

We  
are

# All Able Bodies

From Sensory Deprivation to Sensory Augmentation

*How can our  
bodily abilities  
inform design,  
and how can  
design have an  
intensifying or  
diminishing effect  
on our sensory  
abilities?*

A trans-disciplinary **workshop/seminar**  
organised in a partnership between the Institute of  
Technology Faculty of Architecture, San Pablo CEU  
University Madrid/ Spain, and the School of Architecture,  
University of Reading/ UK, with the support from the  
**International Ambiances Network**

UNIVERSIDAD CEU SAN PABLO | Campus Montepríncipe  
Urbanización Montepríncipe | 28925 Alcorcón (Madrid)

16 | 17  
NOV  
2018

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## | Credits

This brochure has been produced to accompany the *We Are All Able Bodies* workshop/seminar held at San Pablo CEU  
Univeristy, Campus Montepríncipe, Madrid/ Spain, Friday 16th and Saturday 17th of Novemner 2018  
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# /// Introduction

This **two-day workshop/seminar** aims to bring into dialogue researchers and practitioners from a wide range of disciplines to re-examine potentials and limitations of bodies experiencing the sensory realm. Far from the existing research on sensory augmentation devices and wearables, we want to explore the hidden agency of somatics and bodily capabilities. A body in movement could become a challenge for everyone. We want to think of sensory perception *otherwise*, developing new ways of *moving* towards the understanding of disability as *ableness*, as a 'creative act of constantly challenging boundaries' – to paraphrase the dancer Joel Brown [1]. In doing so, we hope to learn through action, subverting and redefining sensory thresholds and, thus, to reclaim the role of the body and the senses in creating new meanings and collective sensibilities. By focusing on the intertwinement between sensory perception, affect and aesthetic practices, we want to exchange experiences, skills and knowledge, addressing diverse ways of creating inclusive environments that operate beyond what we can or cannot perceive, providing a possibility for action and interaction for *All Bodies*. Our research question explores how our bodily abilities can inform design and how design can have either an intensifying or diminishing effect on our sensory abilities.

The event includes **three keynote discussions, four panel sessions composed of both academic and performative presentations, and a workshop organised as a series of sensory practices**. Through the seminar we aim to establish both theoretical and methodological trans-disciplinary frameworks. The workshop and artistic installations will actively explore specific sensory dispositions and intensities – i.e. diverse forms of seeing, hearing, motion and interaction, adapting the body to a particular ambiance and adapting the ambiance to the body.

We hope that this event will present an opportunity for testing and discussing diverse somatic and artistic practices and methodologies and, above all, will become a catalyst for reconsidering our corporeality and our engagement with the environment.

| **Chairs:**

[1] Joel Brown in a Panel Session 'Cultures of Movement' at the event 'How does the city move you? On bodies, identity and urban design' held at the Siobhan Davies Studio in London on 30th June 2018, part of London Festival of Architecture

M<sup>a</sup> Auxiliadora Gálvez Pérez (EPS USP-CEU)  
Carolina Vasilikou (UoR)  
Izabela Wieczorek (UoR)

# /// Programme\*

## Day 1 | Friday, November 16th

**09:15-09:45** Registration [AULA DE ANÁLISIS]

**09:45-10:00** Welcome & Opening Address [AULA DE ANÁLISIS]

**10:00-11:00** **KEYNOTE ADDRESS 1** [AULA DE ANÁLISIS] **Suzan Kozel** | *Phenomenologies of Affect / Threshold Choreographies*

**11:00-11:15** Coffee Break [AULA -1.3.2]

**11:15-12:35** **PANEL 1 | ENABLING THE CITY** [AULA -1.3.2]

> María Teresa García Sánchez | *Listening to the city: perceptual effects in Barber's concert*

> Sofía Balbontín & Mathias Klenner | *Traslaciones sonoras*

> Sandra González Álvarez | *Feeling the city since childhood: the workshops of 'The city of tomorrow/La Ciudad del Mañana/ A Vila do amanhã'*

**12:35-13:30** **PANEL 2 | THE NON-DISABLING VIEW OF DISABILITY** [AULA -1.3.2]

> Thomas Tajo | *Blind and blindness in the age of neuroplasticity and echolocation: towards a non-disabling view of blindness*

> Natalia Pérez Liebergesell, Peter-Willem Vermeersch, Ann Heylighen | *Enriching interpersonal relations: two disabled architects' aesthetic appreciation and conception of built space*

**13:30-14:30** Lunch Break

**14:30-15:25** **PANEL 3 | THE LIVING BODY** [AULA DE ANÁLISIS]

> Jaime Bartolomé Yllera | *The biomechanical joy of architecture and the admiration for our living body: The Volupyuos Floors*

> Claudia Carbone & Angus James Hardwick | *Actions of bodily encounters - dislocated and delayed*

**15:25-15:30** Break

**15:30-17:30** **WORKSHOPS & INSTALLATIONS | SENSORY THRESHOLDS** [AULA DE ANÁLISIS]

> M<sup>a</sup> Jesús Jiménez Mazuelas | *Impairment in elderly: attention as a therapeutic tool* [15:30-16:30]

> Rennie K Tang & Steven Chodoriwsky | *Listening to a gesture* [16:30-17:15]

> Installations: Hannah Rachel Jones Dewhirst | *Sensory deprivation* & Michail Rybakov | *Strategies of Arrival*

**17:30-18:00** **INTERNATIONAL AMBIANCES NETWORK ADDRESS** [AULA DE ANÁLISIS] **Rachel Thomas** | *Disability, a sensitive expertise for accessibility*

**18:00-18:45** Discussion and Drinks [AULA DE ANÁLISIS]

**21:00-22:30** Dinner (optional)



The event will be held at the **Institute of Technology Faculty of Architecture (EPS)**, San Pablo CEU University, Campus Montepríncipe, Madrid/ Spain, and will be inscribed within the programme of the **Laboratory of Somatics for Architecture and Landscape (LSAAP)**.

