Pure Mathematics Seminar

Foundations of the Local Theory of Crystals: Development and Current Status

Dr. Mikhail Bouniaev
SMSS, UTRGV

The main goal of the local theory for crystals developed in the last quarter of the 20th century by Delone (Delaunay) and a group of researchers associated with him is to develop a methodology to determine a crystalline structure from the pair-wise identity of local arrangements around each atom. In this presentation we review some history and development of the local theory, talk about current results and agenda for further research, This review was sparked by a recent new interest in the local theory from crystallographers in the context of non-classical approach to crystallization as an attachment of primary clusters or nanoparticles, and modeling the process by finite automata.

Date: **Friday, November 4, 2016**
Time: **2:15 pm**
Place: **Edinburg:** MAGC 1.302, **Brownsville:** UBLB 2.206

The talk will delivered live at the *Brownsville* campus and will be streamed to the Edinburg campus.

Coffee and cookies will be served.

For further information or for special accommodations, please contact Dr. Sergey Grigorian via email at [sergey.grigorian@utrgv.edu], or Dr. Alexey Garber at [alexey.garber@utrgv.edu], or visit the webpage http://www.utrgv.edu/math/news-events/seminars/puremath/index.htm