NKU's DEPARTMENT OF MATH/STAT PRESENTS:

Art Helps Math, Math Helps Art

Maria Mannone

Friday, April 14: 3:05 – 4:00

BC 111

Abstraction is sometimes an obstacle in mathematical studies, but is also the power of mathematics: math can be applied to a variety of fields, including art. Visual and musical examples can help us understand mathematical concepts, and, *vice versa*, mathematics can deepen the understanding of arts. Some examples will be presented: how to use mappings to connect music and images, formally describe musical gestures, use music to represent concepts of continuity and discreteness, or even approach combinatorics with a musical Rubik's cube. Interdisciplinary studies may involve potential applications to linguistics, cognitive sciences, and biology. Among the case studies, there is the musical rendition, through diagrams and categories, of a water lily and of the armor of a special mammal, the pangolin.

Maria Mannone earned Masters in Theoretical Physics, Orchestral Conducting, Composition, and Piano in Italy; in France, the Master 2 ATIAM at IRCAM-UPMC Paris VI Sorbonne. She's currently a Ph.D. candidate in Composition at the University of Minnesota, where she is doing interdisciplinary research in collaboration with the Fine Institute of Theoretical Physics. She has participated in international conferences about math and music as an invited speaker, and recently spoke on this topic at the Joint Mathematics Meetings in Atlanta, Georgia. She's author and co-author of books and articles about the relationships between music and visual arts, her strong passion.