More information at **psaap.com**

### Public transport:

METRO LIGERO (MLT 3) from COLONIA JARDÍN

INTERURBAN BUSES 571 from ALUCHE

573 from MONCLOA



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2018

**Day 2 | Saturday, November 17th**

**09:15-9:30** Registration

**9:30-10:50** **PANEL 4 | SOMATIC AGENCIES** [AULA DE ANÁLISIS]

> Théa Manola | *Understanding sensory experiences from and for urban design*

> Doerte Weig | *The Somatics Toolkit: A transdisciplinary catalyst for research with all bodily capabilities*

> Victor Fraigneau | *From sensoriality to sensitivity through the sense of smell*

**10:50-11:00** Coffee Break [AULA DE ANÁLISIS]

**11:00-12:00** **KEYNOTE ADDRESS 2** [AULA DE ANÁLISIS] **Jone San Martín** | *Listening to the Body*

**12:00-13:00** **WORKSHOP** | **Jone San Martín** [AULA DE ANÁLISIS]

**13:00-14:00** Plenary Discussion & Close [AULA DE ANÁLISIS]

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**Able**  
**Bodies**

From Sensory Deprivation to Sensory Augmentation

## Phenomenologies of Affect / Threshold Choreographies

**Susan Kozel** Professor, K3/ School of Art and Culture Malmö University

This keynote will explore the threshold between sensory perception and affective sensibility, contributing to a deeper understanding of somatic materialism by way of a practical and methodological elaboration of phenomenology of affect.

**Susan Kozel** is known for artistic and philosophical work applying phenomenology to a range of sensory, affective and somatic practices. with a particular emphasis on dance in networked digital systems. A Professor with the School of Art and Culture at Malmö University in Sweden, she teaches Embodied Interaction on the Interaction Design Master's Program. Publications include *Closer: Performance, Technologies, Phenomenology* (MIT Press, 2007) and many shorter pieces such as "Process Phenomenologies" in *Performance and Phenomenology* (Routledge, 2015), "Somatic Materialism or Is it possible to do a phenomenology of affect?" in *Site Journal of Art, Philosophy and Culture* (2013) and "Performing Encryption," in *Performing the Digital*, (transcript Verlag, 2017). She is the director of the Living Archives Research Project, funded by the Swedish National Research Council ([www.livingarchives.mah.se](http://www.livingarchives.mah.se)) where she refined a variation of phenomenological method and applied it to performances of encryption and somatic archiving. Her current book project has the title *Affective Choreographies*.

## Disability, a Sensitive Expertise for Accessibility

**Rachel Thomas** Research Director at CNRS/ CRESSON, École Nationale Supérieure d'Architecture de Grenoble - Université Grenoble Alpes

It is through the question of the accessibility of the city to all that I will address the theme of the seminar. Two ideas will cross my subject. The first one is that architectural and urban ambiances have a role in the creation of disabling or enabling situations for pedestrians. The second one is that disability can be thought as a universal experience rather than as the stigma of a few isolated individuals. As such, it is a tool to better understand the processes at work between moving bodies, space and ambiances. Based on examples of journeys made in different urban contexts, I will show that accessibility to public spaces involves the motor and perceptual capacities of any pedestrian and mobilizes the sensitive modalities (sound, light, smell, touch...) of space.

**Rachel Thomas** is a sociologist, research director at the CNRS and researcher at CRESSON (UMR 1563 Ambiances, Architectures, Urbanités). She is the author of two books: *Les trajectoires de l'accessibilité* (Bernin, Ed. À la Croisée, 2005) and *Marcher en ville. Faire corps, prendre corps, donner corps aux ambiances urbaines* (Paris, Ed. des Archives Contemporaines, 2010). Her current research questions the possibility of formulating a critique of the urban from a focus on ambiances and their transformations.

[www.hal.archives-ouvertes.fr/tel-01818999](http://www.hal.archives-ouvertes.fr/tel-01818999) | [www.aau.archi.fr/equipe/thomas-rachel/](http://www.aau.archi.fr/equipe/thomas-rachel/)

# Listening to the Body

**Jone San Martín** Dancer and choreographer

Using the knowledge that is archived on her body after years of working and developing dance improvisation techniques, Jone San Martín will give herself tasks that she will solve during a performative lecture. The lecture will not be approached from a demonstrative point of view, but from the fragile and ephemeral condition of the improvised dance.

**Jone San Martín Astigarraga** was born in Donostia/San Sebastián, Spain in 1966. She lives in Berlin, Germany. She is a dancer and choreographer, and a professor of Forsythe improvisation techniques. She studied dance with Mentxu Medel, at the Institut del Teatre in Barcelona, and at Maurice Béjart's Mudra International in Brussels. She was a member of many both classic and contemporary dance companies in Europe such as the Barcelona Ballet, Ballet Nacional de España, Ballet Charleroi, and Ballet Royal de Wallonie in Belgium. In 1992, she joined Ballett Frankfurt directed by William Forsythe. She continued working with Forsythe Company until its closure in 2015. In 2015, Jone joined the first edition of Ensemble Dance On project in Berlin. In 2016, she was given a carte blanche in scenic arts by the municipality of Donostia.



## The Listening to the city: perceptual effects in Barber's concert

**María Teresa García Sánchez** ETSAM UPM

Traditionally, the architect has dealt with the sound dimension of space in the less inclusive way. Even though he has found all kind of solutions to isolate space from sound, in so doing, he has lost the chance to design the space beyond its visual aspect, embedding what the sound might suggest.

This domain of opportunity - maybe new for architecture - has been fruitfully sowed by uncountable musical and sound art proposals over the last century. The city concert devised by the Spanish performer, musicologist, composer and sound artist Llorenç Barber, at the beginning of 1988, is undoubtedly one of these. To date, these monumental symphonies for bells and bell towers have been heard in more than 150 cities around the world, opening the sound experience of the city to infinite perceptual horizons. For around 60 minutes, the citizen wanders around streets and squares, balconies or terraces, viewpoints or nearby hills, as if immersed within an immense sound sculpture.

This contribution tries to identify the effects that these sound phenomena cause in the citizen, by means of three levels of analysis. Firstly, from a physical and psychological point of view, this research deals with those effects related to the listener's body in motion throughout the city. Following, it addresses the effects related to a semantical dimension of the bells' sound.

