris Swain

Low back pain in dance

4:15-4:30 pm: clyde forth

A Witness to Body and Mind: Stillness in Movement

4:30-4:45 pm: Joan Wittig

Dance Therapy and Depression: Integrating Body, Sensation, and Emotion

4:45-5:00 pm: Sean Hoskins

Sam Solo / (at least that is how i remember it)

5:00-5:15 pm: Gabrielle Lansner

Creating the Emotional Language of Dance

5:15-5:30 pm: Closing discussion

Presenter: Julia C. Basso

Title: Dance to enhance brain plasticity – a multimodal form of exercise

Abstract/Bio

Julia C. Basso is a post-doctoral research fellow in the Suzuki Laboratory at the Center for Neural Science at New York University. As a neuroscientist and dancer, she is interested in the body's ability to shape the brain. During her graduate years at Rutgers University, under the mentorship of Dr. Joan I. Morrell, she discovered that distinct regions within the reward circuitry of our brains help regulate the motivation for voluntary wheel running in the rodent. For her post-doctoral work, she is studying how exercise affects cognition, mood, and motivation from a behavioral, electrophysiological, and genetic perspective in humans. Collectively, this work is beginning to reveal that exercise has a bi-directional relationship on the brain. Future research interests lie in understanding the cellular and molecular mechanisms underlying the cognitive benefits of exercise on the brain. Additionally, she is interested in exploring the mechanisms supporting exercise motivation, why certain individuals are more inclined to exercise than others, and how we can get people more motivated to engage in this healthy behavior. She will soon be leaving New York University to be a Visiting Assistant Professor of Neuroscience at Middlebury College. Today she will be speaking about using dance as a tool to enhance brain plasticity and optimize brain health. (www.juliabasso.com)



Presenter: Aga Burzynska

Title: The Dancing Brain: Different effects of dance training in young expert dancers and in amateur older adults

Abstract

Dance is often used as therapy for different developmental and neurological disorders, such as autism, Parkinson's disease or dementia. Still, little is known on neural mechanisms of such therapy. Moreover, we still do not fully understand how dance affects young and older healthy brains. I will present results from two of our recent studies. In the first one, we compared 20 expert female modern dancers with age- and education-matched females with no dance experience. We showed that dancers performed significantly better on dance skill yet dance training did not transfer to benefits at a broad cognitive level. We observed no significant difference in cortical thickness in dancer's brains, but they had lower anisotropy in corticospinal tract, possibly indicating larger axons. Furthermore, dancers expressed action observation network to a larger extent than non-dancers, and had altered functional connectivity of action observation network and motor learning networks. Second study shows results of randomized clinical trial, in which 247 low-active older adults were randomized into walking, dance and stretching-toning interventions. We observed that dance resulted in increased integrity of the fornix, a white matter tract critical for memory and processing speed, whereas integrity of fornix decline in all other groups. Together, our results indicate differences in neural correlates between expert training at young age and amateur training in older age.

Bio

Agnieszka Z. Burzynska (Aga) is an Assistant Professor at the Colorado State University and the director of the BRAiN lab. Her research focuses on the effects of different lifestyle factors (e.g. physical activity, aerobic fitness, occupational exposures) on structural and functional brain health in aging. She completed her PhD at the Max Planck Institute for Human Development, for which she received Otto Hahn Medal from the Max Planck Society. She completed her postdoctoral training at the Beckman Institute at the UIUC.



Presenter: Kathryn Butler

Title: Surveys and Statistics: a numerical approach to measuring the dancer experience

Abstract

When studying dance through a scientific lens, understanding the dancer experience in a non-subjective, numerical way is vital. In this presentation, I will discuss current scholarly research on using surveys and statistics to measure dancer experience. Then, as a case study, I will discuss my senior thesis research in which I used surveys to compare the dancer experience for different groups, some working in-person with fellow dancers, and others collaborating remotely with the aid of synchronous and asynchronous internet tools.

Bio

Kathryn Butler is a recent graduate of Colby College where she majored in Theater and Dance and minored in Physics. Her work at Colby culminated with a senior thesis project exploring the use of scientific research methodology to study the process, product, and post-performance audience response and compare this data between dances created in-person and those created across a geographic divide. Currently, she lives in New York City and is pursuing the performing arts through teaching dance to children, along with continuing her choreographic and improvisational practices.



