

Invited Talk at the
20th Quinquennial Congress of the International Musicological Society
Tokyo University of Arts, Japan

March 20-23, 2017

Session: **Digital Musicology IMS Study Group**

Title: **Computational Approaches to Non-Western Music: from Technology to Insight**

Talk title: **Validating stock musicological knowledge via audio analyses of contemporary raga performance**

Speaker: **Kaustuv Kanti Ganguli and Preeti Rao**

Abstract:

Indian art music is an oral tradition with classical music training imparted principally through demonstration. Even so, there exist text resources that provide explicit accounts of musicological knowledge related to the basic underlying elements of raga and tala. The texts are written forms of what a musician might verbalize while teaching a student. In this work, we consider the computational analyses of recordings of raga performances by eminent Hindustani vocal artistes in terms of common available musicological knowledge about the raga lexicon/grammar. Our analyses of performance audio use computational models to achieve an understanding of: (i) how the musicological knowledge is manifested in performance, and (ii) how the artist improvises i.e. uses the stock musicological knowledge of the raga lexicon/grammar in “new” ways. We extract features that closely model: (i) raga notes, their relative saliences and intonation, (ii) occurrences of expected motifs, and (iii) melodic shape of raga-characteristic phrases.