

Concert 3, September 18, AIMC 2026

- **Co-creative Practices in AI Improvisation:** Redefining Agency in a Solo Performance by Ferdinando Romano (Conservatorio di Como)
- **sonic.snapshot** by Ilia Viazov (Musikhochschule Lübeck)
- **The Fourth Man**, for fretless electric guitar and real-time electronics by Adam Wilson (City University of New York)
- **Burnt Memories** - Echoes of Datasets through Embodiement by Dominic Thibault (Université de Montréal) & David Piazza (Université de Montréal)
- **Ghosts in the Sophtar** by Federico Visi (Luleå University of Technology)
- **Twisted Circuits | Rhythm Traces - III** - For Buchla Music Easel, Musical Agent System, and Sonic Acceleration Box by Nicola Leonard Hein (University of Music Lübeck)

Co-creative Practices in AI Improvisation

This piece examines human-AI co-creation through a hybrid solo performance for double bass, modular synthesizer, and Somax2 (IRCAM). Built in Max/MSP, the system integrates corpus-based artificial agents that act through analog oscillators, MIDI corpora and audio corpora. Using a practice-based approach, the work connects performance theory, interaction design and technological development, focusing on the negotiation of autonomy between human and machine. Rather than treating the system as a tool for unidirectional control, the performance frames agency as an emergent relation between instrumental gesture, machine listening, and algorithmic response. It addresses the performer's shift from controller to meta-improviser, outlining strategies for adaptive behavior, real-time corpus recording, and distributed musical decision-making. Ultimately, this work contributes to the discourse on embodied cognition, liveness and contemporary human-AI musicianship.

Ferdinando Romano is a double bass player, composer and improviser active mainly in the contemporary and avant-garde jazz scene. Alongside his practice as a double bassist, he is active in the field of electronic music. He is currently conducting doctoral research at the Como Conservatory, focusing on the integration of Artificial Intelligence into improvisational contexts. In Top Jazz 2023, the critics' referendum held by the historic magazine Musica Jazz, he won important awards, placing second in the Italian Musician of the Year category. His album Invisible Painters ranked among the Italian Albums of the Year and among the Italian Ensembles of the Year. With his debut album Totem feat. Ralph Alessi, Romano had won numerous awards such as first place as "Best Italian Rising Star 2020" in Musica Jazz magazine's annual Top Jazz and the SIAE 2021 Award.

sonic.snapshot explores new forms of human-machine improvisation through interaction with the performer's sonic self-image, projected into acoustic space via spatial sound techniques. A recorded improvisation on a Serge Modular is recontextualized into a structured sonic archive, transforming gestures into a material that can be revisited in performance. Previously fluid and momentary material becomes a compositional field, allowing the performer to navigate and reveal hidden sonic relationships during improvisation. This approach shifts focus from linear performance to an unfolding dialogue with restructured sound. Spatialisation is treated as an active compositional process through which sound becomes dynamic and relational. The sonic material overlaps and transforms, allowing spatial relations to emerge and dissolve over time and underlying its semantic meaning. The work contrasts the fluid, unstable nature of analog synthesis with a more reflective,

performative control, in which musical decisions emerge through an interplay between intuition and structured re-engagement with past material.

Ilia Viazov, composer, sound artist, and performer, was born in Voronezh, Russia in 1999. He began his musical training as a bassoonist at the Rostropovich Music College in Voronezh, continuing at the Gnesin Russian Academy of Music in Moscow, before turning to composition at the Tchaikovsky Moscow State Conservatory. Due to the actions of the Russian government and the war with Ukraine, he left his home country in 2022, continuing his studies at the Musikhochschule Lübeck, where he completed a Bachelor in Instrumental Composition (Electronic Music and Sound Arts) and is now pursuing a Master's in Sound Arts and Creative Music Technology. He also works as a student assistant in the Hybrid AI Department at the University of Lübeck. His work has been presented at Ars Electronica, Darmstädter Ferienkurse, Frequenz Festival, +RAIN Festival, ZKM Karlsruhe, and ICMC, among others.

The Fourth Man is the latest in a series of pieces for electric guitar and "automatic improvisation" software. Prior works in the series have been performed in Europe, East Asia, and throughout the United States. While the guitarist performs, pitched accompaniment is developed from real-time analysis of the player's output. In earlier works, a simple probability model was used to traverse a factor oracle model of the player's live performance to produce idiomatic recombinations of material.

In "The Fourth Man," this process is augmented with a novel pattern discovery algorithm leveraging lossy compression to exploit repeated motives in the soloist's output.

Adam James Wilson is a composer, guitarist, and software developer who programs computers to improvise with human musicians. His music incorporates algorithmic music composition and real-time generative techniques. Wilson performs with his software experiments on the fretless electric guitar, an instrument that caters to his penchant for microtonality. He has performed/presented his work in Tokyo, New York, Paris, Montreal, San Diego, Washington D.C., Boston, Baltimore, Atlanta, Brussels, Belfast, Baton Rouge, Palo Alto, and elsewhere.