Presenters: Emily Climer & Marie Lynn Haas

Title: Emergent Forms

Abstract

Emergent Forms is a collaboration between filmmaker Elliot Caplan and choreographer Susan Sgorbati. The film offers a glimpse into the practice and performance of *Emergent Improvisation*, a dance practice that draws its structuring principles from patterns in the natural world. In linking the creative work of art-making (movement, sound, film) to the emergent processes evident in nature, there is basis for a rich and textured inquiry into how systems come together, transform and reassemble to create powerful instruments of communication, meaning and exchange. As a film, *Emergent Forms* weaves together studio footage and an interview with scientist Stuart Kauffman—offering a reflection on the deep interconnections between art and science at the heart of the practice.

Bio

Emily Climer and Marie Lynn Haas regularly collaborate in the development and performance of improvisational dance forms. They are both members of Susan Sgorbati's Emergent Improvisation Dance Project, and have collaborated with Susan in the writing of a chapbook called *Emergent Improvisation: on the nature of spontaneous composition where dance meets science*. From 2010-2014, they participated in the making of *Emergent Forms*, a film by Elliot Caplan through Picture Start Films. As part of their research in *Emergent Improvisation*, Emily and Marie developed their own improvisational duet form, the *Recall Form*. They have performed it as part of the Vision Festival (NYC), the Schools Festival at the Centre Nationale de Danse Contemporaine (Angers, France) and as part of Sgorbati's Creative Research Residency at EMPAC (Troy, NY).



Presenter: Cecilia Fontanesi

Title: Dance/Movement Therapy for Parkinson's and Alzheimer's disease

Abstract

Dance/Movement Therapy historically grounds itself in psychotherapeutic theories, while recent findings in neurophysiology and embodied cognition are adding to these frameworks, reinforcing and articulating the idea that the psyche is not separate from, and thus accessible through, the body. While neurological changes associated with physical exercise have been well researched and documented, dance has yet to receive the same attention and represents an area of extreme interest for further study given its many reported benefits.

Dance/movement therapy provides an opportunity for people to move, as much as a fundamental physiological function as an expression of being alive, supporting physical safety, efficiency of bodies and movements. Further, it provides opportunities for creativity, spontaneity, and acceptance. Finally, dance/movement therapy encourages group participation and social interaction, nurturing a sense of belonging, self-esteem, confidence, accomplishment, and mutual respect.

Bio

Cecilia Fontanesi is a dancer, certified movement analyst, neuroscientist, and dance/movement therapist. She graduated from the Laban/Bartenieff Institute of Movement Studies, LIMS (New York) in 2011, and is currently a PhD candidate at CUNY, The Graduate Center. In New York, she performed at Lincoln Center, New York Live Arts, Baryshnikov Arts Center, Baruch Performing Arts Center, Dixon Place, Triskelion Arts, Sheen Center, Chez Bushwick Studio, Chashama, and Greenspace. She is a dance consultant for Jody Oberfelder's The Brain Piece, and is a member of the artistic advisory board of IDACO nyc. In 2015, she co-founded Parcon NYC, a collective of dancers and movers dedicated to challenging our connection to the environment and social relationships, through play, movement, touch, and reflection.



Presenter: clyde forth

Title: A Witness to Body and Mind: Stillness in Movement

Abstract

In this performance-cum-lecture-demonstration I will attempt to weave together and explicate some practices that engage attention to movement through the active state of not moving. Just as many forms of meditation use absolute stillness to support the settling of the mind - in particular Zen meditation (zazen) - so in certain forms of improvisation similar techniques of stillness can be used and even carried forward into physical movement. I will focus in particular on variations of Authentic Movement, Butoh, and Compositional Improvisation, as well as unnamed forms I have developed myself over the last thirty years.

Bio

clyde forth is a dancer, choreographer and visual artist whose original work has been produced on stage and exhibited in galleries and museums in the US, Canada and the UK for over 20 years. She received her fine arts and dance training at Carnegie Mellon University (BFA 1991) and Bennington College (MFA 1996). clyde's teaching credits include guest artist residencies at University of the Arts, Montserrat College of Art, Hudson Valley Community College, Goucher College and Towson University. She has been on faculty at the Bennington College July Program, Eugene Lang College, and SUNY Ulster. She was awarded a 2005 Choreography Residency at Omi International Artist Residency in Ghent, NY and has performed in Jodi Kaplan's Booking Dance Festival, the Philadelphia Fringe Festival, Gilded Pony Festival in Troy, NY and the Trans-modern Festival in Baltimore MD. Ms. Forth is Founder and Artistic Director of Lokasparśa Dance Projects, a contemporary performing company working to dismantle barriers and create connection through dance performance and movement education. The company rehearses and offers classes in Woodstock, NY. (www.lokasparsadance.org)



