

# Seminar Fizičkog odsjeka

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Time (s.t.)

Place

Tuesday 29<sup>th</sup> August, 11:00 h

room F-201

## Inhomogeneous phases in the core of neutron stars

**Dr. Nobutoshi Yasutake**

(Department of Physics, Chiba Institute of Technology, Japan)

In this seminar, we introduce the possibility of two types of inhomogeneous phases in the core of neutron stars: one is the Coulomb crystal, which is known as quark-hadron pasta structures, and another one is chiral crystal. The optimal structures are obtained by a numerical approach based on the variational principle in the both cases. In Coulomb crystal, the inhomogeneous phase appears as the result of the balance between the surface tension and Coulomb interaction. In chiral crystal, we study the inhomogeneous chiral condensation, which has space dependency. In the simple model in 1+1 dimension, this condensation has the same formulation with FFLO state, which is well known in the condensed matter physics. We hope fruitful discussion and comments through this seminar.

Voditelji seminara FO

Damir Pajić i Ivica Smolić