



21世紀COE「トポロジー工学の創成」セミナー

第114回エンレイソウの会

場 所： 工学部1階 A1-17(物理工学系大会議室)

日 時： 平成19年 7月 25日(水曜日)

16:30 ~ 18:00

講演者： Dr. Marc de Boissieu

(SIMAP INP-Grenoble CNRS, France)

題 目： 『**Lattice dynamics of quasicrystals
and approximant.**』

要 旨 : Quasicrystals, discovered almost 25 years ago, are a new paradigm for long range ordered materials. Their diffraction pattern presents Bragg peaks, a signature of long range order, but with a 5-fold icosahedral symmetry incompatible with translation, so that the question “where are the atoms?” has been puzzling scientists for many years. The recent discovery of the binary icosahedral CdYb quasicrystal has been a breakthrough allowing answering this question. In this seminar we will address the question of the physical properties, and in particular lattice dynamics of quasicrystal. After an introduction on lattice dynamics and inelastic neutron scattering experiment we will present experimental results obtained on the quasicrystal and its 1/1 approximant. This allows to study the respective influence of the local order (clusters) and of the long range periodic or quasiperiodic long range order. We will show that significant differences are observed. These results will be compared to atomistic simulations using adapted pair potentials.

エンレイソウの会連絡先

〒060-8628 札幌市北区北13条西8丁目

北海道大学大学院工学研究科C-355号室 鈴木

21世紀COEプログラム「トポロジー工学の創成」における事業推進部

TEL 011(706)6154(代表)内線6154

Email: suzuki@topology.coe.hokudai.ac.jp