Finally, our approach focuses on certain political suggestions engaged by these proposals. Thus, this research aims at how the sound design of the city is able to amplify the senses, meanings and creative habits of the social body of the polis.

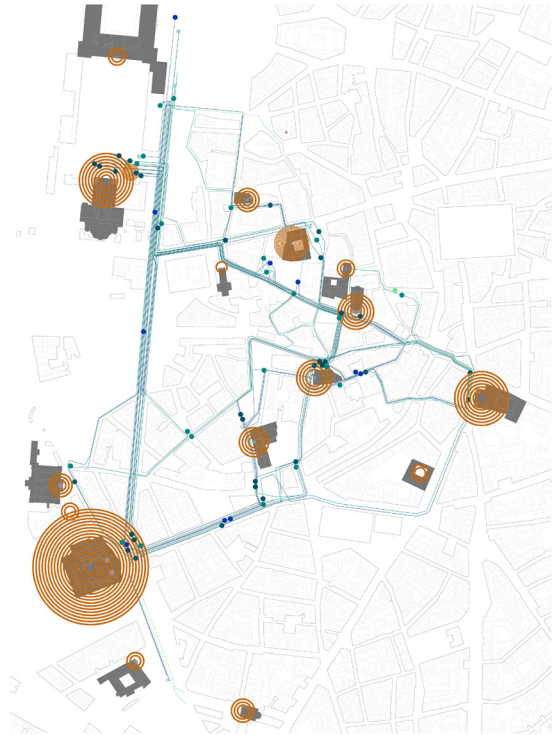


Image: Urban choreographies in the concert 'Aurea Catena' celebrated in Madrid, October 1st, 2007 | Courtesy of María Teresa García Sánchez

**María Teresa García Sánchez's** academic, professional and research career is irrigated by multidisciplinary concerns. An architect (Urban Planning and Building UPM 2001), she is also a musician (Piano and Harpsichord RCSMM Honour Award 2017). After her Visiting Scholar stay at Upenn (Department of Architecture) and Princeton University (Department of Music), she finishes her PhD with *De la ciudad en vibración al ser resonante* (UPM PhD Award 2012). Her research focuses on the study of the sound aspect of urban form. At present, she combines her teaching work (Architectural Graphic Expression UPM) with the professional activity in her own office.



## Traslaciones sonoras

**Sofía Balbontín**

**& Mathias Klenner** [speaker] UDLA/ Universidad de las Américas



Image: 'Traslaciones Sonoras' Urban Intervention in Valdivia's Riverfront, Chile, September 2018 | Courtesy of Mathias Klenner & Sofía Balbontín

The ongoing project *Traslaciones Sonoras*, presents a possible connection between the concepts of soundscape and sound space. It consists of an urban research about soundscape in parallel to the formal development of acoustic architectures (sound spaces). The connection between architecture and environment is given by the translation of one soundscape into another, establishing the context as a sound source and architecture as a translation device.

There is a direct relation between the sound event and the perception we have of it. The agreement between object and perception transports us to a semantic appreciation, where the event transmits a meaning and the sounds act as signifiers (Schaeffer, 1966). This is a fact established by our sensory appreciation of events, where sight and hearing give us a panorama that is difficult to separate from one another. What happens if we disconnect the vision-hearing partnership?

If we isolate the sound event of its “happening”, the space becomes indeterminate, time it's translated into auditory impressions and the meaning is confused with the delocalization of sound sources. Using architectural devices for the translated soundscapes, we can create this de-contextualization. The idea of moving sound from one place to another aims to connect two different sensorial situations, combining the vision of one space with the sound of another. In this way, it is possible to move soundscapes from hidden scenarios into crowded central areas of the city. Sound has the capacity to bring information that the eye does not see, it can make the invisible visible, audible what we pass over (LaBelle, 2018). Sound allows to certain communities and territories which are outside the hegemonic powers, to infiltrate into the public arena and become “visible”. To achieve this, the project uses these translation devices as an urban intervention that creates a phenomenological action experienced by community.

**Mathias Klenner** (Santiago, 1986) and **Sofía Balbontín** (Santiago, 1985) are both architects from *Pontificia Universidad Católica de Chile* and lecturers at *Universidad de las Américas*. They have developed, together and independently, a series of research projects, workshops, experimental installations, videos and sound pieces around the ideas of sound space, soundscape, phonetics, critical urban theory, migration and neoliberalism. Their work has been presented in Santiago, Valparaíso, Valdivia, Chicago, New York, Bilbao, Calabria, Athens, Copenhagen among other places.



## Feeling the city since childhood: the workshops of ‘The city of tomorrow/La Ciudad del Mañana/ A Vila do mañá’

**Sandra González Álvarez & Zaida García-Requejo**

**Universidade da Coruña**

The project ‘The City of Tomorrow / La Ciudad del Mañana / A Vila do Mañá’ consists of a series of workshops for children, developed in different municipalities of Galicia from 2016 to the present.

The current city has left citizens out of its construction. It has been constituted mainly based on economic factors. Consequently, the spaces have been privatized and have been sold. Through the workshops ‘The City of Tomorrow’ we have promoted a new city, in which children and adolescents – until now considered mere spectators in the construction of the city – are actively present in the processes of construction of the common spaces: a square, a neighborhood, a city, a landscape... The workshops equip them with the necessary tools to develop their creativity, combining art and architecture. Additionally, a new awareness about the spaces they inhabit is awakened. Through the wide range of activities, the children discover and become aware of the values and meanings of their own habitat, of the place where they live.

The workshops present the city as a game board, a meeting place and a learning laboratory where children through movement and play explore, live, feel, discover and value their habitat. Childhood has been presented to political powers as part of active citizenship, enabling children to be valuable participants in the construction of the future city. Through the workshops children leave their role as spectators and become creators of their own space – their own square, their own neighborhood, their own city.

“The City of Tomorrow” is an open research project in continuous development in and through new workshops. In addition, the objectives, processes, activities and results are being collected and rethought in several publications.