Presenter: Sean Hoskins

Title: Sam Solo

Dancer: Samuel Horning

Music: The Album Leaf

Filming and Editing: Sean Hoskins

Title: (at least that is how i remember it)

Dancers: Sean Hoskins, Emma Seidel

Music: Zoë Keating

Filming and Editing: Sean Hoskins

Abstract

This dance made for the camera originated in an assignment given to my Music & Dance Relationships course at Wayne State University. Students were asked to "choreograph the music" in a one-to-one relationship: the sounds and phrases in the music being directly represented by movements of the dancer. Using around 30 seconds of choreography, filmed from multiple angles and zoom distances, I entered another phase of composition/choreography with the edit of the film, following the song (to which the student originally set his dance movements) from beginning to end.

Bio

Sean Hoskins investigates the intersections of dance and technology as a choreographer, performer, teacher, and screendance creator. He has a BA (Dance) from Middlebury College and an MFA (Choreography) from the University of Michigan. Sean has been active in the dance field for 20 years, presenting work in various locations throughout the country, including NYC, Detroit, Boston, San Francisco, and at the National College Dance Festival in Washington, D.C. He performed with Leslie Seiters' little known dance theater and ChavasseDance&Performance, as well as in works by Paul Matteson, Peter Schmitz, Jessica Fogel, and many other collaborators. Sean has taught workshops and courses at Wayne State University, Oakland University, Middlebury College, Bates College, and frequently at regional American College Dance Association conferences. He is currently the Dance Technology Coordinator and Production Assistant, as well as part time faculty at University of Michigan.



Presenter: Ian Kremenec

Title: Effect of fatigue on landing mechanics in dancers compared to team-sport athletes

Ian Kremenec, MEng, Karl Orishimo, MS, Marijeanne Liederbach, PhD, PT, ATC, CSCS, Evangelos Pappas, PhD, PT, OCS Marshall Hagins, PhD, PT, OCS

Abstract

Fatigue is strongly linked to an increased risk of injuries, including anterior cruciate ligament (ACL) ruptures. This study identifies differences in the biomechanics of landing from a jump between dancers and team athletes, particularly female athletes, which may explain the epidemiological differences in ACL injuries between dancers and team athletes and the lack of a sex disparity within dancers. However, it is not known if these biomechanical variables change differently between team athletes and dancers in the face of fatigue.

Bio

Ian Kremenec received his Bachelor's [1992] and Master's [1994] Degrees in Electrical Engineering, with a minor in Biomedical Engineering from The Cooper Union in New York City. His Master's Thesis dealt with the analysis of EMG signals recorded during fatiguing contractions using the wavelet transform. Since 1994, Ian has been a member of the multidisciplinary research team at NISMAT, working as a Research Associate and Network Administrator. His expertise is in the application of engineering principles to problems in biomedicine, especially with regard to signal processing techniques. Among his research interests and areas in which he has published are analysis of human motion, biomechanical testing of implants and surgical techniques, magnetic stimulation of muscle and evaluation of fatigue. Ian is a member of the Institute of Electrical and Electronics Engineers, the Biomedical Engineering Society and the American College of Sports Medicine, and is a reviewer for Clinical Biomechanics, Clinical Neurophysiology, The American Journal of Physical Medicine and Rehabilitation and Medicine and Science in Sports and Exercise. Since 2002, he has been an Adjunct Associate Professor of Biomedical Engineering at The Cooper Union. Ian is an avid downhill skier, and has recently taken to telemarking. He is interested in music production and technology, and is an extremely poor player of the Chapman Stick, a 12-stringed, guitar-like instrument.



Presenter: Gabrielle Lansner

Title: Creating the Emotional Language of Dance

Abstract/Bio

Gabrielle Lansner is a critically acclaimed choreographer and award winning filmmaker. As Artistic Director of the dance/theater group, gabrielle lansner & company, she has been dedicated to creating emotionally complex and layered works that tell stories, and that delve into the heart and psyche. She creates movement in collaboration with her performers through an improvisatory process that derives from a confluence of her experiences and the emotional lives of her performers. She is interested in capturing the psychological moments that inhabit the performer and how narrative can be expressed through that physicality. Gabrielle also has over 30 years of training and experience in multiple physical modalities including, dance, yoga, Kinetic Awareness, Feldenkrais and bio-energetics. (www.gabriellesansner.com)



