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*Paper : Generative Improvising in Shur : an approach to generative
Persian traditional music*

Abstract:

*Our goal is to aesthetically analysis Persian traditional music which is
been generated by genetic algorithm technique. A survey on general
music philosophy, in this special case, Persian traditional music
philosophy and regarding to its unique rules such as micro tones ,
improvisations ,semi-atonality and etc, shows that traditional
optizimation algorithms are not appropriate for generating Persian
traditional music. Therefore through an investigation in evolutionary
algorithms, we considered using genetic algorithm as our music
generator system. In order to producing Fitness Function of Genetic
Algorithm we utilize Persian traditional music concepts such as
Dastgâh, Gushe, Shahed tone and etc, and Persian traditional
music unique rules. Due to the extent of Radif which is the base of
Persian traditional music, Shur, as one of its twelve Dastgâhs (mode)
is chosen as genetic algorithm state space. We choose Shur for its
capability to mark Persian traditional music tone through its unique
scale and its significant role in Radif as omm'ol alhan (= mother of
tones). Having Fitness Function and initializing the first generation of
genetic algorithm which is derived from a transformed accidental
event in real world as our system input, we move toward finding an
optimum tone by reproduction of generations. In this paper the
genetic algorithm system output is analyzed in presence of Persian
traditional music aesthetics.*

The audible output of system will be attached to this paper.

Keywords:

Persian traditional music, genetic algorithm, Radif, aesthetics,
dastgâh, shur