

“1985”

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digital saxophone, computer, live electronics

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electric guitar, computer, live electronics

1. Project Description

“1985” is a live performance born from the practice of free musical improvisation, entirely generated in real-time flow through the use of acoustic, electric, and digital instruments, alongside computers, live electronics, and custom-hacked software.

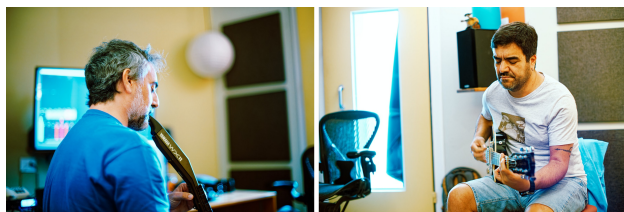


Figure 1: Manuel S. Falleiros and André L. Martins during a recording session.

Researchers and performers André Martins and Manuel Falleiros did recently two recording sessions for a fully instrumental album crafted using musical instruments conceived in the 1980s. Employing period-specific equipment, characteristic effects, timbres, and practices, they intertwined these with their current research in real-time sound creation, utilizing free musical improvisation and computers, digital machines, and programming software. The piece that we will present at SBCM, bearing the same name as the instrumental album *1985*, encompasses a musical and sonic interpretation of 1980s technologies and contemporary musical practices and poetics.

Custom-designed software environments are integral to real-time performances involving musical instruments and computers. Martins utilizes a patch he created and developed himself, called “papagaIO,” which manipulates incoming audio through five distinct processing modalities: granulation, pitch alteration, dynamics control, ring modulation, delays, and harmonic subversion, generating frequency shifts divergent from the original sound’s harmonic series, all modulated via XY trackball vector control. Falleiros utilizes a custom hacked software that exploits a hidden programming mode (“secret mode”) within the Yamaha WT-11 MIDI saxophone tone module, enabling unique dynamic, pitch, and envelope modifications tailored for the performance.

In 40 years, how much has the world of music, sound creation, and our lives changed? How do musicians adapted to digital tools, software, and recent AIs – with their subversive artistic and commercial applications – behave

in a completely globalized and capitalist planet? How do these reflections unfold when revisiting the use of musical equipment and computer music technologies characteristic of the 1980s?

“1985” seeks to establish a performance environment where the human-machine interaction is potentiated in real time, engaging with all the pertinent challenges of using computers, software, interactive musical creation systems, sound processing, and music improvisation. This is conceived without any prior rehearsal and created and executed by the two performers in real time.

The integration of computers and real-time sound processing software has profoundly reshaped the landscape of free musical improvisation. As David Borgo (2007) articulates, the improviser’s agency extends beyond traditional instrumental techniques to encompass the manipulation of sonic parameters in real-time, blurring the lines between performer and sound engineer. This resonates with Curtis Roads’ (2001) exploration of *microsound* and granular synthesis, where computational processes become integral to the creation of musical textures and events, offering improvisers unprecedented sonic palettes. We believe that the real-time interaction with these digital tools fosters the emergence of *hybrid machines* – instrumental setups where the acoustic, electric and digital domains are deeply intertwined, expanding the improviser’s performative possibilities and cognitive engagement with the creation of sound and its flux in real time.

Clèmence Cannone (2011) further emphasizes the dialogic relationship that emerges between improvisers and these technological systems. The responsiveness and malleability of software environments allow for a dynamic interplay where the improviser’s actions directly influence the sonic output, and conversely, the sonic feedback shapes subsequent improvisational choices. This creates a continuous feedback loop, fostering emergent musical structures that would be unattainable through purely acoustic means. The utilization of hybrid machines enables improvisers to design bespoke sonic environments and interactive algorithms in real time, transforming the computer from a mere tool into an active co-creator in the improvisational process, thus redefining the very nature of spontaneous musical expression.

Ultimately, who controls the past controls the future. Who controls the present controls the past. (Orwell, G.).

2. Technical Notes

The piece lasts between eight and thirteen minutes, and is scheduled to be performed on four channels. The musicians will only need the amplification and speakers, providing four audio signals, through the notebook audio interface. The setup assembly consists only of positioning the equipment and passing sound.

3. Program Notes

This performance proposal features a live electronics free improvisation processing a digital MIDI synth controller integrated into a saxophone's interface and an electric guitar. Martins and Falleiros utilize custom-designed software patches, such as the papagaIO, which Martins created and programmed employing five distinct sound processing modalities accessible through visual objects. They also incorporate a uniquely modified Yamaha WT-11 module, a device exclusively produced in the 1980s, which has been creatively "hacked" by Falleiros to unlock a concealed programming mode. This enables real-time, in-depth customization and processing of sound parameters beyond the module's original specifications, forming a crucial element of their improvisational sonic palette.

The performance explores the interplay between electric musical instruments and digital instruments, performers, musical improvisation, live electronics, and the fundamental idea of sound. The machinic system itself, through its own agency, can undergo (de)structuring contingencies that are interchangeable and intrinsic to its very being. Its complexity resides not in one or another determined, isolated system, but in the interaction with the system. Indeed, as long as a machinic assemblage endures,

this organization will persist because the fundamental needs of the entire system are guaranteed. This entails having an energy supply system, a suitable ambient temperature to prevent computer overheating, sound reinforcement speakers strategically positioned for performer monitoring, efficiently configured cabling and signal paths and so forth.

This perspective aligns with the understanding of technological mediation in musical performance, where the inherent vulnerabilities and affordances of the digital system become integral to the improvisational process. The real-time negotiation with these emergent behaviors, whether disruptive or serendipitous, underscores the dynamic and unpredictable nature of improvisation within technologically mediated environments, further blurring the boundaries between intention and accident, control and chance, in the unfolding musical event.

References

- [1] O. W. Bertelsen, M. Breinbjerg, and S. Pold. Instrumentness for creativity – mediation, materiality & metonymy. In *Proceedings of the 6th Conference on Creativity & Cognition*, Washington, DC, USA, June 13–15, 2007.
- [2] D. Borgo. *Sync or Swarm*. Continuum, New York, USA, 2007.
- [3] A. L. Martins. *Ação generativa: a tomada de decisões durante a prática da improvisação livre, a partir de práticas criativas imprevistas, do começo ao fim – a elaboração de um modelo de análise*. Invited researcher, CIDDIC, Unicamp, Campinas, Brazil, 2021–2023.
- [4] C. Canonne. Du concept d'improvisation à la pratique de l'improvisation libre. *International Review of the Aesthetics and Sociology of Music*, 47(1):17–43, 2016.