Presenter: Tori Lawrence

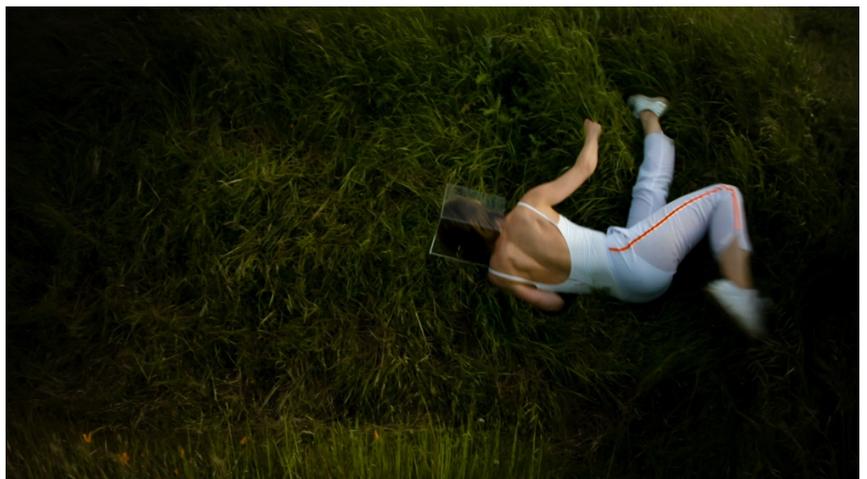
Title: Using Movement and Digital Media to Redefine Space

Abstract

Our surroundings, bodies, and minds have been historically and socially imprinted/refined. Mediated by the body, we are the product of being in the world and we are the product of the world being in us. If our being is intertwined with the material environment, then are we responsible for how we simultaneously exist and shape our surroundings? Are there consequences of the refinement and codes that we inflict upon the environment and ourselves? My dance company's site-specific performances and dance films examine the inherent spatiality of human life and how we are active participants in the construction of our intimate and global spatialities. Our live performances guide audiences into more active ways of perceiving and being present as they venture through space. Our work creates a liminal space for audience members to posit questions, have an active curiosity, and redefine past assumptions within a contemporary context.

Bio

Tori Lawrence is a choreographer and filmmaker who creates immersive site-specific dances, interdisciplinary performance installations, and dance films. Her work inspires an imaginative and sustainable way of looking at, thinking about, and using space. She was recently on faculty at the University of Kansas, where she taught choreography. She graduated from Franklin & Marshall College and received her MFA from the University of Iowa, where she was a recipient of the Iowa Arts Fellowship. She is the recipient of residencies at Djerassi, Playa, Charlotte Street Foundation, Dance Ireland, Brunakra (Sweden), and Workshop Foundation (Hungary). Her live performances and films have been presented nationally and internationally, including three site-specific performance commissions by the Barnes Foundation in Philadelphia and a commission for the stage by the Lawrence Arts Center. Philadelphia Weekly describes her site-specific work as “poignant,” “stunning,” and “arresting.” Her dance films have been presented by Philadelphia Dance Projects, Stockholm Screendance Festival, Screendance Africa, Portland Maine Film Festival, Dock11 (Berlin), Legion Arts, and Cyprus International Film Festival, amongst others. (www.torilawrence.org)



Presenter: David Leventhal

Title: New directions: reimagining ways to explore the effects of live and virtual dance experiences on people with Parkinson's

Abstract

Thirty-eight published studies point to the wide range of benefits that dance provides to people living with Parkinson's (PD). However, more research is needed to try understand the underlying mechanisms behind dance's positive effects and to determine how best to deliver dance interventions in this increasingly digital world. After providing a brief overview of the Mark Morris Dance Group's global program--Dance for PD®--this presentation will explore two distinct but related cutting-edge research initiatives: one that pilots the use of a dance-based augmented reality platform as a portable cueing system, and another that attempts to design and choreograph a motor control-guided dance intervention that focuses on walking speed.

