Explore the Future of Movement and Computing

MOCO'26

23th to 25th of April 2026

Cité des Arts

Montpellier France

MOCO'26 In the pink of Health: Conference programme

Conference Day 1 – Thursday 23 April	
Location: Cité des Arts	
Time	**Programme**
8.00 – 8.30	**Conference registration** - Coffee & tea
8.30 – 9.00	**Welcome to MOCO'26** – Patrice Guyot – Grégoire Bosselut – Director CDA
9.00 – 10:30	**Doctoral Consortium: MOCO Emerging Scholars** Chairs: Théo Velletaz, Martin Leguennec **5 min + 2 min Q&A** • Brenda San Germán Bravo. Body-Informed Effects for Supporting Emotional Self-Regulation in a Mixed Reality space • Théo Dupuy, Victor Lopes de Souza. Cautious predictions to support decision makers in movement-related areas. • Lili M. Rampre. Cyborg Sensing: A Kinotechnic Inquiry into the Epistemic Infrastructures of Movement and Perception. • Léo Chédin. Exploring Choreographic Processes Involving AI. • Atilla Juliana Vrasdonk *et al.* Kinetic Energy and Flow in Co-Improvising Flamenco Dyads. • Romaric Sichler. Learning to Teach Gestures: Adaptive Feedback for Human–Machine Co-Learning in craft. • Léo Mercier *et al.* Movement Sonification Integrated to Rehabilitation-Readaptation. • Roos Van Berkel. Moving with Care: The Agency of Digital Movement in Socio-Material Practices. • Botao 'Amber' Hu. On Improvisation and Open-Endedness: Insights for Experiential AI. • Hanna Zhu. The Posthuman Fusion: Human-AI Co-creation for Movement Arts incorporating Embodied Affect and Cultural Intent.

	• Hadil Abba *et al.* The Sense of Touch in Healthcare HAPTIMED: A Digital Twin of Haptic Perception for Educational Purposes -
10.30 – 11.00	**Coffee Break**
11.00 – 12.30	**Paper Session #1** - *Embodied Interaction, Movement & Perception* Chair: TBA **12 min + 3 min Q&A** • Lottridge *et al.* Moving Contexts: How Culture, Context, and Movement Histories Shape Whole-Body Interaction in Aesthetic Environments • Preisler *et al.* When Bodies Resonate in Sound: Sonifying Interpersonal Movement Dynamics in Dance • Weber *et al.* Dynamic Abstract Avatars Impact Dancers' Sense of Embodiment and Movement Choices • Mardamootoo. Moving Through Volume • De Blanc. Weight-sharing trust and wooden floors: Identifying moderating factors in physically integrated dance • De Blanc *et al.* Automatic and perceptual assessment of motion coordination in dyadic dance
12.30 – 14.00	**Lunch Break**
14.00 – 15.30	**Paper Session #2** - *Dance, Choreography & Creative Practice with Technology* Chair: TBA **12 min + 3 min Q&A** • Rajko *et al.* Choreographic and Improvisational Approaches To Interrogating Robotic Systems • Correia *et al.* Fantasies, Obscurities and (Dis)Connections: Three Case Studies of Dance Artists' Creative, Embodied and Political Engagement with AI • Hou. Playing the Museum: The Body as Interface with Central African Traditions • Stergiou *et al.* Digital Queens: A case study on cloth simulation, motion capture and XR technologies for addressing costume-choreography challenges • Baltas. Extending the Site: XR modalities for Site-Specific Dance – A Comparative Study of XR Technologies in Studio-Based Practice • Sicchio. p5score: A Computational Framework for Choreographic Notation and Real-Time Movement Composition
15.30 – 16.00	**Coffee Break**
16.00 – 18.00	**Practice Works and Posters** **Practice Works #1**- Chair: Julien Laroche • START: Science, arT, reseARch and Transgression

- PosePilot-GOM: A Web-based application for dexterity analysis of human movement
- A pen "IMU inside" : a Sensor-Enhanced Pen for Exploring Sound While Writing
- PosePilot-Ergo: A web-based application for ergonomic analysis and human motion quantification
- PyEyesWeb: An open source toolkit for multimodal movement feature extraction
- Drifting Bodies Through Algorithms

