

2<sup>nd</sup> Annual International  
Neurodiversity *and the*  
Built Environment Symposium:

# IMMERSIVE EXPERIENCES

FRIDAY, OCTOBER 22, 2021

Presented by the **Synesthetic Research and Design Lab**  
at the College of Architecture and the Built Environment  
in collaboration with the **Center for Autism and  
Neurodiversity**, Jefferson Health.

Building upon last year's symposium, **Neurodiversity: Building Community and Rethinking the Built Environment**, this year's dialogue focuses on **immersive experiences, responsive environments, spatial interactions, and experimental evaluative and physiological measuring tools and criteria**. It also includes advocacy, spatial and social frameworks, and bottom up initiatives.

These serial events are intensely **cross-disciplinary** and aim towards critical interactions addressing **all-inclusive ways for inhabiting and perceiving our environments**. They aim to stimulate international dialogue amongst designers, artists, medical field experts, tech companies, educational institutions, self-advocates, and caregivers.

# SCHEDULE

9 – 9:20 A.M.	9:30 – 10:45 A.M.	11 A.M. – 12:15 P.M.	12:30 – 1:45 P.M.	2 – 3:15 P.M.	3:15 – 4:45 P.M.
INTROS	INTERACTION & RESPONSE	FRAMEWORKS & IMPLEMENTATIONS	EXPERIENCE, ART & HEALTH	SOCIAL SPACES & SUPPORT MECHANISMS	CONCLUDING REMARKS
<p><b>9 – 9:10 A.M.</b> Severino Alfonso &amp; Loukia Tsafoulia <i>Synesthetic Research &amp; Design Lab</i></p> <p>Wendy J. Ross, <i>Center for Autism and Neurodiversity – Jefferson Health</i></p>	<p><b>9:30 – 9:45 A.M.</b> <b>Spatial Animacy: Designing Interactive Environments through Kinesthetic Empathy</b> Harry Krekoukiotis</p>	<p><b>11 A.M. – 12:15 P.M.</b> <b>Normalisation to Neurodiversity: Changing Perceptions</b> Merry Barua</p> <p><b>Inclu.de: Inclusion, Design, Allyship, Advocacy</b> Shaneel Mukerji</p>	<p><b>12:30 – 12:45 P.M.</b> <b>Art and Health Interventions – Transferring Mediated Aesthetic Experiences from the Gallery/Museum to Healthcare</b> Lyn Godley &amp; Anita Kocsis</p>	<p><b>2 – 2:15 P.M.</b> <b>The Value of Natural Environments: Healing through Immersive Wilderness Therapy Experiences.</b> Tony Issenmann</p>	<p>Severino Alfonso, <i>Synesthetic Research &amp; Design Lab</i></p> <p>Wendy J. Ross, <i>Center for Autism and Neurodiversity – Jefferson Health</i></p> <p>Loukia Tsafoulia, <i>Synesthetic Research &amp; Design Lab</i></p>
<p><b>9:10 – 9:15 A.M.</b> <b>Remarks I</b> Mark Tykocinski</p>	<p><b>9:45 – 10 A.M.</b> <b>Building A Nervous System for the Built Environment</b> Mikael Avery, Alessandro Napoli &amp; Mijail Serruya</p>	<p><b>11:15 – 11:25 A.M.</b> <b>How Human-Centered Design Creates The Matrix an Inevitable Overlap of Virtual and Physical Spaces</b> Tendo: Jen Goldsmith &amp; Hilary Scharton</p>	<p><b>12:45 – 1 P.M.</b> <b>Art Therapy for the Neurodiverse</b> Rachel Brandoff &amp; Reina Lombardi</p>	<p><b>2:15 – 2:30 P.M.</b> <b>Building Community and Independence in a Shared Space...One Tool at a Time!</b> Amy McCann</p> <p><b>Identity, Design, and Virtual Worlds</b> Corinne Gray</p>	<p>Speakers &amp; Participants</p>
<p><b>9:15 – 9:20 A.M.</b> <b>Remarks II</b> Stephen K. Klasko</p>	<p><b>10 – 10:15 A.M.</b> <b>Affective Matter: A Haptic Material Modality for Emotion Regulation and Communication</b> Athina Papadopoulou</p>	<p><b>11:25 – 11:45 A.M.</b> <b>Autistic Imaginaries of Architectural Space</b> Magda Mostafa &amp; Rachel Updegrave</p>	<p><b>1:05 – 1:15 P.M.</b> <b>The Grey Area Between Autism and Immersive Environments</b> Autisarian Network, Lonnie Smith</p>	<p><b>2:30 – 2:45 P.M.</b> <b>Esports Infrastructure Inclusion</b> Nerd Street Gamers, Taryn McCarty</p> <p><b>Creating Immersive Virtual Environments with and for Individuals with Autism</b> nonPareil Institute, Kyle Barton &amp; Mark Theurer</p>	
<p><b>9:20 – 9:25 A.M.</b> <b>Remarks III</b> Barbara Klinkhammer</p>	<p><b>10:15 – 10:45 A.M.</b> <b>In Dialogue</b></p>	<p><b>11:45 A.M. – 12:15 P.M.</b> <b>In Dialogue</b></p>	<p><b>1:15 – 1:45 P.M.</b> <b>In Dialogue</b></p>	<p><b>2:45 – 3:15 P.M.</b> <b>In Dialogue</b></p>	