Bio

David Leventhal is a founding teacher and Program Director for Dance for PD®, a program of the Mark Morris Dance Group that has now been used as a model for classes in more than 140 communities in 24 countries. He leads classes for people with Parkinson's disease around the world and trains other teachers in the Dance for PD® approach around the world. He's co-produced three volumes of a successful At Home DVD series for the program and has been instrumental in initiating and designing innovative projects involving live streaming and Moving Through Glass, a dance-based Google Glass App for people with Parkinson's. He received the 2016 World Parkinson Congress Award for Distinguished Contribution to the Parkinson's Community and was a co-recipient of the 2013 Alan Bonander Humanitarian Award from the Parkinson's Unity Walk. Leventhal has written about dance and Parkinson's for such publications as Dance Gazette and Room 217, and has a chapters about the program in two recently published books: Moving Ideas: Multimodal Learning in Communities and Schools (Peter Lang), and Creating Dance: A Traveler's Guide (Hampton Press). He is in demand as a speaker at international conferences and symposiums, and has spoken about the intersection of dance, Parkinson's and health at the Lincoln Center Global Exchange, Edinburgh International Culture Summit, University of Michigan, Rutgers, Penn State Hershey Medical Center, Brown, Stanford, Columbia, Georgetown, Tufts, and Centre Hospitalier Universitaire de Liège (Belgium), among others. He serves on the boards of the Davis Phinney Foundation, the Georgetown Lombardi Comprehensive Cancer Center's Arts and Humanities Program, and the Dance & Creative Wellness Foundation. Leventhal designed and currently teaches a pioneering dance-based elective course that is part of the Narrative Medicine curriculum at Columbia University's College of Physicians and Surgeons. He's featured in the award-winning 2014 documentary Capturing Grace directed by Dave Iverson. As a dancer, he performed with the Mark Morris Dance Group from 1997-2011, appearing in principal roles in Mark Morris' The Hard Nut, L'Allegro, il Penseroso ed il Moderato, and Prokofiev's Romeo & Juliet, on Motifs of Shakespeare. Leventhal received a 2010 Bessie (New York Dance and Performance Award) for his performing career with Mark Morris. He graduated from Brown University with honors in English Literature.



Presenter: Marijeanne Liederbach

Title: Prediction of Injury among Elite Dancers: Three Years of Prospective Surveillance

Marijeanne Liederbach, PhD, PT, ATC, CSCS, Evangelos Pappas, PhD, PT, OCS

Abstract

Injuries in dance are commonplace and distressing in terms of human and financial impact. It is the hope of dance medicine healthcare professionals and educators to detect risk for injury prospectively. Screening has been useful for rapport building and improving health literacy, however screening, has still not proven to be predictive of injury. The purpose was to test the predictive validity of four patient reported outcomes (PRO) that assess perception of fatigue, mood states, discomfort and eating attitudes in addition to an array of motor control based clinical performance based outcomes (CPBO) collected during preseason screening in predicting subsequent season time loss injury. 241 elite classical dancers who received regular onsite care consented to participate in PRO and CPBO based preseason screenings and ongoing, healthcare practitioner documented injury surveillance. PRO's appear to be more accurate in predicting injury among dancers than CPBO's. Given dancers have a 3x higher risk of suffering from eating disorders compared to non-dancers, it was useful to determine that the eating attitudes outcome predicted those at higher risk for subsequent injury because of the increased incidence of exercise dependence among dancers and the effects of fatigue.

Bio

Marijeanne Liederbach, PhD, PT, ATC, CSCS is Director of the Harkness Center for Dance Injuries at NYU Langone Orthopedic Hospital and Research Assistant Professor in the Department of Orthopedic Surgery at NYU School of Medicine. Prior to her current appointment, she headed the Dance Medicine Services for The Joffrey Ballet while serving as Supervisor of Sports Physical Therapy at the Nicholas Institute of Sports Medicine and Athletic Trauma at Lenox Hill Hospital and Instructor of Kinesiology at Columbia University. She is a physical therapist and certified athletic trainer with a doctorate in biomechanics and ergonomics. Dr. Liederbach has long served on the Editorial Review Board of the *Journal of Dance Medicine and Science*, the National Advisory Committee for the American Physical Therapy Association's Performing Arts Practice Analysis and the DanceUSA Task Force on Dancer Health. She is an elected Affiliate Member of the American Orthopedic Society for Sports Medicine, a Founding Member of the International Association for Dance Medicine and Science as well as Chair of its Standard Measures Consensus Initiative. Prior to her career in Dance Medicine, Dr. Liederbach danced professionally and worked as a choreographer. Her critically acclaimed work has been shown in Europe and throughout the United States. In 2010, she was inducted into the Hall of Fame of the Dance Library of Israel by Broadway sensation, Ben Vereen.



Presenter: Jody Oberfelder

Title: Does Your Body Think? Do Your Neurons Dance?

Abstract

Oberfelder will show her award winning film: Dance of the Neurons in which 24 dancers simulate all the fun things the brain is and does: the birth of neurons and synaptic connections. Following the screening, we focus on the physicality of neurons, of the mind working and playing in concert with the body.

