



Mathematics of crystallization

A talk by Ulisse Stefanelli

University of Vienna, Faculty of Mathematics

DATE / TIME: Monday, May 12th 2014, 04:00 p.m.

LOCATION: Ludwig Boltzmann-Hörsaal, ground floor, Strudlhofgasse 4, 1090 Vienna

Ulisse Stefanelli | ulisse.stefanelli@univie.ac.at

I would like to present a mathematician's view to crystals at zero-temperature. In particular, I will introduce some problems related to the minimization of pairwise and three-body interaction potentials. The issue will be that of rigorously identifying local and global geometries of ground-state configurations. I will present an overview of the few available results, especially in connection with carbon structures, and I will discuss the challenges of some of the many open problems.