Mathematics and Flamenco: An Unexpected Partnership

José-Miguel Díaz-Báñez Universidad de Sevilla, Spain

Abstract

In this talk, we present a series of mathematical problems that throw interesting lights on flamenco music. More specifically, these are problems in discrete and computational mathematics suggested by an analytical examination of flamenco "cante" (singing). Flamenco music was born in Andalusia and is well known around the world. It has been declared an Intangible World Heritage by UNESCO. Flamenco music is a unique musical genre with an identity and originality worthy of scientific study. We pose several problems that analyzes flamenco rhythms and melodies and propose several possible answers based on a study that uses mathematics as a codifying operator. The talk is illustrated with live singing and dancing.