F-5 SEMINAR



Friday, June 9, 2023 at 10:30 AM

in the seminar room of physics (room 106) Condensed Matter Physics, Jožef Stefan Institute

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Phononic and phasonic disorder in quasicrystals – recent results from AGH Kraków group

The statistical method of structure and diffraction analysis of quasicrystals celebrates 25 years. One of the recent results of its application is a correction for phonons and phasons. In my presentation, I will briefly discuss the idea of incorporating these phenomena in the statistical model of a structure, and show examples in AlCuRh decagonal system. Phason flips might also be responsible for phase transition in AlCuRh to one of the generalized Penrose tilings (with 5 atomic surfaces), which is confirmed by our studies on high-temperature data. I will also briefly discuss recent directions of research at AGH Kraków group, including the possible goals of my stay at JSI in Ljubljana.

You are cordially invited to attend.