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Quantum Voyages, Cosmic Journeys: Exploring Physics through the Arts

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From ancient monuments to modern day films, the confluence of the arts and physics has resulted in creations that have led to a deeper understanding of nature, to friendly and enchanting ways of perceiving science in action, to giving the arts a new dimension, to technological progress, and to pure fun! In this talk, I will describe the educational power of such confluences and recount some of our experiences in this realm. In a project-based interdisciplinary course entitled Where the Arts meets Physics, we bring alive the universe and the quantum world through installation and performance – cosmic canopies housing black hole mergers, raps on radioactivity, Warhol versions of Bohr-Einstein debates, and more. Collaborations with theater and dance have led to creating Quantum Voyages, an original performance piece. Here, two voyagers enter the microscopic realm of atomic landscapes, quantum conundrums, superconductivity, and cold atomic quantum states, guided by the spirit of knowledge, a 'quantum ensemble', and guest physicists. I will share the process behind the making and performing of the piece, leading up to its public appearance at the APS 2019 March meeting.