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**Sandra González Álvarez** Architect by the School of Architecture of A Coruña. Master in Architectural Rehabilitation. PhD candidate in the Official Programme of Doctorate in Architecture and Urbanism at the University of A Coruña and the Mackenzie Presbyterian University in São Paulo. Ibero-American Research Bank Santander 2017-2018. Creator and director of “The City of Tomorrow / La Ciudad del Mañana / A Vila do Mañá”, which together with ARTEIXOworks were part of the exhibition contents of the Spanish Pavilion at the Architecture Venice Biennale 2018.

**Zaida García Requejo** holds a Bachelor of Architecture and a Master in Architectural Restoration from University of A Coruña (UDC). She is a PhD candidate in the Official Programme of Doctorate in Architecture and Urbanism at the University of A Coruña. Professor in The Department of Architectural Projects, Urban Planning and Composition in The School of Architecture at UDC.



Image: Living, enjoying the city, while working with the line | Courtesy of Sandra González

# Blind and blindness in the age of neuroplasticity and echolocation: towards a non-disabling view of blindness

**Thomas Tajo** Independent researcher

Neuroplasticity tells us that our body and brain are plastic. Plasticity makes our bodies and brain malleable. Through learning we can harness the adaptability of our senses and brain to develop capacities which are traditionally not associated with our human bodies and senses – such as independent navigational abilities in the blind. We will specifically look at the Perceptual Navigational approach of the Visioneers, examining the effects of their approach founded upon the scientific understanding of the plasticity of the human brain and childhood development; the approach which has introduced the use of the Full-Length Cane and Echolocation or FlashSonar.

## Full-length cane

We will explore how the Full-Length cane, which is much longer and lighter than the traditional white-cane that is prescribed for the use of the blind, makes for flexibility and easy manoeuvrability during use. How it extends the tactual spatial perceptions of blind users and consequently expands their peripersonal space, thus, adding to their navigational confidence and improving their idiothetic navigational abilities.

## Echolocation or FlashSonar

We will look at how it trains hearing to use sound to carry out the job of obtaining three dimensional spatial informations in real-time, thus, expanding the function of hearing Beyond the functions of language and communications and music which are traditionally associated with hearing, how Echolocation or FlashSonar allows blind people to acquire spatial informations that are beyond the reach of the longest usable cane and, thus, enable them to carry out allothetic navigations. We will explain how Echolocation trains the visual brain to process three dimensional spatial informations with the use of sound. Accordingly, we will look at how the Perceptual Navigational instruction of the Visioneers results in more navigationally confident and competent blind individuals who are able to carry out navigational tasks which are culturally and scientifically presumed to be impossible for the blind. We will explore how their instruction produces results which broaden our understanding of the capacities of blind people supporting a more positive view of the blind and blindness.

We will look at how the Perceptual Navigational approach has the potential to change the contemporary cultural and scientific landscape of thinking about blindness and blind people – from an inherently disabled and incapacitated view to a normal and non-disabling view.

**Thomas Tajo** is an independent researcher. He is an Echolocation and Perceptual Navigational instructor for the Visioneers. He is also a disability activist and blindness consultant.

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# Enriching interpersonal relations: two disabled architects' aesthetic appreciation and conception of built space

**Natalia Pérez Liebergesell** [speaker]

**Peter-Willem Vermeersch**

**Ann Heylighen** KU Leuven, Department of Architecture, Research[x]Design

Some notions of aesthetics in architecture focus on the individual-environment relation rather than on the relations between individuals occurring within space and the role of architecture therein. Other notions start to question these individual perspectives by looking into aesthetic sensibilities oriented towards creating environments that enrich interpersonal relations. In this context, our study examines two architects' aesthetic appreciation and production of built space, and how it relates to their perspective of being disabled.

We report on the study of two cases: the Sorenson Language and Communication Center (SLCC) and Urban Chandelier, in tandem with their architects' experiences of being disabled. Along with analyzing design media, in-depth interviews with deaf architect George Balsley and with vision impaired architect William Feuerman gave insight into how the aesthetics of their conceived spaces facilitate, enhance or intensify socio-affective relationships with(in) the environment and/or between bodies. In relation to George's deaf ways of being, the SLCC nuances spatial boundaries by attending to spatial communication pathways and degrees of visual privacy relevant for sign language. For its part, Urban Chandelier aims to enhance social (inter)action and facilitate appropriation of urban space. Conceptually, the chandelier's effect relates to William's own experiences: his vision impairment altered his visual attention, granting him with a newfound awareness of his own body, his surroundings, and a more socially-oriented understanding of aesthetics. In light of these findings, our study supports the claim that aesthetic enjoyment may be taken in (inter)active and socio-affective relationships occurring within, and supported by, the built space

**Natalia Pérez Liebergesell** studied architecture at the ETSAV-UPC in Sant Cugat del Vallés, Barcelona. After graduating, she edited and co-authored the book *Four Wheelchair User Architects*, featuring her and her three peers' final thesis projects. Since 2016 she is a doctoral researcher at the KU Leuven Department of Architecture in Belgium, studying how disabled architects design. Her research explores how the impact of the socio-material environment in disabled architects' lives and their spatial and multisensory experiences shape their design practices and outcomes. Her research is funded by the Research Fund KU Leuven in the form of a C1-Project.

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## Actions of bodily encounters - dislocated and delayed

**Claudia Carbone** Arkitektskolen Aarhus

**Angus James Hardwick** [performer in absentia] Independent researcher

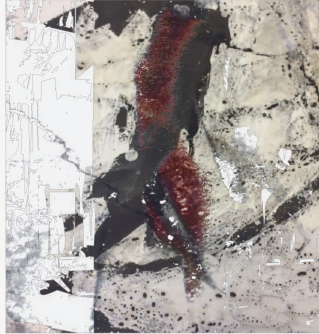


Image: Scenes 1-3 | Courtesy of Claudia Carbone

We are interested in relating and testing our different bodies, genders, ages and the translation of their material and immaterial residues in new contexts [Madrid]. Our bodies are in constant dialogue with matter in transformation, and we wish to discern ways of making small architectures embedded in our transformable situations. In a designerly manner, our contribution will try to activate some of our material residues in the (re) making of found 'ordinary' places and affect our environment.