Bio

Jody Oberfelder is a director, choreographer, and filmmaker, creating tangible and visceral experiences for audiences. Her work has been shown internationally in venues including Museu dos Biskeinhos (Braga, Portugal), NoD (Prague), Gallus Theater (Frankfurt), Guelph Dance Festival (Canada), New York Live Arts, PS 122, 92 Y, Dixon Place, Lincoln Center, and others. Her most recent project “The Brain Piece” premiered at New York Live Arts June 2017. Oberfelder has created ten short films screened at Lincoln Center: The Dance on Camera Festival, Cannes Short Film Festival, Bryn Mawr Silver Screen Festival, Fargo Film Festival, Dance Camera West, Worlding the Brain Symposium, Braga Festival Video Portugal, Cinedans (Amsterdam), VideodanceBA (Buenos Aires), InShadow (Lisbon) and more.



Presenter: Karl Orishimo

Title: Effect of fatigue on landing mechanics in dancers compared to team-sport athletes.

Ian Kremenec, MEng, Karl Orishimo, MS, Marijeanne Liederbach, PhD, PT, ATC, CSCS, Evangelos Pappas, PhD, PT, OCS Marshall Hagins, PhD, PT, OCS

Abstract

Fatigue is strongly linked to an increased risk of injuries, including anterior cruciate ligament (ACL) ruptures. This study identifies differences in the biomechanics of landing from a jump between dancers and team athletes, particularly female athletes, which may explain the epidemiological differences in ACL injuries between dancers and team athletes and the lack of a sex disparity within dancers. However, it is not known if these biomechanical variables change differently between team athletes and dancers in the face of fatigue.

Bio

Karl Orishimo received his Bachelor's Degree in Bioengineering from the University of Pennsylvania (1998) and his Master's Degree in Biomedical Engineering from the University of Virginia (2000). In 2010, Karl also earned his Certification as a Strength and Conditioning Specialist (CSCS). From 2000 to 2003, Karl was a research associate/engineer at the Anderson Orthopedic Research Institute where he studied clinical and biomechanical factors related to the wear of total joint replacements. Since 2003, Karl has been a Biomechanist and Research Associate at the Nicholas Institute of Sports Medicine and Athletic Trauma [NISMAT] at Lenox Hill Hospital in New York City, working with a multidisciplinary research team. His expertise is in biomechanics, human performance and in the application of engineering principles to problems in biomedicine.

Among his research interests and areas in which he has published are the analysis of human motion, injury biomechanics, and testing of implants and surgical techniques. Karl is a member of the American College of Sports Medicine, the American Society of Biomechanics, the International Society of Biomechanics and the National Strength and Conditioning Association. He has served as a reviewer for Clinical Biomechanics and Human Movement Science and, since 2006, he has been an Adjunct Associate Professor of Mechanical Engineering at The Cooper Union.



Presenter: Gabrielle Revlock

Title: Me, my hoop, and I

Abstract

When I first started hooping in 2006 I was attracted to the mesmeric quality of the hoop but also intrigued by it as a demanding object, a limitation, a barrier. Like a ball, it is a perfect toy. Based on its structure, it insists that I attend to it in very specific ways -- maintaining a constant pulse, radiating from my hips or hand through my entire body but yet its simplicity of design and invitation to play cultivates curiosity and experimentation. I find that each time I pick up the hoop I discover new things about my own body, space, rhythm, and sensation. Because of its ongoingness there is a feedback loop where I animate it but it animates me in return. In one sense we are partners negotiating the dance. In another, the hoop is an extension of my body, my new body. The presentation will include two video excerpts, one is an improvisation shot at Omi International Arts Center the other, "Liberation" is a collaboration with video artist André Daughtry.

Bio

Gabrielle Revlock is a dance-maker and performer known for her signature work with the hoop and her "inventive", "rambunctious", and "mesmerizing" choreography. Presenters include American Dance Festival, JACK, Gibney Dance Center, Center for Performance Research, New York Live Arts, Omi International Arts Center, FringeArts, Kelly Strayhorn Theater, Seattle International Dance Festival, Philadelphia Dance Projects, ODC, Velocity Dance Center, Dance Place, The Public Theater, Bryn Mawr College, Provincetown Dance Festival, Joyce SoHo, and The Annenberg Center for the Performing Arts. She has performed in the Na Grani Contemporary Dance Festival (Russia), Whenever Wherever Festival (Japan) Yokohama Dance Collection (Japan), Trafó (Hungary), Korzo (Netherlands), M1 CONTACT Contemporary Dance Festival (Singapore), and Small Format Contemporary Dance Festival (Russia). Her work has been supported by The Pew Center for Arts & Heritage, and Independence Foundation Fellowship, a LAB Fellowship through FringeArts, Pennsylvania Council on the Arts, SCUBA National Touring Network for Dance, Puffin Foundation, Philadelphia-Poland Exchange, Philadelphia-Budapest Exchange and the US Consulate in Yekaterinburg. In 2011 she won a finalist prize at The A.W.A.R.D. Show for "I made this for you" a critique of competitions which contributed to the termination of that contest. Choreographic residencies include Chez Bushwick, New Dance Alliance's LiftOff, Dance Omi, Culture Mill in cooperation with American Dance Festival, and New York Live Art's Fresh Tracks. As a dancer, she has performed for Lucinda Childs, Susan Rethorst, Jumatatu Poe, Christopher Williams, Jeanne Ruddy, Suzanne Linke, Mark Dendy, Bill Young, Jody Oberfelder, and is a company member with Jane Comfort and Company. Gabrielle hold a BA in Art History from Vassar College.



