



ΑΡΙΣΤΟΤΕΛΕΙΟ
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΘΕΣΣΑΛΟΝΙΚΗΣ

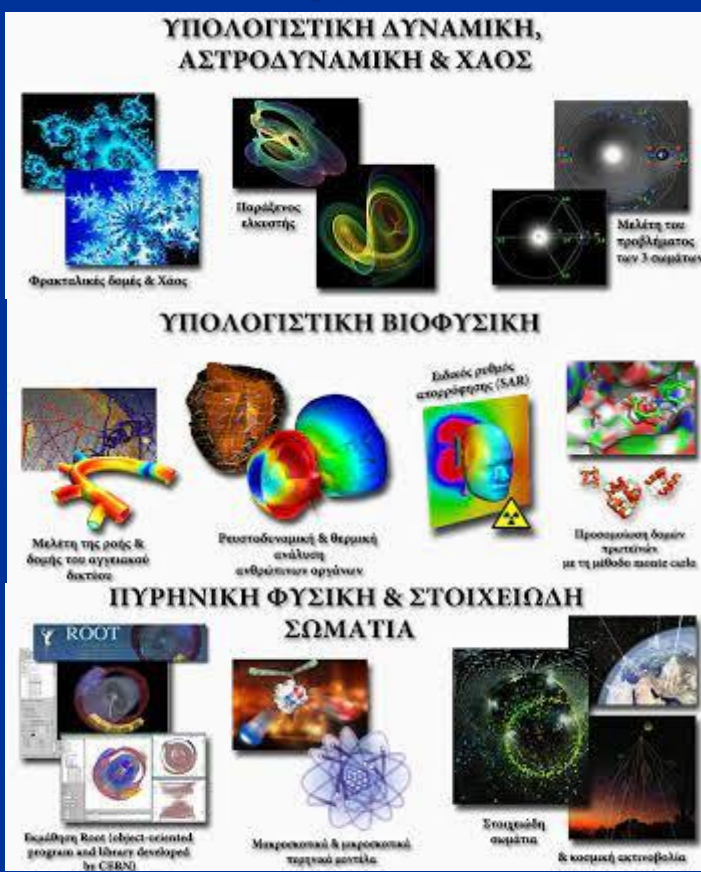
ΣΕΜΙΝΑΡΙΟ ΠΜΣ ΥΠΟΛΟΓΙΣΤΙΚΗΣ ΦΥΣΙΚΗΣ ΤΜΗΜΑ ΦΥΣΙΚΗΣ

Τρίτη 11 Ιανουαρίου 2022

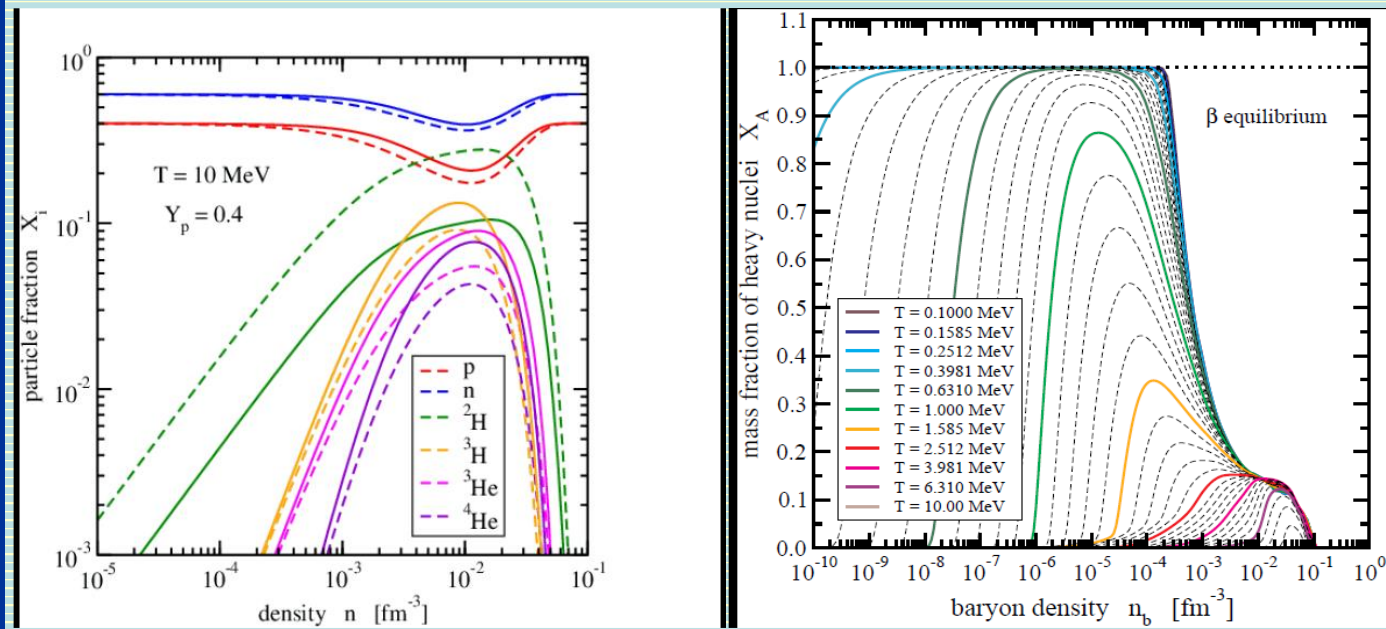
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Zoom link: authgr.zoom.us/j/93408351002

Σεμινάρια ΠΜΣ Υπολογιστικής
Φυσικής 2021-2022



Clusters in Nuclear Matter and Heavy Nuclei



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Correlations are an essential feature in systems of strongly interacting nucleons. Often they are not considered explicitly in the widely-used mean-field models for nuclear matter and nuclei. Many-body correlations can be represented in such approaches effectively as new degrees of freedom, i.e., clusters. They modify the thermodynamic properties and composition of nuclear matter and are important for the equation of state in astrophysical applications, e.g., the structure of neutron stars or the simulation of core-collapse supernovae or neutron-star mergers. The formation of clusters affects the surface properties of heavy nuclei and can be investigated experimentally.

Το προφίλ του ομιλητή



Stefan Typel is a senior researcher at the Technical University of Darmstadt since 2016 and a longtime member of the theory group at GSI. Since 2018 he is head of the IT group at the Institute for Nuclear Physics. His Ph.D. at the University Münster (1994) was devoted to the indirect method of Coulomb dissociation for nuclear astrophysics. He worked as a PostDoc at the ULB in Bruxelles (1995), at the LMU in Munich (1995-2000), at NSCL, MSU in East Lansing (2000-2002), at GSI in Darmstadt (2002-2005), at GANIL in Caen (2007-2008), at the TU in Munich (2008-2011) and again at GSI in Darmstadt (2011-2016). His main research topics comprise reaction theory (Trojan-Horse method), nuclear structure (relativistic mean-field models) and nuclear and neutron-star matter (generalized density functionals).