Workshop on Emerging AI Technologies for Music: Towards Controllable, Collaborative, and Creative Systems – AAAI

Keshav Bhandari[1], **Abhinaba Roy**[2] **Simon Colton**[1], **Dorien Herremans**[2]

[1]Queen Mary University of London
[2]Singapore University of Technology and Design
k.bhandari@qmul.ac.uk, abhinaba_roy@sutd.edu.sg, s.colton@qmul.ac.uk, dorien_herremans@sutd.edu.sg

Description of Workshop

This workshop is accepted as AAAI workshop, and is part part of a new annual series on the latest developments in AI for music, explores the emerging frontier of AI technologies that serve not just as automation tools but as collaborators in creative expression. As AI systems reshape how music is composed, performed, and produced, this workshop highlights the importance of keeping humans actively in the loop through prompt-based interfaces, multimodal workflows and other interactive AI tools. We aim to explore the latest research in human-centric AI for music and discuss how systems can empower humans to guide, steer, and shape AI outputs through intuitive interfaces, interactive workflows, interpretable systems and meaningful user-controls. While early music AI focused on fully autonomous models, the field is increasingly shifting toward co-creative and controllable systems, reflecting growing recognition that meaningful musical outcomes arise through human-machine collaboration. As the inaugural workshop in this planned annual series, we will explore how AI systems can be designed to amplify rather than replace human creativity.

Interest and Timeliness of Topic

In recent years, the field of AI and music has witnessed rapid growth, with deep learning techniques driving notable success across domains such as music information retrieval (MIR), generative modelling, representation learning, source separation, and transcription. The emergence of large-scale music foundation models (e.g., MusicLM, Suno, Riffusion) and multimodal systems combining modalities such as text, audio and video has further expanded the creative possibilities of AI-driven music. However, despite these technical advances, there remains a significant gap between the capabilities of current AI music systems and their practical adoption by musicians, producers, and educators. There has been a growing consensus in the community that recognizes the limitations of fully autonomous generation and the need for interactive, interpretable, controllable, and human-centered approaches.

A number of publications have acknowledged the need for additional research on human-centric systems to successfully integrate AI within the workflow of musicians, composers, educators, and medical professionals (Civit et al. 2022; Dash and Agres 2024; Yu et al. 2023; Sun et al. 2024; Zhao et al. 2025). This trend is evidenced by recent developments including a special track on Human-AI Interaction in Creative Arts and Sciences at IJCNN 2025[1] and the emergence of tools such as Google's Magenta Studio[2], Suno's Song Editor[3] and Sony's Diff-A-Riff[4], which highlight the need for controllable, customizable systems that maintain meaningful human agency over the creative process.

We aim to bring together experts from diverse disciplines within AI music research to address a central question: How can we best design AI music systems that enable meaningful human control, interaction, and collaboration? This aligns with AAAI's broader mission to advance responsible, human-aligned AI systems.

Topics of Interest

We particularly welcome submissions that emphasize controllability, interpretability, explainability, personalization, human-AI interaction and collaboration in music systems. Topics of interest include, but are not limited to:

- Music composition and generation
- Foundational music models
- Music production workflows
- Music education and pedagogy
- Music performance systems
- Music information retrieval
- Sound design and audio production
- Music therapy applications
- Music transcription and analysis
- Singing voice synthesis
- Evaluation of music AI systems
- Music recommender systems

[1]https://2025.ijcnn.org/authors/special-track-papers-and-exhibitions

[2]https://magenta.withgoogle.com/studio/

[3]https://suno.com/blog/songeditor

[4]https://cslmusicteam.sony.fr/news/diffariff-cocreation-models/

- Musical instrument design
- Robotic musicianship
- Optical music recognition
- Music theory and musicology
- Ethical, cultural and societal implications
- Accessibility and inclusion in music AI

Proceedings and Review Process

To ensure a fair and rigorous acceptance procedure for the workshop proceedings, we have assembled a diverse and highly qualified editorial board consisting of 5 proceedings editors and 7 program committee members, representing expertise in music information retrieval, generative AI, computational creativity, and machine learning. All editors and committee members are active researchers with substantial publication and reviewing experience at top-tier venues such as NeurIPS, ICML, AAAI, ISMIR, and IJCNN.

The **programme committee** consists of:

- Prof. Dorien Herremans, Singapore University of Technology and Design (editor/reviewer)
- Keshav Banhari, PhD candidate, Queen Mary University of London (editor/reviewer)
- Dr. Abhinaba Roy, Singapore University of Technology and Design (editor/reviewer)
- Prof. Simon Colton, Queen Mary University of London (editor/reviewer)
- Prof. Mathieu Barthet, Queen Mary University of London (editor/reviewer)
- Dr. Benjamin Hayes, Sony CSL, Paris (reviewer)
- Dr. Jaeyong Kang, Singapore University of Technology and Design (reviewer)
- Dr. Berker Banar, Ellison Institute of Technology Oxford (reviewer)
- A few other members pending.