Presenter: Tamar Rogoff

Title: Enter the Faun: a choreographer trains an actor with cerebral palsy to dance

Abstract

Rogoff's documentary film, with Daisy Wright, *Enter The Faun*, tells the story of her training of Gregg Mozgala, an actor with cerebral palsy, who danced with her company in *Diagnosis of a Faun* at La MaMa. The documentary film has toured to fifty film festivals in USA and abroad in the last three years, linking the worlds of art and disability through screenings and workshops for the medical, disability, and dance communities. Rogoff has taught her dance lab class for 35 years and taught for many years at NYU's Experimental Theater Wing. She was movement coach to Claire Danes for the film *Temple Grandin*. Her newest piece, *Grand Rounds*, premiered at La MaMa in April of 2017.

Bio

Tamar Rogoff is a choreographer and filmmaker who explores the outer limits of how people negotiate extreme circumstances. She combines unlikely company members, on the lookout for ways to tell difficult stories. Rogoff has developed a method for teaching and choreographing she calls, BodyScripting, her way of expanding awareness of the body through experiencing one's own anatomy. Rogoff does multidisciplinary, multigenerational, inclusive, and site-specific dance and film. Her work has been shown at P.S. 122, La MaMa, Kennedy Center, Lincoln Center and abroad. She has been funded by the National Endowment for the Arts, Rockefeller MAP Grant, NYFA, Sundance and was a Guggenheim Fellow.



Presenter: Šara Stranovsky

Title: Cultural Crossroads: Creating new languages through choreography

Abstract

What happens when people in a community are unable to express themselves fully due to geographic displacement or due to changes in community membership? What happens at a cultural crossroads when too many influences make a common sense of community seemingly impossible? Dances that are rooted in community-building have the communicative power to bring fragmented societies together, create kinesthetic empathy, and help a community to regain a sense of power over their fragmented senses of identity. Dance can be a powerful engine for generating new languages and new forms of communication that cannot be expressed verbally. By looking at a specific crossroads community in Cabo Verde West Africa, a place that is both *isolated* as an archipelago while at a crossroads of global exchanges, we can better understand how dance cultivates new non-verbal languages and establishes what anthropologists call “communitas”—a deep sense of togetherness. Using Cape Verdean national dance company Raiz di Polon as a main example, this presentation shows how a unique choreographic style helps to communicate togetherness for a fragmented community.

Bio

Šara Stranovsky is a scholar and interdisciplinary artist of dance, music, and multimedia artist based in Brooklyn New York. She holds a MA and PHD from UCLA's Department of World Arts and Cultures/Dance in *Culture and Performance Studies* and her dissertation was called, “Dancing at the Crossroads with Raiz di Polon: Contemporary Dance, Seas of Sodadi and Corporeal Creolization.” As a dancer, she has performed in the Off-Broadway immersive aerial show *Fuerza Bruta Wayra*, and other immersive theater shows as a musician and dancer. She currently works as a teaching artist and educator for various cultural institutions in New York, including BAM and the Museum of the City of New York.



Presenter: Chris Swain

Title: Low back pain in dance

Abstract

This presentation will provide a brief examination of physical and neurobiological contributors to low back pain. It will then examine the epidemiology of low back pain and injury in dance, and present findings from a nine-month longitudinal study conducted with 119 pre-professional and professional dancers in Australia.

Bio

Chris Swain is an Australian PhD student. His PhD is tentatively titled 'The epidemiology and biomechanics of low back pain in dance' and he was a recipient of a 2017 Endeavour Fellowship, which allowed him to spend 6 months working with the Harkness Centre for Dance Injuries, New York.



