

Mathematics, Physics & Computer Science Seminar Series

March 8, 2023 from 4:30 PM at Governor's Palace, Moravské náměstí 1a, Baroque Hall

Tomasz Łuczak

The phase transition phenomena in combinatorial structures

Abstract:

The notion of the phase transition was introduced in physics to describe a wide class of phenomena when a tiny change of parameters can significantly affect the behaviour of the physical system. In the talk we present several results when such a rapid transformation of the structure can be observed and rigorously analysed. Some of them were inspired and anticipated by actual physical phenomena, others emerged naturally in the studies of discrete combinatorial systems.

Tomasz Łuczak is a Polish mathematician working in the field of probabilistic combinatorics. He graduated at Adam Mickiewicz University, where he is now working as professor at Faculty of Mathematics and Computer Science. He has received a number of awards, including EMS Prize, the Prize of the Foundation for Polish Science, Kazimierz Kuratowski Prize, Stefan Banach Medal, and Władysław Sierpiński Medal. Since 1998 he is a member of the Polish Academy of Sciences.