The 12th international microconference Analytic and algebraic methods in physics

November 2nd, 2013, Villa Lanna, Prague

the meeting dedicated to the 75th birthday of professor Miloslav Havlíček

$\rightarrow \mathbf{THE} \ \mathbf{BOOK} \ \mathbf{OF} \ \mathbf{ABSTRACTS} \ \leftarrow$

(the version of January 10, 2013)

(alphabetical ordering)

Zuzana Masáková

From quasicrystals to infinite words and numeration systems

Most of the quasicrystal models can be recast in the frame of the so-called cut-andproject scheme which enables one - by projection of higher-dimensional lattices - to obtain discrete point sets with rotational symmetries forbidden in periodic structures. We shall explain the cut-and-project method and demonstrate the connection to symbolic dynamical systems, infinite words and number systems. We shall present several results from combinatorics on words and non-standard numeration obtained with the use of the properties of cut-and-project sets.