# BIOS

## INTRODUCTORY REMARKS

### **STEPHEN K. KLASKO, MD, MBA**

*President, Thomas Jefferson University  
Chief Executive Officer, Jefferson Health*

**Stephen K. Klasko, MD, MBA**, is an advocate for transformation in health care and higher education. As president and CEO of Philadelphia-based Thomas Jefferson University and Jefferson Health since 2013, he leads one of the nation's fastest growing academic health institutions based on his vision of "healthcare at any address." Jefferson Health has grown from two to 18 hospitals, including a Medicare payor organization and a pioneering connected care initiative. His 2017 merger of Thomas Jefferson University with Philadelphia University created a professional university with top-20 programs in fashion, design, health, and the first design-thinking curriculum in a medical school. His track record earned him a place tied for #2 "Most Influential" individuals by Modern Healthcare 2018, and as #21 in Fast Company's 100 Most Creative People in Business 2018. He is an obstetrician, has been dean and CEO of two additional colleges of medicine, and believes that creativity is the key skill for students in the age of augmented intelligence and robotics.

### **MARK L. TYKOCINSKI**

*EVP and Provost,  
Thomas Jefferson University  
Dean, Sidney Kimmel Medical College*

**Mark L. Tykocinski, MD**, is the Provost at Thomas Jefferson University and Executive Vice President for Academic Affairs at Thomas Jefferson University, The Anthony F. and Gertrude M. DePalma Dean, Sidney Kimmel Medical College of Thomas Jefferson University. Dr. Tykocinski serves Provost, Executive Vice President for Academic Affairs, Thomas Jefferson University, and the Anthony F. and Gertrude M. DePalma Dean of Sidney Kimmel Medical College at Thomas Jefferson University. Before joining Jefferson in 2008, he was Professor and Chair of the Department of Pathology and Laboratory Medicine at the University of Pennsylvania School of Medicine. His research contributions have been in the fields of molecular and cellular immunology, for which he holds a series of research patents. He serves as SAB Chair for KAHR-Medical, the Israeli biotech company he founded in 2007 for fusion protein pharmaceuticals. He earned a BA in biology magna cum laude from Yale University and his MD from New York University.

### **BARBARA KLINKHAMMER, RA (DEU), DIPL.-ING**

*Dean and Professor, Thomas Jefferson University, College of Architecture and the Built Environment (CABE)*

An accomplished scholar, design educator, and architect, **Barbara Klinkhammer, RA (DEU) Dipl.-Ing.**, serves as Dean of the College of Architecture and the Built Environment at Thomas Jefferson University. Klinkhammer brings a deep understanding of the contemporary professional design world and a timely vision of the future of design education. An expert on color theory, she has numerous publications and grants to her name focusing on color in the built environment. She co-founded the Jefferson Institute for Smart and Healthy Cities and actively takes part in the discourse of contemporary architecture through practicing and participation in international design competitions. She has served in leadership and board positions of numerous professional and academic organizations including the ACSA, ARCC and SESA and served as the co-editor of ARRIS. Klinkhammer holds the German equivalent of the Bachelor and Master's degrees in architecture from the RWTH-Aachen and is a registered architect in Germany.

# INTERACTION & RESPONSE

## **SPATIAL ANIMACY: DESIGNING INTERACTIVE ENVIRONMENTS THROUGH KINESTHETIC EMPATHY**

As ubiquitous computing is being woven deeper into the fabric of our everyday lives accelerated through the ongoing pandemic, the need for intuitive, embodied and inclusive applications of technology is becoming increasingly apparent.

Our daily interactions are becoming increasingly virtual, however the core of human experience is still intensely embodied and situated in a 3-dimensional physical world. Spatial design becomes informed by Human-Computer Interaction, but needs to display interactivity that transcends mere responsiveness while acknowledging the importance of embodied, material and kinesthetic aspects of our human experience.

How might we create spaces that sense our emotional states and respond in meaningful behaviors that would elicit a sense of animacy of the space itself? To what extent would this alter our perception of the space? How can digital information be manifested in physical form and contribute to the cognitive offloading of our technologically-saturated lives?

This presentation will address these questions through the lens of an ongoing, collaborative research project titled

Spatial Animacy, an interactive kinetic environment, exploring kinesthetic empathy and perceived animacy in architectural space.

