

THE SIAM STUDENT CHAPTER OF CITY TECH PRESENTS A TALK BY

Dr. David Smith

On December 3rd, 2020 Virtually via Zoom FROM 1:00-2:00 PM.

Meeting ID: 586 526 2264 and Passcode: SIAM2020

The talk is on

“The Other Pythagorean Equation”

Everyone is familiar with the Pythagorean Theorem, from which one can calculate the hypotenuse by taking the square root of the sum of the squares of the legs. In music, however, there is another Pythagorean equation from which we derive the modern western diatonic musical system. In this talk, I discuss the derivation of harmonic-series-related musical scales, and the weird incompleteness and paradoxes implicit in them that must lead to the use of temperament.



Dr. David B. Smith is Dean of the School of Professional Studies at NYC College of Technology, an award-winning composer and sound designer, and one of the pioneers in the area of live performance virtual orchestra. At City Tech, he has been instrumental in the development of innovative technology-based curricula in areas such as Interactive and Emerging Media, Music Technology, and Video Production Technologies. He has participated in productions at the college that deploy state-of-the-art or experimental technologies as part of departmental learning opportunities. These include the annual Graves End Inn Haunted Hotel project, and several virtual orchestra operas coproduced with Opera Company of Brooklyn.

A founding partner and Director of Research and Development at Realtime Music Solutions, Dr Smith was principle inventor of the Sinfonia® orchestral enhancement instrument, which has been used in over one hundred thousand performances including fourteen national tours, London’s West End, and Cirque du Soleil. He is a holder of patents in music performance technologies, and is particularly interested in interactive challenges facing the implementation of new technologies in the performing arts. As a sound designer, he has designed over a hundred and fifty productions. Recently he was awarded a Kevin Kline award for Outstanding Sound Design for his work on St Louis Repertory Theatre’s 2007 production of *Dracula*. Dr. Smith has composed over forty major works for a wide variety of musical ensembles, and was a concert violinist for twenty years. He is presently working on an opera, a sequel to Mozart’s *Die Zauberflöte*.