This contribution takes departure in a previous research project entitled *Exploring Immediate Architectures from Splatter to Conglomerates – A performance: The Making of Small Architectures* acted for the CA2RE conference in Aarhus, Denmark. This improvised performance – 3 cycles within a 20 minutes duration – explored ways of designing new grounds for small architectures to occupy and territorialise space while 'framing' the actions of two acting agents. These improvised actions annihilated, created, dislocated information and matter in a delayed but continual state of transformation and interference.

*Actions of Bodily Encounters* consists of an overlay of new actions, digital projections and bodily manipulations, registered on a new defined arena (the wall) in Madrid. It is a twofold performance. The first part takes advantage of one performer not being able to participate in vivo. Projections (re)play a delayed and dislocated performance where the second performer, on site, introduces new layers on the defined arena (and wall). We aim to discuss materiality: one body acting on a past – and into the ephemeral light projections. A lived appropriation of an informed surface populating/inhibiting a wider field.

**Claudia Carbone** is a Teaching Associate Professor at the Aarhus School of Architecture, from where she gained a Master of Arts in Architecture (MA) in 1997. In her teaching, her artwork and research, she investigates translation between representations in drawings, photographs, films, models and installations. Her work questions the serial, the singular and the multiple, and the relation between representation and the real. She has received grants and acknowledgements and her work has been published and exhibited in Denmark and abroad. She is also a member of the Danish Society of Arts.

**Angus James Hardwick** is a creative practitioner. He holds a Masters of Arts (MA) in Architecture from the Aarhus School of Architecture in Denmark and a Bachelor of Architectural Studies (Hons 1) from Australia. He has worked internationally in the delivery of undergraduate studio-based architectural education, in established design-focused architecture offices and in smaller flexible temporary work formations that coalesce for specific projects and goals. His current research focuses on the affectiveness of things and explores how alternative spatial practices (performance) can reveal unexpected im/materialities. His approach to matters of environmental awareness and practice methods has been recognised by a number of awards.



# The biomechanical joy of architecture and the admiration for our living body: The Volupyuos Floors

**Jaime Bartolomé Yllera** GilBartolomé ADW / Universidad Nebrija

This paper examines design strategies in architecture related to the production of positive feelings by buildings, and speculates on how to operate explicitly with them in order to intensify such experiences. Based on Spinoza's theory of affect, and supported by a varied body of contemporary science, this paper reviews the conceptual structure and the geometric, material, and biological bases of positive emotional interactions between architecture, and the human body, its organs of perception, and action patterns.

I will present several building projects where these principles have been applied, providing reliable objects of disquisition and further study. These projects constitute a repository for concrete disciplinary findings and innovations offering an alternative and invigorating design paradigm for buildings – at the intersection of performance and aesthetics and beyond pervasive paradigms such as functionality, efficiency or comfort.



Image: Voluptuous floors / Design Project | Courtesy of Jaime Bartolomé

**Jaime Bartolomé** is a practicing architect, researcher and design teacher. He studied architecture at the Polytechnic University of Madrid, graduating with distinction and holds a PhD in Architectural Design (the Bartlett, UCL, London). Since 2017 Jaime worked for Cero9/Amid in Madrid and for Zaha Hadid Architects in London. In 2008, he founded GilBartolomé ADW with Pablo Gil. The firm has designed the new airport of Lahore in Pakistan, and the House on the Cliff in Salobreña among other projects. The office has been awarded several competition prizes and its work has been published. Jaime currently teaches architectural design at Nebrija University.

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This paper focuses on biomechanical, relations that substantiate specific architectural emotions, investigating the internal mechanisms and resources on which they are based. The intensification of these relationships has been tested through the design of a series of prototypes.

This paper is part of a broader research, which besides biomechanical relations, explores thermodynamic, aerologic, luminic, biological, and tactile relations. The resulting architectural manifolds derived from this research are composed of deeply articulated technical systems that include novel entangled definitions of flooring, interior and exterior enclosure, openings, building systems, lighting and vegetation, among others



## Understanding sensory experiences from and for urban design

**Théa Manola** ENSA Grenoble / CRESSON

**Théa Manola** is an architect DPLG, urban planner, and PhD in urban studies. Lecturer on Social and Human Sciences for Architecture, at the Grenoble's school of architecture and researcher at the team CRESSON of the Laboratory AAU (Ambiances, Architecture, Urbanities). Her scientific work focuses on ordinary sensitive experiences, (multisensory) landscape, and socio-environmental and participatory issues and their consideration in the urban fabric. She teaches in the Bachelor's degree of Architecture and in the Master's degree of Architecture and of Urban Design.

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If there exists an important scientific production on the sensory relations that humans maintain with their environment, a real difficulty persists as for their consideration in urban design. One of the reasons for this difficulty lies in the limited means at our disposal to apprehend and understand them. Therefore, this communication proposes to question the methodological issues of the sensory perception, ranging from its “capture” and understanding, to its mobilization in the urban design process. To do this, we propose to present three completed research works that pose this question.

Firstly, we will discuss the difficulties of “capturing” sensory/sensitive experiences and will propose a methodological protocol (combining interviews, guided tours and multi-sensory backpacks) to overcome them (Manola, 2013). Secondly, we will present how, on the basis of this first scientific experiment, we set up a “research-project” starting from a “capture” and comprehension of ordinary sensory experiences (by implementing “workshop-walks” - Manola, Bailly, Duret, 2017) and culminating (among others) in a series of urban micro-interventions highlighting the previously “captured” sensory and sensitive aspects. Critical feedback on this process will be carried out in order to explore how the sensory/sensitive experiences can inform the design.



# The Somatics Toolkit: A transdisciplinary catalyst for research with all bodily capabilities

**Doerte Weig**

**Somatics Toolkit, University of Coventry / Movement Research, Barcelona**

Our bodies are the first and central instruments with which we as researchers, artists or designers create, shape or conduct research. Despite sensory, somatic and affective turns in theoretical understandings, the body or *body-ing*, to use a term indicating a processual understanding of body, receives very little attention in education, training and knowledge creation. The *Somatics Toolkit* aims to encourage thinking, moving and navigating research spaces outside usual comfort zones to consciously and inclusively acknowledge body as research tool.