### **HARRY KREKOUKIOTIS**

*Architect, Interaction Designer, Human-Computer Interaction Researcher*

**Harry Krekoukiotis** is an architect, interaction designer and researcher, exploring Augmented Materiality at the intersection of Architecture, Media Art and Human-Computer Interaction (HCI). He holds a professional degree in Architecture Engineering (Dipl. Eng.) and MSc in Design, Space, Culture from National Technical University of Athens, Greece (NTUA). As a Japanese Government Scholar (MEXT Scholarship), he has graduated from Keio University Graduate School of Media Design (KMD) with a Master in Media Design and is a Research Assistant and PhD candidate at Embodied Media Lab, KMD, where he leads the Hybrid Spaces research group. His research and work have been featured in HCI conferences and media art exhibitions in Japan and internationally.

## **BUILDING A NERVOUS SYSTEM FOR THE BUILT ENVIRONMENT**

For the Cortimo and NuroSleeve clinical trials, the Neurorestoration team at Jefferson built the "FREEDOM" software platform that can take multiple, parallel, simultaneous inputs, decode patterns in

them, and then use the results to trigger one or more effectors. This talk extends the idea of using the FREEDOM platform from inside and on the body to the built environment, to function as a kind of "artificial nervous system" embedded in that environment to sense and respond. For users with motor disabilities, the system can seamlessly link to "smart home" features (lights, appliances, thermostat) to improve independence. For people with altered sensory perception, one can envision a nuanced affective regulatory interface, where sensors detect kinematic and autonomic parameters to instantaneously modify qualities of light, sound, humidity, temperature, and physical structure of the room by opening and closing doors, windows, shades, vents, partitions and other features. The more people that interact with this platform- and the more neurodiverse the range of these people- the more the embedded artificial intelligence can learn and hence better benefit those who use, reside and navigate through that built environment.

### **MIKAEL AVERY, MS, OTR/L, M.Arch**

*Visiting Assistant Professor, Thomas Jefferson University, Kanbar College of Design, Engineering, and Commerce, College of Rehabilitation Sciences*

**Mike Avery** is a designer, educator, maker, and healthcare professional working at the intersection of architecture, product design, and health. He believes that the

true measure of a project's success is evaluated by how well it aligns with the desires, needs, and goals of those who will engage with the objects, spaces, and experiences we create. Foregrounding this person-first perspective, Mike harnesses his diverse background and training, as a member of nuomo, llc., to help create the next generation of assistive devices.

**ALESSANDRO NAPOLI, PhD**

*Clinical Research Lead Engineer,  
Neurorestoration, Thomas Jefferson  
University*

**Dr. Napoli** received PhD in Electrical and Computer Engineering from Temple University in May 2014. Dr. Napoli's areas of expertise are physiological signal processing, brain computer interfaces, Research and Development, and more in general the application of engineering tools, including hardware and software, to address unmet clinical needs. Dr. Napoli is currently leading the Neurorestoration engineering team at Thomas Jefferson University. The R&D team is involved in a broad range of clinical trials that aim to improve functional and clinical outcomes for patients affected by neuromuscular impairments.

**MIJAIL SERRUYA, MD, PhD**

*Director, Neurorestoration@Jefferson*

**Mijail "Misha" Serruya, MD, PhD**, is a physician-scientist interested in developing wearable and implantable neurotechnology. Born and raised in Philadelphia, Dr. Serruya earned undergraduate, graduate neuroscience, and medical degrees at Brown University. He was a Co-Founder of Cyberkinetics, the first company to work on a chronically

implantable brain computer interface to restore function in people living with paralysis. He completed a residency in neurology at the University of Pennsylvania, with pediatric rotations at CHOP. He has pursued post-graduate training in cognitive neurology, pediatric psychopharmacology, and clinical hypnosis. He joined the faculty at Jefferson in 2011, where he helped direct the Comprehensive Concussion Center and subsequently helped direct the Executive Brain Health Program at the Marcus Center for Integrative Medicine. Currently he is launching the Neurestoration@Jefferson initiative that seeks to deploy clinical trials evaluating new neurotechnologies to help restore mobility, relieve pain and augment cognitive function in children and adults living with neurological disease and injury.

**AFFECTIVE MATTER: A HAPTIC MATERIAL MODALITY FOR EMOTION REGULATION AND COMMUNICATION**

Our emotions do not always surface into our awareness, making it difficult to put them into words. When emotions do not reach our cognitive awareness, they can still express themselves as physiological changes in our body, often unperceived by ourselves and by others. To facilitate emotion regulation and expand the bandwidth of emotion communication, I developed Affective Matter. Affective Matter is a haptic material modality that allows information about the physiological aspects of emotions to be communicated through materials. Through the development of Affective Matter, I aim to enhance intrapersonal and interpersonal affective communication through haptic

means and contribute to sensory-based therapies for emotional disorders. I will discuss the development of two types of programmable affective sleeves, as examples of Affective Matter, and the results of two conducted studies testing the psychophysiological impact of each of the sleeves. I will also briefly discuss a user interface I developed that allows for user customization of the sleeves and communication between two individuals wearing the sleeves. Affective Matter suggests a method for human-material therapeutic interaction, where bodies and their material environments can work in synergy to enhance our emotional wellbeing.

