Einladung

zum Vortrag im Rahmen des **SFB Colloquiums** (Standort Linz), mit dem Titel

A new physics-based approach to studies of financial markets: the Linear Sigma Model

VORTRAGENDER: **Denis Parganlija**, TU Wien
DATUM: Dienstag, 14. November 2017
ZEIT: 14:00 Uhr
ORT: Keplergebäude, K 009D, JKU Linz

Abstract: Proper understanding of markets - particularly the financial ones - is of great importance for at least two reasons. Firstly, it may lead to a more profound theoretical understanding of the market agents and their behaviour. Secondly, it has a large number of practical applications across various industries, such as financial services. A notable task is to forecast market behaviour. With regard to financial markets, benchmark approaches are generally based on random-walk/stochastic calculus. My talk is about a very different approach: a physics-motivated model with no explicit connection to stochastics. This so-called Linear Sigma Model has never before been applied for market analyses. A preliminary study of financial markets suggests that the model in its simplest version is able to forecast future market behaviour with an average deviation of approximately $2.5\% - 6.5\%$ between the prognosis and the actual data. Very basic reasoning behind the model and a discussion of its results will be given in the talk.

Das **SFB Colloquium** wird vom **FWF Special Research Program (SFB) Quasi-Monte Carlo Methods: Theory and Application** unterstützt