Presenter: Joan Wittig

Title: Dance Therapy and Depression: Integrating Body, Sensation, and Emotion

Abstract

Dance/movement therapists use movement and body-focused work as the primary way of practicing therapy. Dance/movement therapy doesn't privilege words; rather it invites clients to rely on the wisdom and memory stored in their bodies, and to let this guide access to emotions. Movement leads to memories held in the body. The origins of emotional experience can be found in the body, especially if they are preverbal in nature. People struggling with depression have often lost contact with their bodies, and so with their sense of aliveness. Movement facilitates a sense of aliveness, and leads the mover back to a sensory experience that can lessen the experience of isolation and desperation that often accompanies depression. This talk will explore the use of movement improvisation as an approach to treating depression, with a focus on the process of integrating body, sensation, and emotion as a path to emotional health.

Bio

Joan Wittig MS, BC-DMT, LCAT is the co-founder and former director of the Graduate Dance/Movement Therapy Program at Pratt Institute, and is currently a full-time faculty member there. Wittig is also founder and director of the New York Center for the Study of Authentic Movement; Program Director of the dance therapy program for Inspirees International, the first dance therapy training program in China; and is on the faculty for Dance Therapy New Zealand. Wittig teaches and presents internationally, and has a private practice in New York City.



Additional Collaborators

Collaborator: Marshall Hagins

Title: Effect of fatigue on landing mechanics in dancers compared to team-sport athletes.

Ian Kremenec, MEng, Karl Orishimo, MS, Marijeanne Liederbach, PhD, PT, ATC, CSCS, Evangelos Pappas, PhD, PT, OCS Marshall Hagins, PhD, PT, OCS

Bio

Dr. Marshall Hagins was a dancer on Broadway before obtaining his BS in physical therapy, and a masters and PhD in Biomechanics and Ergonomics from New York University and a second doctorate from the University of St. Augustine in manual physical therapy. Dr. Hagins is Emeritus Professor at Long Island University having taught in the physical therapy program for 20 years. He is a Senior Clinical Research Associate at Harkness Center for Dance Injuries in Manhattan and a Board Certified Clinical Specialist in Orthopedics. Dr. Hagins has received over one million dollars in grant funding from the National Institute of Health and has published over 40 papers in peer reviewed journals in the areas of Dance Medicine, Sports Injuries, Ergonomics, and Alternative Medicine (yoga).



Additional Collaborators

Collaborator: Evangelos Pappas

Title: Effect of fatigue on landing mechanics in dancers compared to team-sport athletes.

Ian Kremenec, MEng, Karl Orishimo, MS, Marijeanne Liederbach, PhD, PT, ATC, CSCS, Evangelos Pappas, PhD, PT, OCS Marshall Hagins, PhD, PT, OCS

Title: Prediction of Injury among Elite Dancers: Three Years of Prospective Surveillance

Marijeanne Liederbach, PhD, PT, ATC, CSCS, Evangelos Pappas, PhD, PT, OCS

Bio

Evangelos Pappas trained as a physiotherapist in Thessaloniki, Greece before pursuing a Masters in Orthopaedic Physical Therapy at Quinnipiac University and a PhD in Orthopaedic Biomechanics at New York University. Prior to joining the University of Sydney, he taught for 11 years at Long Island University-Brooklyn Campus in kinesiology, clinical decision making and musculoskeletal pathology and physiotherapy. His excellence in teaching was recognized by his nomination for the Newton award for excellence in teaching. A/Professor Pappas joined the University of Sydney in 2013 where he continues to lecture in the areas of musculoskeletal physiotherapy, and particularly as it relates to the upper and lower extremities. A/Professor Pappas is also active in musculoskeletal research. His research has been funded by the National Institutes of Health and intramural grants. He has presented his work in more than 50 national and international conferences and he has been interviewed on the radio as an expert on knee injuries. His publications appear in top journals in the fields of physiotherapy, sports medicine and biomechanics. One of his publications received the T. David Sisk award for best review paper from Sports Health; a leading multidisciplinary journal in sports medicine. In addition, A/Professor Pappas has served on the research subcommittee of the awards committee of the American Physical Therapy Association. A/Professor Evangelos Pappas' research interests are in the areas of sports medicine, biomechanics and musculoskeletal physiotherapy. Specifically, his interests are in the areas of etiology of lower extremity sports injuries, effectiveness of injury prevention programs, motor control re-training for the prevention and treatment of knee pathologies, epidemiology of ACL injuries, rehabilitation of lower extremity injuries, and dance medicine.

