

Tiling Rhythmic Canons: when Music meets Maths

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I will sketch the history of tiling problems in music with a particular emphasis on the construction of rhythmic canons, a compositional process whose roots can be traced back to Olivier Messiaen's *Traité de rythme, de couleur et d'ornithologie*. After a short presentation of the mathematical model of "Regular Complementary Canons of Maximal Category" proposed by Dan Tudor Vuza in a series of papers published in *Perspectives of New Music*, I will show the deep connections between such a musical construction and some open conjectures in mathematics. I will end by showing how composers such as Fabien Lévy, Georges Bloch, Mauro Lanza, Daniele Ghisi, Sébastien Roux and Tom Johnson, have applied tiling rhythmic canons in different compositional projects during the last twenty years.