**ATHINA PAPADOPOULOU**

*Architect and Design Computation  
Researcher, PhD Candidate, MIT*

**Athina Papadopoulou** is an architect and design computation researcher. Her recent research focuses on the development and study of inclusive material environments that enhance wellbeing through sensory interaction. As part of her PhD dissertation at MIT, she developed Affective Matter, a haptic material modality for emotion regulation and communication. Her work has been published in science and design journals including Nature, Cognitive Science and Architectural Design, as well as Computation and HCI conferences. She holds a SMArchS in Design Computation from MIT, a Masters in Design and Culture, and a Masters in Architecture from the National Technical University of Athens. She has been a registered architect in the EU since 2008.

# FRAMEWORKS & IMPLEMENTATION

## **NORMALISATION TO NEURODIVERSITY: CHANGING PERCEPTIONS**

Action for Autism (AFA) pioneered work in the field of Autism Spectrum Conditions in India. Closing in on three decades of providing services, advocating and influencing public policy the underlying challenge has been in changing perceptions about disability and in particular autism. AFA has brought about small but important shifts in the understanding of accessibility which continues to largely be associated with mobility and sensory conditions.

### **MERRY BARUA**

*Founder & Director, Action for Autism*

**Merry Barua**, Founder Director Action For Autism is an activist, educator, author who pioneered the Autism movement in India, and parent to Neeraj who is autistic. Merry has helped catalyse legislative changes that include autism, been instrumental in the training of several thousand parents and professionals and a spread in services across South Asia. She advocates for accessible environments for autistic individuals and the right to education, employment, recreation, among others, as equal citizens of the country. Merry is an Ashoka Fellow, an INSAR awardee, and has received national and international recognition for her work.

## **INCLU.DE: INCLUSION, DESIGN, ALLYSHIP, ADVOCACY**

*Inclu.de* seeks to integrate ideas of inclusive life with strategic design concepts for the Allyship initiative, which aims to create allies from the wider community to support autistic adults living independently in 'everyday' tasks/activities. Using this as the bottom-up model of working, the design and inclusive systems projects would provide top-down services supporting community spaces, institutions and organisations to rethink and redesign for better inclusion of neurodivergent individuals.

### **SHANEEL MUKERJI**

*Special Educator & Therapist*

**Shaneel Mukerji** is a special educator and therapist in Kolkata, India. Her work with families and organisations provides a safe space for discussions, and ensures access to appropriate information to empower people to be better able to support themselves. She is also involved in research, creating resource material, training, and consulting on mental health and disability projects.

She is on the multi-disciplinary team at the Mental Health Foundation Kolkata, Co-Founder of Ainaa an initiative that conducts reflective mental health workshops using Narrative Ideas and Practices, as well as Founder of *Inclu.de*,

the organization she will be speaking about today.

## **HOW HUMAN-CENTERED DESIGN CREATES THE MATRIX AN INEVITABLE OVERLAP OF VIRTUAL AND PHYSICAL SPACES**

Have you ever seen software that made you think the creators never actually met anyone who would use their product? Human-centered design is the idea that we can engineer experiences to address the core needs and problems of the people who will use our software and avoid the "what were they thinking when they made this?"

At the center of this process is an obsessive focus on understanding the perspective of the person who experiences the problem, what they need, and whether or not what we design is actually solving the problem. When following this approach, it's possible to create impactful solutions that not only address needs in the virtual world, but also overlap into physical spaces.

In this session, we will explore approaches to human-centered software that let users define themselves and share their information so virtual and physical experiences are tailored to individual needs.

## JENNIFER GOLDSMITH

*President, Tendo Systems*

**Jen** is President of Tendo Systems, a software company focused on creating the trusted connection between patients, clinicians, and caregivers by providing seamless, consumer-driven experiences throughout the care journey. With deep experience in Software-as-a-Service platforms and applications, as well as professional and strategic services, Jen has spent more than two decades defining and building new markets, incubating early products and solutions, building high-performing teams, and scaling highly regulated businesses across the education and life sciences industries. In addition to her role at Tendo, Jen serves on the board of directors at Benchling and BTR and has published extensively on technology and business topics. Past companies include Computer Sciences Corporation, IBM, Instructure, and Veeva, where Jen was responsible for leading Veeva Vault from its formation to market leadership.

## HILARY SCHARTON

*Senior Director Product Strategy,  
Tendo Systems*

**Dr. Hilary Scharton** is a clinical psychologist and behavior analyst who specializes in child psychology. She worked in schools with neurodiverse students across a wide range of diagnoses, including diagnostic testing and classification of students on the Autism spectrum. Now Hilary works in software development, leading product and product strategy teams to build human-centered software

that solves real problems while still being delightful to use.

## AUTISTIC IMAGINARIES OF ARCHITECTURAL SPACE

Too many of the creators and curators of our built environment are driven and dictated by the hegemony of neuro-normative perspectives. The social spatial structures they largely create are built through the lens of the able-bodied, youthful, seeing, moving, hearing, typically perceiving existence. Any departure from this normative is seen as atypical, itself pathologized, while the architectural stage on which it is set is absolved of all responsibility. The burden to adapt is shifted almost entirely onto the atypical body, with architecture obstinately upholding design standards, norms, practices and traditions, unwilling to adapt or be informed by this alternative experience. Architecture in this sense is discriminatory, prejudicial.

