# Timbre Effects in Melody Recognition: Binding Timbre Characteristics and Melody Identity

**Stephen Wee Hun Lim**
National University of Singapore

**Winston D. Goh**
National University of Singapore

**Abstract:** The nature of timbre effects in recognition memory for melodies played by multiple instruments was investigated in a single experiment, by comparing performance when studied melodies were repeated in same, different, or new timbres at test. Melodies that remained in the same timbre from study to test were recognized better than were melodies that were presented in a previously studied but different, or previously unstudied (new) timbre at test; performance for melodies that were presented in a different timbre at test did not differ reliably from that for melodies in a new timbre at test. Our data suggest the intriguing possibility that the timbre effects observed in recognition memory for melodies are attributed solely to instance-specific matching rather than timbre-specific familiarity; memory representations that subserve explicit recognition of melodies appear to be formed by a highly specialized association that binds together timbre characteristics and melody identity.