Each submission will be assigned to **three independent reviewers** drawn from this pool, based on expertise. Reviews will focus on novelty, technical soundness, reproducibility, clarity, and relevance to the workshop themes. The proceedings editors will oversee the review process, ensuring consistency and fairness, and will make the final acceptance decisions based on reviewer recommendations.

We will follow the publisher's guidelines for formatting and reviewing.

The planned review process timeline is as follows:

- **Submission deadline:** Early November 2025
- **Review period:** November 2025
- **Notification of acceptance:** Mid December 2025
- **Camera-ready deadline:** January 2026
- **Workshop date:** January 26-27, 2026 (AAAI-26, Singapore)

This schedule provides sufficient time for thorough reviewing while aligning with AAAI's workshop timeline. The editors will also perform a final quality check on accepted camera-ready versions before submission to the publisher, ensuring both scientific rigor and compliance with formatting requirements.

Organizing Committee

The organizing committee for the proposed AI music workshop brings together four highly active and well-connected researchers, with strong visibility across academic and professional networks such as Twitter and LinkedIn. Notably, two of the organizing members - Keshav Bhandari and Simon Colton are part of the Center for Digital Music (C4DM) at Queen Mary University of London and Abhinaba Roy and Dorien Herremans are from Singapore University of Technology and Design. Together both affiliations have around 75 active PhD students and 20 academic supervisors focusing exclusively on AI, audio and music.

Research Experience of Organizing Committee

Summary of the organizing members' research expertise:

Dorien Herremans: Dorien is an Associate Professor at Singapore University of Technology and Design (SUTD), where she leads the Audio, Music, and AI (AMAAI) Lab. Before joining SUTD, she was a Marie Sklodowska-Curie Postdoctoral Fellow at the Centre for Digital Music at Queen Mary University of London. She was also nominated on the Singapore 100 Women in Tech list in 2021, and one of the top 30 SAIL Award (Super AI Leader) Finalists in 2024 at the World AI Conference. Google Scholar Link[5]

Simon Colton: Simon is a Professor of Computational Creativity, AI and Games in EECS at Queen Mary University of London. He was previously an EPSRC leadership fellow at Imperial College and Goldsmiths College, and held an ERA Chair at Falmouth University. He is an AI researcher with around 200 publications whose work has won national and international awards, and has led numerous EPSRC and EU-funded projects. He focuses specifically on questions of Computational Creativity, where researchers study how to engineer systems to take on creative responsibilities in generative music, arts and science projects. Prof. Colton has has written about the philosophy of Computational Creativity and led numerous public engagement projects. Google Scholar Link[6]

Abhinaba Roy: Abhinaba is a senior research fellow at Singapore University of Technology and Design. He received his Ph.D. in Computer Vision in 2019 from the Istituto Italiano di Tecnologia, Genoa, Italy. He has held positions in both industry and academia, focusing on developing and deploying practical AI solutions. In recent years, his research has increasingly focused on the intersection of AI and

[5] https://scholar.google.com/citations?user=Hp5W5f0AAAAJ&hl=en\&oi=ao

[6] https://scholar.google.com/citations?hl=en&user=L6GPVfcAAAAJ

music, particularly in areas such as text-to-music generation, symbolic music creation, and multimodal music understanding. His work has been published in leading conferences including ISMIR, IJCNN, AAAI, and others. Google Scholar Link[7]

Keshav Bhandari: Keshav is a PhD candidate at the Centre for Digital Music (C4DM) at Queen Mary University of London supervised by Prof. Simon Colton. His research explores neuro-symbolic methods for music composition with a focus on musical structure and controllability. Prior to Queen Mary, he was part of the Interactive Audio Lab at Northwestern University, Evanston. Over the years, Keshav has published papers across conferences such as NeurIPS, AAAI, IJCNN and recently won the best paper award at EvoMUSART-25 (part of EvoStar). Keshav will be the main contact for the proposed AI music workshop at AAAI-26. Google Scholar Link[8]

Keynote Speakers

Confirmed Keynote Speakers

In addition to the regular paper-track, we also have a number of keynote speakers to attract more submissions. Our keynote speakers bring combined expertise from both academic research and industry applications in music AI.

Hanoi Hantrakul: Lamtharn "Hanoi" Hantrakul is an AI Research Scientist and AI Sound Artist based in Bangkok, Thailand. His work explores how machine learning can empower music, arts and culture, particularly from Southeast Asia. With over 8 years of experience in the tech industry, he has developed state-of-the-art Generative AI models at Google, TikTok and ByteDance as a Senior AI Research Scientist. He is co-inventor of notable technologies including Google's open source DDSP library and the music large language model SEED-MUSIC deployed in Doubao (China's ChatGPT).