In collaboration with Eline Kieft (Coventry) and Ben Spatz (Huddersfield), and funded by the UK National Centre for Research Methods (NCRM), we are developing the *Somatics Toolkit* for researchers employing ethnographic methods, so including various scientific backgrounds. The project highlights *body-ing* as core research tool as well as a source of mental and emotional support; the toolkit consists also of audio-files offering guided movement tasks applicable specifically to research processes. Topics include: Awakening the Somatic Experience, Body Data, Vulnerability, Reciprocity, Moving with polarities in your data, Self-care as a researcher, Literature review, Writer's block.

We are dedicated to making the *Somatics Toolkit* sensorially enabling and used by academics, designers and others; to avoid it becoming 'pretty' online junk. I will present the feedback we received from the group who tested the first version of the audio-files, as a starting point for interaction with seminar participants in Madrid. Given the knowledgeable audience, the suggested activity is to explore and experiment with SCR how the *Somatics Toolkit* can best be a catalyst for sensory augmentation in design and research. Depending on the interest in the room, we could focus on how it can contribute to highlighting the hidden agency of somatics and bodily capabilities in design, or to shaping methodological transdisciplinary frameworks.

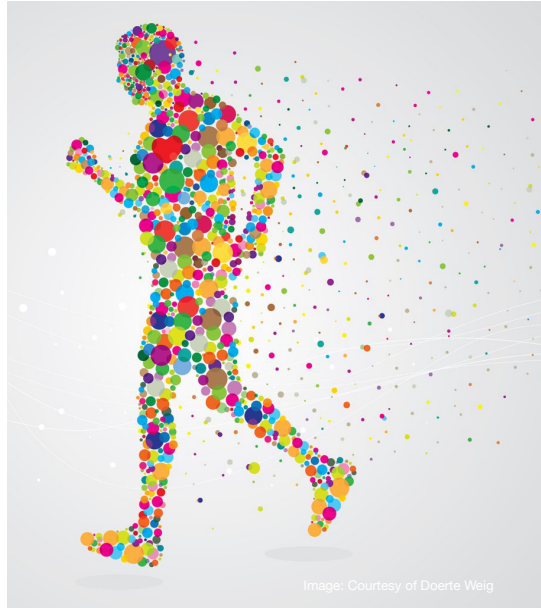


Image: Courtesy of Doerte Weig

**Doerte Weig's** fascination is to uncover the different facets of human movement and physicality, and how these relate to socio-political transformation. Doerte has a background in social anthropology (PhD) and experience with moving-sensing bodies through diverse research projects with hunter-gatherers, dancers (Sardana + contact impro), movement meditation practitioners (5Rhythms), castellers (builders of human towers), bodyworkers. As a specialist on the nexus of bodies and mobilities and her work on fascia and 'sensorial awareness', Doerte believes that we cannot think the future of education, work, creative cities and societies without taking into account the physicality and sensoriality of our moving bodies.

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# From sensoriality to sensitivity through the sense of smell

**Victor Fraigneau** École nationale supérieure d'architecture de Paris-La Villette

Smells, though invisible, intangible and almost ineffable, constitute an integral part of our environment nevertheless. The sense of smell is specifically linked to our memory, our emotions, and offer an acute perception of **temporality**, of a different **spatiality** which make it a remarkable sensitivity to experience a place. The enhancement of this sense also makes it possible to express the impalpable and undefined atmospheric qualities of a place. This intervention wishes to explore the **corporeal** characters of the sense of smell, and its importance in the experience of our contemporary built environments.

Whenever we inspire, we smell. Apart from olfactory disorders, it is not possible to suppress this perception. This is what makes the sense of smell a fundamental, literally essential sense. It is a penetrating sense, a sense of passage, of **porosity** and **limit**. It is also, **a sense of life**, linked to vital **breathing** and its **rhythm**. This sense links our bodies to the **material** and the **immaterial** world, it binds the ideas of spirit and body.

The connection between olfactory perception and the essential mechanism of respiration says a lot about its physiological utility. The peculiarity of the olfactory perception is the expression of a chemical and environmental **event**, the symptom of a change that can take place on a molecular scale as well as at the level of a territory. By looking closer at physiological issues, we will question how much the sense of smell participate in our experience of **atmospheres** and of our own bodies. We will interrogate the relation between an episodic **memory** of smell and our sense of a place, and dig to find links to the **sense of being-there**, and thus to better understand the potential of promoting the sense of smell in issues about our built environments.



Image: Tsukiji fish market, Tokyo, photo by Arian Zwegers | Courtesy of Victor Fraigneau

**Victor Fraigneau** is a French architect, PhD student at the School of architecture of Paris-la-Villette, at the GERPAU laboratory. He investigates what the olfactory dimension can bring to the definition of architecture and landscape.

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## Impairment in elderly: attention as a therapeutic tool

**M<sup>a</sup> Jesús Jiménez Mazuelas** [workshop lead]

Universidad Complutense de Madrid / Hospital Universitario de La Paz

**Elisa Valeriano Paños**

Universidad Complutense de Madrid / Hospital Universitario Gregorio Marañón

During the last decades, multiple studies have shown the intricate functioning of the nervous system in relation with gait. Vision, hearing, vestibular system and somatosensory system are senses that play a major role in the maintenance of balance during walking. In spite of that, regarding human being gait requires not only take into consideration sensory and motor aspects of motion, but thinking about several executive functions such as inhibitory control, working memory and attention, which are processed in the central nervous system.



Image: Bart Vandavege | Courtesy of M<sup>a</sup> Jesús Jiménez Mazuelas

Unluckily, many people affected by different types of diseases regarding with nervous system tissue damage suffer sensory, motor and execute functions impairment, affecting their balance while walking. Recent researches give us some good expectations in this domain, giving proven evidence of the plasticity of several structures of the nervous system. This fact enables tissue regeneration and a new distribution of neural paths so that walking skills could be recovered.

Our intervention enhances the role of sensorimotor programs in self-perception and environment perception while walking in normal conditions, and experimentally reduced and increased sensory conditions. All the experiences derived from the interventions could be measured with instruments related with feet pressure and spatio-temporal parameters of gait.

