

TEMPLE UNIVERSITY MATHEMATICS COLLOQUIUM

Ridgway Scott

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will speak on

Dipolar Materials

ABSTRACT: Dipoles are ubiquitous in nature. Many materials are made of dipolar molecules, such as water. Thus it is of interest to know how large collections of dipoles can interact on a macro scale. One measure of this is called the Madelung constant. Materials whose dipoles coordinate on a global scale are called ferro-electric, by analogy with ferro-magnets. Ferro-electric materials can store a permanent charge. We describe how it is possible for water ice to become ferro-electric, and we discuss how to interpret Madelung constants in cases where the corresponding sum of dipoles appears divergent.

MONDAY, OCTOBER 26, 2015

LECTURE AT 4:00 PM

COFFEE, TEA, AND REFRESHMENTS FROM 3:40 PM

ROOM 617, WACHMAN HALL

DEPARTMENT OF MATHEMATICS