

The RCM's Performance Studio has been transformed into an immersive, multifaceted laboratory, with full wall-height sized screens and a state-of-the-art Meyer Sound Constellation system incorporating dozens of speakers installed into the walls and ceiling. The pioneering Meyer Sound technology gives users the ability to transform the acoustic to emulate other performance spaces or create entirely new acoustics. This is paired with immersive visualisations of performance spaces, driven by Unreal Engine software and including models of the RCM's own exemplary concert hall and theatre, which provide realistic and reactive audiences or audition panels.

The combination of these technologies provides an unparalleled opportunity to simulate real and heightened performance experiences under pressure. By changing the receptiveness of the audience, triggering the many disruptions that can occur during a performance, adjusting the lighting and audience size, or setting up an intimidating audition or competition panel, performers and other users can hone their craft experimenting with prepare for the challenges of a modern music industry as well as propelling research in this

multiple disciplines.' field across

Similar technology has been installed in a second studio in the RCM's historic Blomfield building, upgrading the College's original, revolutionary Performance Simulator, and will be available to RCM students on a day-to-day basis. As well as the RCM's prestigious MSc in Performance Science, modules in the subject are integrated in student programmes across all levels

the Business School, Football Association, and Google hone their skills of live performance under pressure. The new Performance Laboratory will be transformational in the range and realism of situations for which we can help performers adapt and prepare.'

Funded by a £1.9 million grant from the Arts and Humanities Research Council (AHRC) and World Class Laboratories Fund (WCL), the major investment reflects the Royal College of Music's position as a world-leader in performance science and its mission to serve the UK's creative and cultural economy. The new facilities have been designed and created by the RCM's Centre for Performance Science and Digital teams and builds on over a decade of performance research already undertaken by the RCM.

Richard Bland, Head of RCM Digital & Production, said: 'Bringing together this collection of technologies is an indicator of how committed the College is in supporting the next generation of musicians. Not just embracing, but actively advancing digital technologies for research, learning and performance. The Constellation system alone is thrilling as it is the UK's first publicly accessible performance space treated this way. The opportunities to use multiple technologies in a venue hosting so many concerts during the year puts the College at the forefront as a digital innovator.'

Continuing current partnerships and fostering new ones, the RCM will use the Performance Laboratory to advance performance research across not only the arts, but also business, sport, medicine, and education. Since 2014 the College has offered performance coaching through the Imperial College Business School, and its distinctive 'Thriving in Radical Uncertainty' training for the United Nations Development Programme is being expanded to form a new partnership making full use of the new laboratory.

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ENDS

Founded in 1882, the Royal College of Music (RCM) is a world leading music conservatoire with a prestigious history and contemporary outlook. More than 900 undergraduate and postgraduate students come from over 50 countries from all over the world. The RCM is a member of the University of the Creative Arts (UCA) and is a member of the Association of Music Conservatoires (AMC).

The new CPS, named an Imperial Centre of Excellence, is an ambitious collaboration aimed at tackling major challenges of performance across a wide array of domains. The RCM and Imperial are uniquely positioned to undertake this activity, with partnerships spanning the arts, medicine, engineering, natural sciences, and business. The vision is that by understanding how skilled performers meet the distinctive challenges of their work, often under intense stress and public scrutiny, performance will serve both as a source of inspiration and a rich resource for research.

The Meyer Sound Constellation system is an electronically adjustable room acoustics system that combines ambient sensing microphones, advanced digital signal processing, and a system of loudspeakers to modify the reverberant characteristics of a space. Meyer Sound's team of highly specialized designers and technical support personnel work closely with the architect, acoustician, audio-visual consultant, theatre consultant, and installer from conception to final commissioning.

Constellation transcends the limitations of physical acoustics management, introducing a new level of acoustic flexibility not possible through physical methods. Instead, Constellation works by digitally fine-tuning room reverberation and early reflections to perfect the acoustic space. Constellation integrates a system of microphones and loudspeakers into a space. Each loudspeaker and microphone is connected to the Meyer Sound D-Miti digital audio processing system, which includes microphone inputs, loudspeaker outputs, and