Although **M<sup>a</sup> Jesús Jiménez Mazuelas** has always been playing with all kinds of movements in order to create sensations, some recent research and personal experiences have shown her the pretty complexity of standing still. The whole packet of cognition, emotions, sensitivity and motor aspects gathered in a body prepare the way in which human being develops his/her variable performance in daily life and how perceives the world surrounding while keeping stability in their actions. M<sup>a</sup> Jesús is a Ph.D. student at Universidad Complutense de Madrid, studying Podiatry, Physical Therapy and Feldenkrais method but, above all, is a person full of curiosity about balance in life.

**Elisa Valeriano Paños** Graduated in Nursing at the University of Castilla La Mancha, Spain in 2009, and obtained a Master's Degree in Social and Health Care Research at Faculty of Social Sciences, Cuenca, Spain in 2013. At the present, she is carrying out PhD studies about frailty syndrome and cognitive impairment. She has received a grant for research collaboration with elderly population at Faculty of Nursing, Cuenca 2014. Mains areas of research: frail elderly, gait impairment and falls.



Image: Embodied Mapping Workshop at Los Angeles River Bowtie Parcel |

## Listening to a Gesture

**Rennie K Tang & Steven Chodoriwsky**

California Polytechnic State University

As urban dwellers we often find ourselves entangled within intense and sometimes overwhelming multi-sensory environments. From loud traffic jams to endlessly scrolling screens, the instant access to an excess of information can take a toll on the body. The design of our built environment can play a critical role in modulating sensory interplay as part of our daily spatial encounters. Architectural designers can benefit from the experience of occupational therapists specializing in sensory integration and movement-based practitioners who have an acute awareness of how people process, filter and experience these multi-sensory environments. Listening to a Gesture is a performative workshop that focuses on silencing the visual noise that surrounds us through very deliberate acts of listening and moving informed by these disciplinary cross-overs.

This workshop creates a linkage between the micro-gestures performed by bodies to the macro-movements of global travel, by removing the physical barriers that might prevent valuable cross-cultural encounters to occur. As researchers we do not have the financial means to travel to Madrid from our home base in Los Angeles but would like to find ways to find 'ability' within this seeming 'disability.' The 45-minute workshop will gather participants in a room for a spatial exploration guided by vocal instructions broadcast from an online communication platform. Facilitators in Los Angeles will prompt modes of communication across the video screen and within the respective rooms involving physical gestures and vocal accompaniment. In Los Angeles there will be four participants: Rennie Tang, Steven Chodoriwsky (workshop facilitators), Olivia Booth (arVst) and Elisa Seidner (director of KidAbiliVes Sensory Integration Clinic where workshop will be held), who will be performing in parallel to participants in Spain. The workshop will be audio recorded on both sides and edited into a soundscape collage that will be shared with all participants after the symposium.



**Steven Chodoriwsky** is a designer, artist, writer, and educator. His research-based practice employs a diverse range of media including installation, performance, and audio-visual artifacts. He teaches at Cal Poly Pomona in the Departments of Architecture and Landscape Architecture, as well as at Woodbury University. Previously, he taught at Cornell University, and at the University at Buffalo, SUNY, where he was the Peter Reynier Banham Fellow 2016-17. As a visual artist and researcher, he has held positions at the Jan van Eyck Academie and at the Center for Contemporary Art, Kitakyushu.

**Rennie Tang** is a designer and educator based in Los Angeles. As Associate Professor of Landscape Architecture at California Polytechnic State University, Pomona her teaching methods emphasize one-to-one scale spatial construction, topographic manipulation and material exploration. Fueled by transdisciplinary collaborations with artists, choreographers and healthcare specialists her research interests include intergenerational playscapes, kinesthetic engagement in urban landscapes, and health and well-being in cities. She holds a Bachelor's degree in Architecture from McGill University and a Master of Science in Architecture and Urban Design from Columbia University; she has worked in Montreal, Toronto, New York, Los Angeles, Berkeley, Oakland and Vienna.

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## Sensory Deprivation

**Hannah Rachel Jones Dewhirst**

SUBSTUDIO / Bowling Green State University.

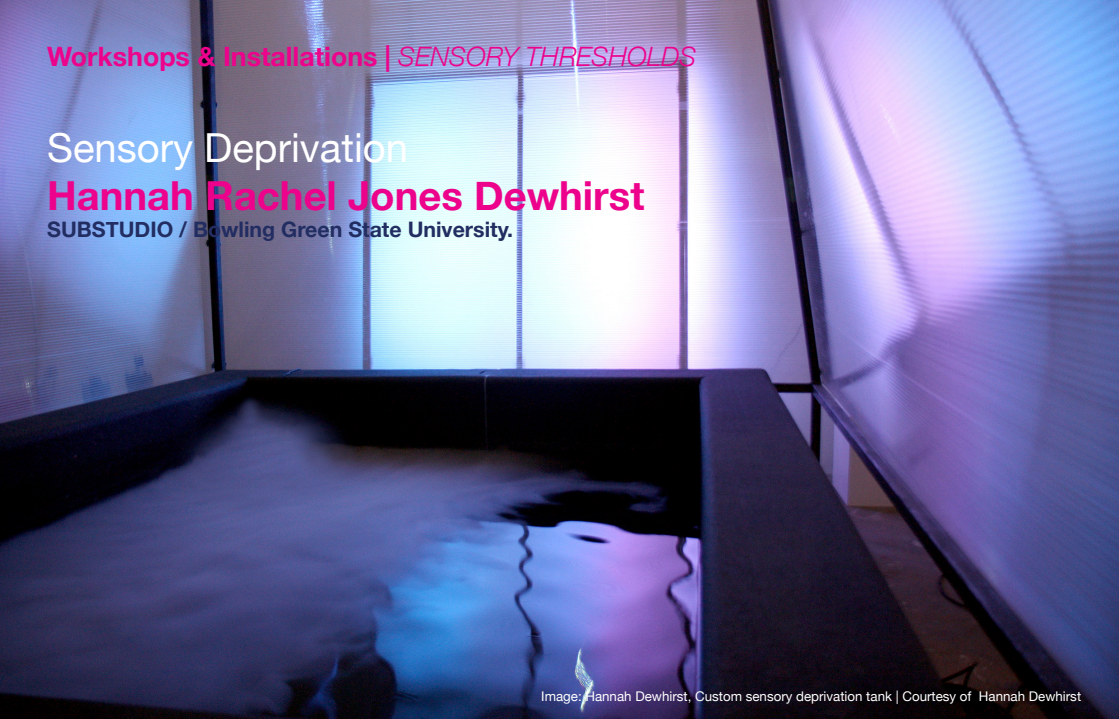


Image: Hannah Dewhirst, Custom sensory deprivation tank | Courtesy of Hannah Dewhirst

