

Research Performances

From Lonely Wolves to a Mind-Reading Ensemble

The power of improvisation to inspire active listening, trust, and a state of flow

Until the late 19th century, improvisation was a natural part of Western art music performance and what audiences expected to experience. Performers regularly engaged audiences through spontaneous decisions, improvising preludes, Entrées, and cadenzas, embellishing repeats impromptu, linking movements and whole pieces with improvised modulating interludes, and extemporising entire fantasias on themes suggested by listeners on the spot. This tradition celebrated the performer's personal voice and fostered a strong connection between musicians and audiences. However, throughout much of the 20th century, improvisation diminished from classical concert life, replaced by an ethos of strict (and heavily regulated) fidelity to the printed score.

In recent decades, however, we have been witnessing a resurgence of improvisation not only as a means of musical expression but also as a powerful tool for learning, communicating, and artistic research. This rebalancing of mastery (musical and instrumental), personal interpretation, and spontaneity restores attention to performers' well-being, ensemble connectedness, and audience experience and engagement.

This session starts with a 10-minute overview of the historical context and recent research insights. I will touch on the impact of improvisation on risk-taking, emotional expression, flow states, communication, and performance anxiety.

The live performance element will feature four students from the Norwegian Academy of Music, with no prior background in classical improvisation and only a single introductory session beforehand. Together, they will engage in real-time musical exploration, fusing spontaneity with structural awareness and improvisational elements as they work on solo and chamber music repertoire. Through interactive exercises in deep listening and "musical mind-reading," the performers will investigate how trust, attentiveness, and expressive risks evolve within an ensemble context. Improvisatory interactions will be both stylistically open and repertoire-related.

This session draws directly on findings from the study on Improvisational State of Mind (Dolan et al., 2018, *Frontiers in Psychology*). It explored how classical musicians experience and communicate differently when shifting between 'strict' (pre-determined) and 'let-go' (improvisatory) modes of performance. The study combined audience response, motion tracking, and EEG data, and found consistent differences in neural complexity, bodily coordination, and perceived emotional engagement. Improvised performances were consistently rated as more emotionally compelling and musically convincing by audiences, regardless of listeners' musical training.

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This presentation also draws from a new co-authored publication in *Nature magazine's* Scientific Reports (2025), which further examines the neurophysiological correlates of improvisatory practice. Both studies highlight how improvisation can shift musicians into heightened states of creative awareness and interactivity, which are perceivable and impactful to audiences.

This session brings these findings into an applied context by posing two central research questions:

- Can classically trained musicians, even with minimal prior exposure to improvisation, access a shared *Improvisatory State of Mind* in real time?
- What artistic and interpersonal transformations arise when performers are encouraged to take risks within a traditionally score-bound performance culture?

The final 10 minutes will be a facilitated discussion with the audience and performers, reflecting on the process and its outcomes in the light of the research questions above. Participants will be invited to consider the role of improvisation in reanimating classical performance as a living, dynamic process.



David Dolan
Guildhall School of Music & Drama (London, UK)
David.Dolan@gsmd.ac.uk

David Dolan, pianist, researcher, and educator, is the founder and Head of the Centre for Creative Performance & Classical Improvisation at the Guildhall School of Music & Drama, London. A leading figure in reviving classical improvisation and its applications in Western art-music performance, his pioneering teaching and practice methods are used at music institutions worldwide.

In his international career as a concert pianist, David integrates extemporisation into solo and chamber music performances of relevant concert repertoire. He has performed in many of the world's leading concert venues and festivals.

Yehudi Menuhin's response to David Dolan's CD When Interpretation and Improvisation Get Together was: "David Dolan is giving new life to classical music."

His recent multidisciplinary research, conducted in collaboration with Imperial College, London, and the Max Planck Institute, Frankfurt, has examined the impact of risk-taking and an improvisational approach to music-making on performers, audiences, and the quality of communication between them.