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COMPUTATIONAL THINKING IN SOUND

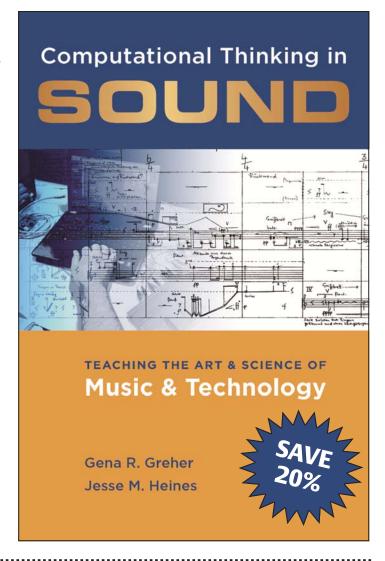
TEACHING THE ART AND SCIENCE OF MUSIC AND TECHNOLOGY

By Gena R. Greher and Jesse M. Heines

ith Computational Thinking in Sound, veteran educators Gena R. Greher and Jesse M. Heines provide the first book ever written for music fundamentals educators that is devoted specifically to music, sound, and technology. Using a student-centered approach that emphasizes project-based experiences, the book provides music educators with multiple strategies to explore, create, and solve problems with music and technology in equal parts. It also provides examples of hands-on activities that encourage students, alone and in groups, to explore the basic principles that underlie today's music technology and freely available multimedia creation tools. Computational Thinking in Sound is an effective tool for educators to introduce students to the complex process of computational thinking in the context of the creative arts through the more accessible medium of music.

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Gena R. Greher is a Professor of Music Education at UMass Lowell. Her research focuses on creativity and listening skill development in children and examining the influence of integrating multimedia technology in urban music classrooms and music teacher education through School-University partnerships.



Jesse M. Heines is a Professor of Computer Science at UMass Lowell. His primary teaching responsibilities include object-oriented programming and graphical user interfaces. His research focuses on computer science education, particularly interdisciplinary approaches that blend computer science with music and other fields to enhance instructional effectiveness in both.