Poster #1 - Chair: Stéphane Perrey
- Gasparotti *et al.* Effects of cognitive-motor training in virtual reality on anticipatory brain functions and balance of professional dancers
- Lozano-Goupil *et al.* Video-Based Motion Capture and Social Signal Processing for Detecting Psychosis Risk
- Rokeby *et al.* Enriching the Kinematic: Approaching New Methods for Machine Learning with Bodies That Move at the Edge
- Zhu. How AI Leads in Creative Practice: From Mentorship Dialogues to Extended Narratives
- Whatley *et al.* Dance, disability and robots: interdisciplinary possibilities for reframing 'healthy bodies' in performance
- Chiu. Embodied Ethics in Digital Futures: Choreoethics and Motion Capture in Digital Dancescapes
- Ayache *et al.* The Choreography of Thought: How Interpersonal Coordination Reveals Shared Cognition
- Sutton-Chanari *et al.* On the fractal complexity of sacrum motion during walking
- Ioannis. Musicians' Movement Repertoires and Emergent Coordination: Scapular Kinematics, EMG, and Struggle in Higher Music Education
- Zhang. Reframing Human–Machine Movement through Laban Spatial Logic: Toward a Temporal and Embodied Framework of Relational Vitality
- Daveau *et al.* Embodied Gestures: recognizing static hand movements with lightweight neural models
- Taleb-Salah *et al.* Motion Capture for Ergonomic Assessment: Inertial vs. Computer Vision Based on YOLOv11
- Pyaraka *et al.* Humanoid Robot Navigation in Shared Care Spaces: A Human-Aware Navigation Framework and ImplementationHumanoid Robot Navigation in Shared Care Spaces: A Human-Aware Navigation Framework and Implementation
- Chafik *et al.* IMU-Based Detection of Load Carriage for Ergonomic Risk Assessment
- Lahya *et al.* Deep Learning for Physical Load Estimation: Insights from ViLoad Video Dataset

19.00 Evening	**Gala**

Conference Day 2 – Friday 24 April Location: Cité des Arts	
8.30 – 9.00	**Conference registration** - Coffee & tea
9.00 – 12.00	**Practice Works and Posters** **Practice Works** - Chair: Patrice Guyot • Tethered: Biophysical Sensing toward Affective Somatic Integration • Holding Time Main-Tenant as a Practice of Palliative Health • Creative Movement Hacking: Can We Combine Ideokinesis and Immersive Technologies to Enhance Embodiment? • Creativity Tools for Movement-based Artistic Practices in Extended Reality: Performances based in Fantasticos • The Emergence of a Dance: A Sensitive Experience of Movement • The Z of Touch: Crystallizing the Interoceptive Axis of Blended Touch **Poster #2 (10:00 – 12:00)** - Chair: Stéphane Perrey • Kobayashi *et al.* GenreMix Analyzer: Visualizing Probabilistic Composition of Dance Styles for Supporting Dance Learning • Laroche *et al.* Multi-agent Coordination in Shared Hybrid Spaces - How Digital Environments and Adaptive Agents Shape Collective Embodied Timing • Skjeldal *et al.* Studying Embodied Expression in Drumming for Virtual Systems • McKendrick *et al.* Don't Let Me Be Misunderstood: Guiding Acting Practice through Negative Robot Behaviour and Contextual Intentions • Grebel *et al.* Battles as Interactive Ecologies: Designing with Embodied Roles in Hip-Hop Performance • Glover *et al.* Sample entropy analysis of variability in sit-to-stand-to-sit movements of people with or without chronic pain • Faux *et al.* Dynamical 2D-DFA for movement analysis in obstetrics • Bosselut *et al.* Exploring multimodal neurophysiological synchrony and behaviour in choir performance: a preliminary study. • Neville. Agiles: Creativity and Mobility through embodied participation in Immersive Environments • Vincs *et al.* Virtual Volumetric Bodies Interacting with Squishy Balls and Shiny Fish: Towards a more inclusive XR interaction system • D'adamo *et al.* SoniFootsteps: Movement-Triggered Footstep Sounds to Modulate Body-Weight Perception, Gait and Emotion

	• <u>Soga and Sra.</u> VR Dance Puppet: Movement Creation by Controlling Partial Body Parts Using a VR Device • <u>Stein *et al.*</u> Tapxophone: Towards Engaging Finger Rehabilitation using Computer Vision and Music • <u>Hollerweger *et al.*</u> Streaming Open Sound Control data from a commercially available IMU suit in real time for performative sonic arts projects • <u>Gong *et al.*</u> DVF-Generator: A Physics-Aware Conditional Generative Model for Respiratory Motion Synthesis in Liver SPECT
12.15 – 13.30	**Lunch Break**
13.30 – 15.30	**Paper Session #3** - ***Machine Learning, AI & Generative Systems for Movement*** Chair: Gérard Dray **12 min + 3 min Q&A** • <u>Lawrence *et al.*</u> Interactive Machine Learning can recognise complex movements, but does it make us happy? • <u>Yang *et al.*</u> Designing Generative AI for Real-Time Multi-User Interaction in Co-Creative Dance • <u>Faurent *et al*</u>. Learning Human Rhythmic Movements: Adaptive CPGs for Synchronized Virtual Agents • <u>Akbas *et al.*</u> Cross-Modal Retrieval-Augmented Generation for Craft Gestures Learning: Enabling Dialogue with Multimodal Pedagogical Contents • <u>Trolland *et al.*</u> Exploring Movement-Led Co-Design for Interactive Lighting in Performance • <u>Beller.</u> Exploring "Synekinian Pairs": Manual-Vocal Gesture Integration in Experimental Contexts
15.15 – 16.30	**Keynote #1** **A. Refsum Jensenius / L. Bishop** - Chair: J. Laroche 50 min + 20 min – Title TBA
16.30 – 17.00	**Coffee Break**