As a sound artist performing under "yaboihanoi," his electronic music incorporates Thai tunings and rhythms. He won the 2022 international AI Song Contest with "Enter Demons and Gods" and has performed at SONAR Music Festival alongside artists like Skrillex and Four Tet. His musical instrument "Fidular" received an A' Silver Award and Core77 Design Award in 2017 and is permanently exhibited at the Musical Instruments Museum in Phoenix, AZ. His work on machine learning and cultural empowerment has been covered by international media including Deutschlandfunk, Scientific American and Fast Company. Google Scholar Link[9]

Elio Quinton: Elio is a scientist, engineer and leader with over a decade of experience in Artificial Intelligence, Machine Learning, and Audio Technology. Currently VP of Artificial Intelligence at Universal Music Group (UMG) and advisor to creative AI startups, he founded and leads the Music & Audio Machine Learning Lab (MAML), the first ever Machine Learning R&D group in the recorded music industry. MAML's mission is to invent and build next-generation AI/ML tools to support and empower artists and industry professionals globally. Trained as both a scientist, engineer and musician, Elio holds a PhD in ML and Audio DSP from the Center for Digital Music, a Physics MSc, a Music Technology MA, and a diploma in Commercial Music performance from BIMM London. Google Scholar Link[10]

Ethan Manilow: Ethan is currently a Senior Research Scientist at Google DeepMind on the Magenta Team. He finished his PhD in Computer Science working under Bryan Pardo in the Interactive Audio Lab at Northwestern University. During his PhD, he spent two years as a Student Researcher with Magenta and prior to that, he spent a year and half as Student Researcher at MERL on the Speech and Audio Team. His research centers on making machine learning systems that listen to and understand musical audio in an effort to make tools that can better assist artists. Google Scholar Link[11]

Oriol Nieto: Oriol Nieto, is a Senior Audio Research Engineer in the Sound Design AI Group at Adobe Research. Prior to that, he was a data scientist at Pandora. He obtained his Ph.D in Music Data Science from the Music and Audio Research Lab at NYU (New York, NY, USA) in 2015. He holds an M.A. in Music, Science and Technology from Stanford University (Stanford, CA, USA), an M.Sc in Information Technologies from Pompeu Fabra University (Barcelona, Spain), and a B.Sc. in Computer Science from Polytechnic University of Catalonia (Barcelona, Spain). His research focuses on topics such as music information retrieval, large scale recommendation systems, and machine learning with especial emphasis on deep architectures. He plays guitar, violin, and sings (and screams) in his spare time. Google Scholar Link[12]

Backup Keynote Speakers

In case of last-minute cancellations, we have identified potential replacement speakers:

- Prof. Dorien Herremans (Singapore University of Technology & Design)
- Prof. Philippe Pasquier (Simon Fraser University)
- Prof. Ollie Bown (University of New South Wales, Australia)
- Stefan Lattner (Sony CSL, Paris)

Relevant Links

- UKRI Centre for Doctoral Training in Artificial Intelligence and Music, Queen Mary University of London: https://www.aim.qmul.ac.uk/

[7] https://scholar.google.com/citations?hl=en&user=qPCQf2kAAAAJ

[8] https://scholar.google.com/citations?hl=en&user=1aVkR1QAAAAJ

[9] https://scholar.google.com/citations?hl=en&user=g91EXNcAAAAJ

[10] https://scholar.google.com/citations?user=IaciybgAAAAJ&hl=en

[11] https://scholar.google.com/citations?hl=en&user=2A80yVkAAAAJ

[12] https://scholar.google.com/citations?hl=en&user=7CyUUcMAAAAJ

- Audio, Music, Affective computing and AI team (AMAAI), Singapore University of Technology and Design: https://dorienherremans.com/team

References

Civit, M.; Civit-Masot, J.; Cuadrado, F.; and Escalona, M. J. 2022. A systematic review of artificial intelligence-based music generation: Scope, applications, and future trends. *Expert Systems with Applications*, 209: 118190.

Dash, A.; and Agres, K. 2024. AI-Based Affective Music Generation Systems: A Review of Methods and Challenges. *ACM Comput. Surv.*, 56(11).

Sun, J.; Yang, J.; Zhou, G.; Jin, Y.; and Gong, J. 2024. Understanding Human-AI Collaboration in Music Therapy Through Co-Design with Therapists. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems*, CHI '24. New York, NY, USA: Association for Computing Machinery. ISBN 9798400703300.

Yu, X.; Ma, N.; Zheng, L.; Wang, L.; and Wang, K. 2023. Developments and Applications of Artificial Intelligence in Music Education. *Technologies*, 11(2).

Zhao, Y.; Yang, M.; Lin, Y.; Zhang, X.; Shi, F.; Wang, Z.; Ding, J.; and Ning, H. 2025. AI-Enabled Text-to-Music Generation: A Comprehensive Review of Methods, Frameworks, and Future Directions. *Electronics*, 14(6).