Wilson co-founded and serves as director of the New York City Electroacoustic Improvisation Summit, an annual concert series featuring music by artists focused on the integration of music improvisation and real-time interactive computer systems. He is currently Associate Professor and Director of Emerging Media Technology, specializing in Computer Music, at New York City College of Technology (CUNY City Tech).

Ghosts in the Sophtar The Sophtar is a tabletop string instrument with an embedded system for digital signal processing, networking, and machine learning. It features an array of actuators that can be activated algorithmically by the models running on the embedded computer, a pressure-sensitive fretted neck, two sound boxes, and controlled electroacoustic feedback capabilities by means of bespoke interface elements. In this performance, the Sophtar responds to a human player by means of actuators and harmonically filtered electroacoustic feedback controlled by Somax2, a multiagent system for human-machine co-improvisation.

Federico Visi is a researcher and musician based in Berlin, Germany. His work explores the interplay between human and non-human agencies in music, embodiment in networked music performance, and interactive machine learning. He has recently designed a networkable feedback string instrument with embedded machine learning called the Sophtar.

He currently works as a researcher at Luleå University of Technology and is a member of the TCP/Indeterminate Place networked hyperorgan quartet. He collaborates with research labs at several international institutions including University of Iceland, Goldsmiths University of London, and Universität der Künste Berlin.

Burnt Memories explores three representations of the Buchla Easel: the original analog instrument, recordings of past improvisations assembled into corpora for concatenative synthesis with Mosaïque, and the same sonic material encoded in the latent space of Wænderer. Through gestural interaction, the duo navigates, transforms, and reassembles these traces of previous performances. The piece unfolds as an archival process in which sonic memories are continuously reconstructed, revealing fragments of their origins while generating new musical forms. Between preservation and transformation, Burnt Memories questions what remains of an instrument and its gestures when its sounds become data.

David Piazza and Dominic Thibault are electroacoustic composers, improvisers, and researchers exploring the intersections of musical instrument design, embodied interaction, and artificial intelligence. Piazza is pursuing an interdisciplinary PhD at McGill University under the supervision of Marcelo Wanderley, while Thibault is Associate Professor of Digital Music at Université de Montréal. Both are members of CIRMMT and Laboratoire formes · ondes. Their ongoing collaboration combines research-creation, software development, and performance, notably through Mosaïque and Wænderer, two instruments investigating the creative possibilities of musical datasets, machine learning, and gestural interaction.

Twisted Circuits | Rhythm Traces - III focuses on integrating an augmented Buchla Music Easel with a musical agent system. The augmentation uses the Sonic Acceleration Box (SAB), a synthesizer, drum machine, and multi-effect unit realized with Bela Gem and programmed in SuperCollider, to extend the Music Easel's performative economy and to generate new sonic possibilities.

Furthermore, the work employs a musical agent system implemented in SuperCollider using the FluCoMa library that learns in real time from performers playing Buchla and SAB and operates in a player paradigm, based on the musical material it has learned. The musical agent system can learn and adapt the instrument's tonal and rhythmic fluidity, extending its capabilities beyond its limits. Hein's musical agent learns to interact musically, creating music in real time with Hein on the synthesizer and developing the interaction between human and machine-generated musical voices.

Dr. Nicola Leonard Hein is a sound artist, guitarist, composer, and researcher in music aesthetics and cybernetics. He is professor of Sound Arts & Creative Music Technology, as well as the artistic director of the studio for electronic music at the University of Music Lübeck.

He holds a Ph.D. from Columbia University, where he conducted extensive research in Critical Improvisation Studies and Human-Machine Improvisation, working with George E. Lewis. His work is determined by the interaction of sound, space, light, movement, and the emergent dynamics of aesthetic systems. He fuses cybernetic human-machine interaction with interactive AI music systems, augmented reality, telematic real-time art, immersive sound (with ambisonics, wave field synthesis, beamforming etc.), instrument-making, and conceptual compositions. Collaborations with: Max Eastly, George Lewis, Miya Masaoka, Viola Yip, Axel Dörner, Chris Chafe, Jeff Snyder, Seth Cluett, Godfried Willem Raes, Luc Döbereiner, Ana Maria Romano Gomez, Hans Tammen, Teresa Carrasco, Mazen Kerbaj, Ute Wassermann, Adam Pultz Melbye, Toshimaru Nakamura, Federico Visi, Lillevan and many more. With the support of the Goethe-Institut and numerous other institutions, his works have been realized in over 30 countries. Presentations of his work have taken place at MaerzMusik Festival (Berlin), Ars Electronica (Linz), Moers Festival, A L'ARME! FESTIVAL (Berlin), Super Deluxe (Tokyo), Sonica Festival (Glasgow), Experimental Intermedia (New York), CCRMA Stanford, Princeton University, Harvard University, NIME, ICMC, AIMC and many more.