17.30 – 19.00	**Performance Promenade**
	• ZAGHAREED: A Human and AI Co-Created Film Extending a Dance
	• The origins of intelligence: A performative statement on the primacy of movement
	• Real-Time Full-Body Multi-Player Interaction with AI Dance Models
	• Performance of "SensualMap 2.0 Meets The Source"
	• The Emergence of a Dance: A Sensitive Experience of Movement
	• The Body Knows the Pattern: A Performance System Exploring Gesture Mapping and Embodied Rhythm
	• The mv lab spatial trainer MR demo
	• Sonification of dance during the performance promenade
	• Anonymous - A Participatory Installation for Creative Improvisation
19.00+	**Dinner on your own**
20.30	

Conference Day 3 – Saturday 25 April Location: Cité des Arts	
8.30 – 9.00	**Conference registration** - Coffee & tea
9.00 – 10.30	**Paper Session #4** - *XR, Virtual Environments & Multimodal Interaction Systems* Chair: TBA **12 min + 3 min Q&A** • Gaugne *et al.* Blow based collaboration in a digital art virtual environment • Saint-Cast *et al.* A Full-Stack Web-Based Ecosystem for Movement–Sound Interactions • McKendrick. Mask Work and Performance Techniques for VR Embodiment • Guo *et al.* Liquid Connections: Reimagining Social Touch in Virtual Reality • Brendel *et al.* Low-Latency Real-Time Volumetric Reconstruction for Interactive and Dynamic Stage Productions • Odonnell *et al.* Gesture Mapping for Embodied Rhythmic Expression: A Case Study on Expressive Affordances
10.30 – 11.00	**Coffee Break**
11.00 – 12:10	**Keynote #2** **V. Cochen De Cock / B. Bardy** - Chair: J. Laroche 50 min + 20 min – Title TBA
12.15 – 13.30	**Lunch**
13.30 – 15.00	**Paper Session #5** - *Human–Robot Interaction & Bio-Inspired Systems*

	Chair: TBA **12 min + 3 min Q&A** - Ouhssain *et al.* Reinforcement Learning with Musculoskeletal Models to Study Fatigue Effects on Human Muscle Synergies - Alcubilla *et al.* Designing Relational Care: Speculative and Participatory Approaches to Movement-Based Human-Robot Interaction through the Performing Arts - Guevara. Reflections: Health, Technology, and the CCL Experience - Hu *et al.* "We Move Like an Octopus": Exploring Decentralized Tentacular Coordination via Inter-Bodily Electromyostimulation Relays X - Neuhauser *et al.* Estimating Piano Piece Difficulty via Embodied Robotic Hand Performance Analysis
15.00 – 16.30	**Practice Works and Posters** **Practice Works** - Chair: Leonardo Montecchia - Interactive Dance Performance as a Dialogue: Choreographing through Sound and Grief - Gone Fabulous VR: Virtual Reality Installation through Choreographic Process - SyncOff™ A Speculative Symposium on Coordination Collapse **Poster #3** - Chair: Stéphane Perrey - Tadayoni *et al.* SensualMap 2.0 Meets The Source - Di Donato *et al.* British Sign Language in Embodied Music Interaction: An exploratory study of British Sign Language music interpretation - Marin-Bucio. Machinic Movement Matrix: A framework and tool for human-AI dance creation - Ardaiz *et al.* Teams of Sport Science and Computer Engineering Students Learning Together - Siman. The Recorded Performance as Virtual Event: Archival Vitality in Preljocaj's Swan Lake - San German Bravo *et al.* Laban Inspired Visual Effects Influence Perception and Movement - Kolokotroni *et al.* Illuminating Emotions: Evaluating the Emotional Impact of Lighting on Animated Characters in Animation and Video Games through Motion Capture - Akbas *et al.* Reflective Embodiment through Avatar Abstraction: Insights from Movement Practitioners - Kantan. Beyond Deterministic Mappings: Audiovisual Correspondence in Movement-Controlled Generative Music - Corbellini *et al.* Slow Mood, Aesthetic Resonance, and Embodied Interaction: Design Principles for Art-Aided Rehabilitation

16.30 – 17.30	**Paper Session #6** - *Movement Analysis, Motion Capture & Computational Modeling* Chair: TBA **12 min + 3 min Q&A** - Pilkov *et al.* Estimating Pianists' Hand and Finger Kinematics with Markerless Motion Capture - Pataranutaporn *et al.* Phylogenetic Tree of Dance: Computational Reconstruction of Movement Lineages Through Motion Capture Analysis - Serdar *et al.* Mixed Method Audio-Video Analyses of Felt Togetherness in a Networked Music-Dance Performance
17.30 – 18.00	**Ending Remarks – Closing MOCO 10th**
18.00	**Jam session**