

# 1

Title: Musical Acoustics Research at McGill University

Speaker: Prof. Gary Scavone, Schulich School of Music, McGill University

Time: 3 pm, December 18, 2019

Venue: EEG 301, Dept. of Electrical Engg.

## Abstract:

Can computer modeling methods be used to design musical instruments with improved intonation or response? Is that \$6M Stradivarius violin really worth it? Why do clarinet and saxophone reeds wear out? How can we use digital sound synthesis for the historical preservation of famous musical instruments?

This presentation will provide an overview of recent and ongoing musical acoustics research being conducted in the Computational Acoustic Modeling Laboratory (CAML) in the Schulich School of Music, McGill University, Montreal, Canada. CAML research can be roughly organized into three categories: 1. Physics-based modeling for sound synthesis and/or computer-aided instrument design; 2. Measurements for the analysis of instrument behaviour or extraction of model parameters; and 3. Perceptual experiments to assess player discrimination or the importance of instrument features / qualities. Specific lab projects to be discussed will include woodwind tonehole modeling, woodwind reed consistency and aging, the perception of music instrument qualities, and a project to "resurrect" Stradivari's Messiah violin.

## About the Speaker:

Dr. Gary Scavone is a Professor of Music Technology in the Schulich School of Music, McGill University, where he directs the Computational Acoustic Modeling Laboratory. He received PhD and MSc degrees (Music and Electrical Engineering) from Stanford University and BSc and BA degrees (Electrical Engineering and Music) from Syracuse University. From 1997-2003, he was Technical Director and Research Associate at the Center for Computer Research in Music and Acoustics at Stanford University. His research includes acoustic modeling, analysis, and synthesis of musical systems and sound synthesis software development. He and his students have published over 100 journal and conference papers on a wide range of topics in musical acoustics and sound synthesis research. Dr. Scavone is also a semi-professional saxophonist specializing in the performance of contemporary concert music.

## 2

Title: The Music of Pannalal Ghosh and his Bamboo Flute

Speaker: Dr. Vishvas Kulkarni, Senior Scientist, B.A.R.C.

Time: 4:15 pm, Dec 18, 2019

Venue: EEG 301, Dept. of Electrical Engg.

### Abstract:

Until the mid-1930s, the woodwinds, had no place in Hindustani music. It was Pt. Pannalal Ghosh (Pannababu) who filled this vacuum by transforming a tiny folk instrument into the novel long bamboo flute suitable for playing Hindustani music bring completeness to the instrumental genre. Historically, this work is a rare example of “creation of a musical instrument” as well as “its elevation to the stature at par traditionally established instruments” in the short time span of two decades. Pannababu rendered completely self-composed splendid music on his own designed bamboo flutes. His style was a balanced blend of both, the Gayaki (vocal style) and the Tantakari (stringed instrument style). Even the smallest component of his rendition was always at the right place and in appropriate proportion with no scope for gimmicks.

In 1991, Vishvas Kulkarni picked up a project to collect and compile information pertaining to Pannalal Ghosh. A sizeable volume was gathered during next 28 years which is presented in his recently released book ‘Pannalal Ghosh’. This presentation (an extract from the book) focuses on the structure of his designed novel 338 Hz bamboo flute and the music he rendered on it.

### About the Speaker:

Vishvas M. Kulkarni obtained the MSc and PhD degrees in Plant Breeding and Biotechnology respectively. He is a senior scientist at the Nuclear Agriculture & Biotechnology Division of Bhabha Atomic Research Centre, Mumbai. He strives to inculcate and spread arts, culture and music by organizing various classical events involving reputed musicians and artists. As a Hindustani musician, Vishvas received his initial training in vocal classical from the maestro, late Pt. Shreepat Shastri (disciple of Ust. Faiyaz Khan of Agra-Rangeela tradition) and later continued under Smt. Nalini Rokade (Pt. Shastri’s daughter), late Shri. Ashok Kulkarni and late Pt. Nanasahab Betawadkar. He has been pursuing his ardent passion for flute playing since late ‘80s. Vishvas, a performing flautist and the grand disciple of Pt. Pannalal Ghosh received lessons in flute from Pt. K.L. Ginde and Pt. V.G. Karnad (disciple of Pt. Ghosh).