This collection of works aims to shift that ethos. It proposes that it is architecture itself that is disabling, not individuals who are disabled. It posits through the presentation of the Autism ASPECTSS Design Index, that should we allow ourselves to be informed by alternative perceptual models and expand our design lens to include Neurodiverse and Autistic views, we will create not only more inclusive, diverse and broadly accessible architectures for this population, but possibly unlock a potential senso-socio-cultural space that affords benefits to the broad spectrum of the human condition.

One of the works within the collection is by Rachel Updergrove an autistic woman who studied architecture. While she was diagnosed with ASD after college, her autism was always a part of her, diagnosed or not. Her work is a timeline of some of her university projects that looks to reflect on how her process and designs are autistically her.

## MAGDA MOSTAFA, PhD

*Autism Design Consultant, Progressive Architects [www.autism.archi](http://www.autism.archi)*

**Magda Mostafa** is an architect, scholar and educator and is currently an Autism Design Consultant at Progressive Architects and Associate Professor of Design at the American University in Cairo. She is the author of the Autism ASPECTSS® design guidelines, the world's first research-based design framework for autism worldwide. ASPECTSS® has been presented at the United Nations, Harvard's GSD, Columbia University GSAPP, the National Autistic Society in the UK, Ireland's AsIAM, the World Autism Organization, The Royal Town Planning Institute of the UK and the London Festival of Architecture among others. It was awarded the UIA International Research Award in 2014 and was showcased in her TedxTalk in 2015. ASPECTSS® has been used to design projects spanning five continents from classroom retrofits to healthcare spaces to urban-scale neighborhoods. She recently published the world's first Autism Friendly University Design Guide with Dublin City University, where her ASPECTSS® Index is applied to higher education formal and informal learning spaces. Her work was



also recently exhibited at the European Cultural Center as part of the 2021 Venice Architecture Biennale. In 2020 she joined the New York-based think-tank and inclusive practice MIXDesign as a co-director of their MIX Neurodiverse Studio and as an autism expert.

#### **RACHEL UPDEGROVE**

*Lab Planner, HERA laboratory planners, WELL AP, Jefferson alumna (B.ARCH '19)*

**Rachel Updegrove** is a Jefferson College of Architecture and the Built Environment alumni (B.ARCH '19) and currently works at HERA laboratory planners. Before her sophomore year of college, she was diagnosed with severe OCD, and was recently diagnosed with Autism. In college she struggled to relate to people and coped by reading and listening to others' stories. Stories led her to co-found Jefferson's East Falls chapter of Active Minds, a mental health advocacy group run by students, for students. This year, she had the opportunity and pleasure to share her story of how her autism impacts her architectural design process, through a graphical timeline, in Magda Mostafa's exhibit titled, "Autistic Imaginaries of Architectural Space" at the European Cultural Center as a part of the 2021 Venice Biennale.

# EXPERIENCE, ART & HEALTH

## **ART AND HEALTH INTERVENTIONS – TRANSFERRING MEDIATED AESTHETIC EXPERIENCES FROM THE GALLERY/MUSEUM TO HEALTHCARE**

This project explores the immersive effects of dynamic and interactive art interventions and subsequent experiences and the transfer of how we grasp, criticize, and transform meaning of such experiences (Dewey, 2005) beyond art discourse and applied to health environments. We invite through a design lens an interdisciplinary debate to consider how information design, aesthetics and experience can prototype meaning making and convert qualitative and subjective insights to communicate patterns, images and diagrams for diverse health experiences. What can we learn from experiences when we look beyond linguistic meaning and into the process of meaning in the art (Johnson, 2008) and take those insights to health environments?

Dewey, J. (2005). *Art as experience*: Penguin.  
Johnson, M. (2008). *The meaning of the body: Aesthetics of human understanding*: University of Chicago Press.

### **LYN GODLEY**

*Associate Professor of Industrial Design,  
Thomas Jefferson University*

**Lyn Godley** is a Professor at Thomas Jefferson University. There, she has developed a Lighting Design curriculum with a focus on Light as Experience. She has spoken at National and International conferences, and is the lead on Jeff ARx, an initiative investigating the impact of dynamic and interactive art on health. She also recently, together with 5 other EU universities, completed a three-year research grant through Erasmus+ on the effects of light on health. In addition, she is an active Light Artist with work in numerous museum collections and public commissions.

### **ANITA KOCSIS**

*Professor, Director of Design Factory  
Melbourne, Swinburne University*

**Anita Kocsis** is Professor, Director of Design Factory Melbourne, Swinburne University, Melbourne an experimental co creation platform and one of the three core founders of the 33+ international Design Factory Global Network. Anita's human first, commercial and academic design and research is implemented in new products, prototypes and experiences across diverse sectors; astrophysics, arts, academia, health, including a start up in the museum sector demonstrating by practice that research translation and innovation happens when the boundaries around disciplines are removed.