My work examines moments of tension. The spatial sequencing we dream about evokes science fiction, states of control, a threatening shadow on the horizon. But there are others that forefront the calming colors of a sunset, the meditative movement of a single point of light, the strength of the body. By weaving these conditions together, tested in true spatial terms, I continue to re-program and re-assemble the moments of tensions that tend to awaken us.

The arms of my practice exist as complementary parts to a whole: aspirational collage drawing, full-scale studio experimentation, and layered, evaluative documentation. I use light and water as primary mediums, sensory deprivation, immersion, and mythology to create otherworldly experiences.

For two years, I fully immersed myself in experimentation with sensory deprivation and manipulation, using a self-built custom sensory deprivation “float” tank. This tank was built as a hyper-controlled, finely-tuned tool for spatial and experiential experimentation. Because of the controlled sensory baseline (no light, sound, or bodily awareness), this instrument allowed me to document and compile a catalog of isolated and tested spatial conditions. More than a sensorial wealth of information, this way of testing allowed me to formulate a generative, tool-based way of working. This practice and style of “testing space” is holistically body-based, both interior and exterior, material, full scale, and experimental.

The generative quality of this experimental practice becomes as important as the output. Thus the site-specific, time-based work amasses a life of its own as I test and “tune” a work to its environment and its users. The process of making is a vital act of discovery, wherein experience and intuition, alongside digital fabrication processes and material experimentation allow for an ongoing feedback loop.

**Hannah Dewhirst** is a designer, co-founder of SUBSTUDIO Architecture, and Instructor of Architecture at Bowling Green State University. She brings to the table over ten years of experience working for architects Steven Holl, William Massie, Rafael Viñoly, and Gensler. Hannah received her Masters of Architecture from Cranbrook Academy of Art in 2017 and a Bachelor’s degree from University of Michigan in 2009. Her work has been exhibited at the Chicago Architecture Biennial, Movement Electronic Music Festival, and the Cranbrook Art Museum.

## Strategies of Arrival

**Michail Rybakov** independent researcher

To fully arrive at a place, you have to be able to position yourself in it. This demands the ability to choose action or non-action, as “Life is choosing matter”, to quote the biologist Lynn Margulis.

What effect does it have on our life, that disembodied, artificial intelligences are making more and more choices for us? Will our technological solutions, designed to enrich and extend our bodies, take over our ability to choose and to act? Does the use of technology have to contradict the presence of human bodies? Or can it foster our somatic agency?

Two installations show my research into these questions.

**Michail Rybakov** is a Media artist and artistic researcher originally from St. Petersburg, Russia. After studying media art at the University of Art and Design Karlsruhe, he is currently doing postgraduate research into ‘Strategies of Arrival’, as well as researching the arrival at possible futures with Bruno Latour for his upcoming exhibition on the Critical Zone.

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# /// Organisers

## | Bios:

**Ma Auxilidora Gálvez** is an architect and holds a PhD in Architecture from ETSAM UPM. She is also a Feldenkrais Teacher. Since 2016 she develops the 'Platform of Somatic for Architecture and Landscape' (PSAAP). Between 2013 and 2016 she co-directed with Izabela Wieczorek the architecture firm Gálvez+Wieczorek. She is a professor at the E.P.S San Pablo C.E.U University in Madrid, but she also collaborates with other local and foreign institutions. Between 2006 and 2010 she was a coordinator for Panama in the International Cooperation of Social Housing developed by the Andalusian Government. Currently, she works in landscape and architecture mainly associated to an embodied point of view. Her research explores possibilities of embodied cognition and movement in the pedagogy of these disciplines.

[www.psaap.com](http://www.psaap.com)

**Carolina Vasilikou** is an architect and educator, working as a Lecturer in Architecture at the University of Reading. She is a core member of 'Urban Transcripts', a non-profit organisation bringing together research, urban activism and community-led practices. Carolina leads projects on sensory perception and well-being in urban spaces, including an AHRC-funded community engagement project on multi-sensory navigation in heritage cities. She is a member of the 'International Ambiances Network', 'Urban Living' Research Group and 'Breaking Down Barriers' diversity & inclusivity team at UoR. Carolina has founded C.R.A.C.K.S. (Collaborative Research on Architecture, Creative Kinetics and Somatics) with Physical Theatre Artist Judita Vivas, tracing the tremendously curious movement in unseen spaces of complex urban environments, with a performative turn using experiential and embodied practices.

[www.research.reading.ac.uk/urban-living/projects/re-public/](http://www.research.reading.ac.uk/urban-living/projects/re-public/)

**Izabela Wieczorek** is an architect, researcher and educator. She holds a MSc in Architecture and Urban Design from Politechnika Krakowska and a PhD in Architecture from ETSAM UPM. She has an international teaching experience and is currently a Lecturer in Architecture at the University of Reading. From 2003 to 2017 she was a co-director of Gálvez+Wieczorek arquitectura, whose work has been awarded prizes as well as published and exhibited internationally. Since 2017, she runs Atmospheric Architecture Agency (AAA) – a research-based experimental practice that explores relational, sensorial, performative, affective and ecological aspects of Architecture. She is also an associate member of the international research platform 'Atmospheric Spaces: Aura, Stimmung, Ambiance', the 'International Ambiances Network', and the 'Urban Living' Research Group at UoR.

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# /// Notes



We  
are

# All Able Bodies

From Sensory Deprivation to Sensory Augmentation

*How can our  
bodily abilities  
inform design,  
and how can  
design have an  
intensifying or  
diminishing effect  
on our sensory  
abilities?*