

1106-H1-1850 **Srividhya Balaji*** (bsrividhya90@gmail.com), Department of Mathematics, Pittsburg State University, 1701 S Broadway St, Pittsburg, KS 66762. *Connections between Indian Classical Music and Mathematics.*

Mathematics, as we all know, is the elixir of life. It is the language of all the arts and sciences. When it comes to music, the role of mathematics is clearly evident in terms of rhythm, melodic patterns, or the extempore improvisations.

Music and mathematics are intricately related, but there is not an equation that will model all works of music. However, there are certain mathematical structures inherent in all works of music. Indian classical music utilizes mathematical concepts like set theory, functions, coordinate transformations, permutations and combinations, limit points, etc. in every piece of its music. The language of mathematics helps us comprehend this underlying structure. This presentation will mainly focus on the different mathematical concepts involved in the classical music of India. (Received September 15, 2014)