## **ART THERAPY FOR THE NEURODIVERSE**

Art Therapy is a field that sits at the merger of health and design, focused on using art as a tool in promoting wellness, insight, and growth through creativity. While art therapists work with a wide array of clients, the speakers will focus on sharing experiences that prioritize the needs of the neuro-diverse community, and of creating and engaging immersive art experiences. They will highlight the need for thoughtful consideration of the space where creation takes place, and how the space in and of itself can evoke therapeutic change.

### **RACHEL BRANDOFF, PhD, ATR-BCCS, LCAT**

*Assistant Professor & Coordinator of Art  
Therapy, Community & Trauma Counseling  
Program. Thomas Jefferson University*

**Rachel Brandoff** is a Registered, Board-Certified Art Therapist and credentialed supervisor. She is an Assistant Professor and Coordinator of the Art Therapy Concentration in the Community and Trauma Counseling program at Jefferson. Rachel maintains a clinical practice specializing with individuals who are coming out of crises and coping with trauma. She provides supervision and consultation to art therapists and professional counselors. Rachel has served on the boards of various professional organizations and is a regular presenter

at regional and national conferences. Her first book, *Quick and Creative Art Projects for Creative Therapists with (Very) Limited Budgets*, was published in 2019.

**REINA LOMBARDI, ATR-BC, ATCS, LMHC-QS**

*Owner, Florida Art Therapy Services  
Executive Director, Creative Clinician's  
Corner, LLC*

**Reina Lombardi**, ATR-BC, ATCS, LMHC-QS, owner of Florida Art Therapy Services, LLC, along with a small team of therapists provide art therapy services to individuals and families, as well as through contracted groups within the SWFL community. Reina has extensive experience in serving children and adults affected by Autism in educational, community and clinical environments. She regularly facilitates trainings on topics of art therapy and mental health. She recently co-authored a chapter on Museum Based Adolescent Art Therapy Group to develop affect regulation skills. Additionally, she is the host of the Creative Psychotherapist podcast where she interviews creative arts therapists.

## **THE GREY AREA BETWEEN AUTISM AND IMMERSIVE ENVIRONMENTS**

I use the term Hot Rocks to help me visualize autism deficiencies and possible solutions. Each deficiency or solution represents a separate rock. The rocks vigorously float inside the grey area between autism and immersive environments, each rock not knowing the other exists and possibly never crossing each other's path. For decades the rocks have failed to connect because there is no established partnership between those who treat autism and those who create immersive environments.

**LONNIE SMITH**

*Founder and Director of the Autisarian  
Network and Co-owner of the Holodec  
Virtual Reality Tech Center*

**Lonnie Smith** is the founder and Director of the Autisarian Non-profit and co-owner of the Holodec Virtual Reality Tech Center. He is an Air Force veteran with a degree in web design and coding, but most importantly he is the proud father of two boys who were diagnosed autistic. For over 30 years he has fought many battles in a private war against autism, but now that he has found soldiers with the same goals and passion, he is confident we can end the war.

# SOCIAL SPACES & SUPPORT MECHANISMS

## **THE VALUE OF NATURAL ENVIRONMENTS: HEALING THROUGH IMMERSIVE WILDERNESS THERAPY EXPERIENCES.**

Outdoor behavioral healthcare is the prescriptive use of wilderness experiences by licensed mental health professionals to meet the therapeutic needs of clients. This talk will explore the healing power of intentional immersion in a therapeutic wilderness setting. Research indicates that adolescent and young adult wilderness therapy participants suffering from depression, anxiety and substance use make clinically and statistically significant improvements over counterparts in hospital settings or in their home environments. Furthermore, research suggests that these individuals maintain their gains for up to 12 months after the therapeutic wilderness experience. From the intentional use of positive relationships, removal of unhealthy coping mechanisms and the unwavering existence of nature, Blue Ridge Therapeutic Wilderness empowers students by teaching them to thrive. In this talk we will examine the way the designed use of nature promotes growth and health.

**TONY ISSENMANN, PhD, LMFT**  
*Director of Family Programs*

**Dr. Tony Isсенmann** is the Director of Family Programs at Blue Ridge Therapeutic Wilderness.

Blue Ridge Therapeutic Wilderness combines traditional, evidence-based therapies with a unique wilderness experience to provide adolescents, young adults and their families a powerful setting for hope, change, and healing. Dr. Isсенmann oversees the systemic integration of family programming so that the focus of change is not solely on the student who is enrolled in the program. He also works directly with families, facilitates parent workshops, supervises a team of family therapists and has the opportunity to develop new, innovative family programming.

## **BUILDING COMMUNITY AND INDEPENDENCE IN A SHARED SPACE ...ONE TOOL AT A TIME!**

How can community be defined in a space? What tools promote increased independence and continued growth? How does the layout of a home provide for security, connection, autonomy, and engagement? How do these elements intersect?

Self-advocates from Carousel Connections will offer insight and information from their journey in the Get Ready home, a training home located outside of Philadelphia, that

supports the Readiness process towards greater independence for residents who are neuro-diverse. Presenters will provide a home tour and share hands-on tools that allow for effective, empowering everyday experiences and routines. Through intentional design and planning, a home for *all* is created.

**AMY McCANN**  
*Founder/CEO of Carousel Connections*

**Amy McCann** encourages growth opportunities by bridging connections and building relationships, sharing a vision of independence, and promoting models for inclusion and universal design as the founder and CEO of Carousel Connections. Carousel Connections is an innovative program that provides training and support for adults with disabilities as they transition to greater levels of independence. As the founding director of Common Space, a non-profit organization that focuses on bridging diversity and crossing boundaries in a shared community space, Amy connects to local organizations and builds partnership opportunities for all. Amy is a facilitator for creating family housing cohorts and is a Community Connector for several Personal Support Networks in the Philadelphia area. As an inclusive educator and community builder, she focuses on empathy training, building self-regulation strategies, trauma informed care practice, and

mindfulness related to how we all learn and work to our best.

## IDENTITY, DESIGN, AND VIRTUAL WORLDS

What role does design play in identity building? How can we create virtual worlds that celebrate Neurodiversity as just another way of being? Can virtual spaces play a role in shaping disability culture, and what would such spaces look like? Co-founder and CEO of Uncomfortable Revolution, Corinne Gray will share the story and mission of Uncomfortable Revolution and their quest to build a culture that builds neurodivergent pride.

### CORINNE GRAY

*Co-founder & CEO,  
Uncomfortable Revolution*

**Corinne** lives with depression and anxiety and identifies as neurodiverse on the autism spectrum. She co-founded Uncomfortable Revolution - a magazine and lifestyle brand for people living with chronic illness and disability. Uncomfortable Revolution's mission is to make sure that disability is no longer left out of diversity, equity, and inclusion conversations and to change the way the media represents disability and chronic illness. Before launching Uncomfortable Revolution, she worked at the forefront of the U.N. Refugee Agency's innovation program, focusing on how technology could lead to greater social and economic inclusion of refugees. Corinne is a Fulbright Scholar and MIT Sloan Fellow with a Master's degree from Carnegie Mellon University's Heinz College of Information Systems and Public Policy, and an MBA from MIT. Corinne's early career started in education as an arts teacher, and she

carries a deep passion for young people. She currently sits on the boards of two youth and refugee focused nonprofits in Uganda and wants to be a philanthropist when she "grows up".

## ESPORTS INFRASTRUCTURE INCLUSION

Nerd Street Gamers (Nerd Street) is a national network of esports facilities (Localhost) and events dedicated to powering competitive opportunities for gamers. The company promotes greater access to the esports industry, laying a national framework for esports talent development and high-quality gaming tournaments. Through our partnership with Autism and Neurodiversity, we are impacting the way our structures are built while also providing training to corporate and retail staff.

### TARYN McCARTY

*Community Development,  
Nerd Street Gamers*

**Taryn McCarty** leads the community development team at Nerd Street Gamers (NSG). Focused on growing NSG's community, Taryn also identifies opportunities for growth in local municipalities and national organizations—from strategic engagements and product improvements, to ways to further disrupt the industry.

## CREATING IMMERSIVE VIRTUAL ENVIRONMENTS WITH AND FOR INDIVIDUALS WITH AUTISM

nonPareil Institute specializes in technical and work-readiness training of adults on the autism spectrum. Providing training for and creation of immersive virtual environments has been one of our core training and production capabilities for several years. Our instructors and students have been involved in several projects which expand the technical abilities of our students, but also benefit those using the worlds that we have been involved in building. Immersive virtual environments can provide amazing opportunities for growth, training, education, and more.

### KYLE BARTON

*Design Instructor/Project Lead,  
nonPareil Institute*

**Kyle Barton** has been a technical instructor at nonPareil Institute for 6 years. He teaches the fundamentals of programming and environmental design. He is also a project manager and has worked extensively with the Unreal engine. Kyle has a BA in Psychology from the University of Texas at Dallas. **MARK THEURER** *Director of Outsourcing Initiatives,  
nonPareil Institute*

**Mark Theurer** has an adult son on the autism spectrum and came to nonPareil Institute after a career in public safety. Mark was first a volunteer, then Director of Operations for nP's Plano, TX location, and is now the Director of Outsourcing Initiatives. Mark has a BA in Business Management from Colorado State University.

# BIOS CONCLUDING REMARKS, PANELS DISCUSSION MODERATORS

## **SEVERINO ALFONSO & LOUKIA TSAFOULIA**

**Severino Alfonso** and **Loukia Tsafoulia** are registered architects, educators and researchers. They are founders of PLB studio architecture and research practice and Assistant Professors at the College of Architecture and the Built Environment, Thomas Jefferson University where they co-direct the Synesthetic Research and Design Lab in collaboration with health departments within Jefferson. They have taught at Barnard + Columbia Architecture, Pratt Institute, Parsons School of Design, New York Institute of Technology, the Spitzer School of Architecture at The City College of New York and at the New York City College of Technology. Their design work has been exhibited in international design venues and they have lectured in academic institutions in the US East Coast, Madrid, Athens, and various cities in China. Their work was also recently exhibited at the European Cultural Center as part of the 2021 Venice Architecture Biennale. Their research is positioned at the intersection of responsive environments, digital technologies and the computational theory of design in the 1950s-1970s in Europe and North America. They both hold a Post-Professional MS in Advanced Architectural Design from the Graduate School of Planning and Preservation, Columbia University.

## **SEVERINO ALFONSO**

**Severino** holds two MS in Urban Design and Advanced Architecture from the school of architecture in Madrid (ETSAM) where he is currently a Ph.D. candidate. He has worked with international architectural studios such as Carme Pinos, Angel Fernandez Alba and Federico Soriano in Spain, Lomar Arkitekter in Sweden and Per-forma Studio, KDF Architecture and Natalie Jeremijenko in the United States.

## **LOUKIA TSAFOULIA**

**Loukia** received her professional degree in Architecture Engineering from the National Polytechnic School of Athens where she is a Ph.D. candidate. She is the editor of the book publication titled *Transient Spaces* and editor and author of the in progress book *KatOikia, Housing in the Age of Rapid Globalization, Ubiquitous Technologies, and Information*. She has worked with Studio Dror, LEESER Architecture, and Jorge Otero Pailos in New York and with K+T Architecture as well as the NTUUrban Environment Lab in Athens.

## **WENDY J. ROSS, MD**

**Wendy J. Ross, MD**, is a developmental and behavioral pediatrician and the inaugural director of Jefferson's Center for Autism and Neurodiversity, which merges her love of clinical medicine with her community inclusion programs. Dr. Ross created the first Autism Airport Inclusion Program with mock flights, upon which Senator Lautenberg based legislation. She additionally has pioneered programs at museums, sporting events, and other settings. In 2014, Dr. Ross was recognized internationally as a top 10 CNN hero. She attended the Humanities and Medicine program at Mt Sinai School of Medicine in New York, where she graduated in the AOA honor society. She completed a pediatrics residency at Yale and a fellowship in Developmental Pediatrics at Harvard.

# ORGANIZERS

Thomas Jefferson University's **College of Architecture and the Built Environment** is educating the next generation of design and construction professionals in architecture, interior design, landscape architecture, historic preservation, construction management, geodesign, sustainable design and real estate development. The College regularly partners with major corporations, local communities and nonprofit organizations to offer you a broad range of real-world projects and networking opportunities to fulfill your passions. Our dynamic approach to education and emphasis on social equity, sustainability and design excellence provides you with a competitive advantage that prepares you to become an innovative leader in an equitable and sustainable future.

The mission of the College is to educate the next generation of design and construction professionals to create an equitable and sustainable future. Our curricula emphasize specialized knowledge unique to each discipline, paired with interdisciplinary collaboration that prepare students for practice in the global market.

We improve lives by designing and building a better world.

The **Synesthetic Research and Design Lab** at the College of Architecture and Built Environment – Thomas Jefferson University is directed by Severino Alfonso and Loukia Tsafoulia. It serves as a collaborative research and prototyping platform where interactive design and emergent health sciences meet highlighting the recursion between the individual and their environment. The Lab is a newly minted platform that aims to take risks in developing methodologies that engage critically with interactions of humans, objects and environments.

The Lab collaborates with the Center for Autism and Neurodiversity – Jefferson Health in the building of a solid foundation of knowledge, addressing all-inclusive ways for inhabiting and perceiving our environments. This collaboration stimulates dialogues amongst designers, medical field experts and people with Autism Spectrum Disorder in regard to the inclusivity of our current environments and with particular focus on designing for neurodiverse individuals and those with ASD.

The Lab continuously aims to learn from unexpected collaborations, test unconventional ideas, and leverage novel pedagogical explorations to engage with young minds that come from diverse backgrounds and cultivate a collective learning process. The Lab has been awarded a series of grants from Thomas Jefferson University.

The **Center for Autism and Neurodiversity** – Jefferson Health is directed by Wendy J. Ross, MD. The Center drives a collaborative effort among those affected by autism, clinicians, and community partners to create pathways for meaningful interaction and participation throughout the lifespan. The Center takes a novel approach by taking those from differing professional and personal experiences and incubating programmatic conceptual shifts to move the needle from the concept of a 'cure' to creating opportunity for those who think and interact differently, and examining the impact both on those individuals and the world at large throughout the lifespan.

The Center is excited to engage with the Lab in exploring the physical environment and its impact on the population of those affected by autism. This collaboration serves as a catalyst that will open new pathways in how we design spaces. Its goal is to spark enthusiasm, ongoing dialogue and exploration in how we all view the world and our roles within it, emphasizing the value of the integration of multiple perspectives in maximizing possibility for everyone.

The Center continuously strives to learn from multidisciplinary and stakeholder perspectives, pilot new programs, and measure outcomes, in an effort to create optimal endeavors and strategies that can be widely disseminated to enhance opportunity.

