



ΣΕΜΙΝΑΡΙΟ ΠΜΣ ΥΠΟΛΟΓΙΣΤΙΚΗΣ ΦΥΣΙΚΗΣ ΤΜΗΜΑ ΦΥΣΙΚΗΣ

Τρίτη 8 Νοεμβρίου 2022

Αίθουσα συνεδριάσεων τμήματος Φυσικής (4^{ος} όροφος, αίθουσα 26)

ώρα 12:00

Σεμινάρια ΠΜΣ Υπολογιστικής Φυσικής 2022-2023

ΥΠΟΛΟΓΙΣΤΙΚΗ ΔΥΝΑΜΙΚΗ, ΑΣΤΡΟΔΥΝΑΜΙΚΗ & ΧΑΟΣ

Φρακταλικοί δομές & Χaos

Παράδειγμα ελαστικής

Μελέτη του προφίλιματος των 3 σωματίων

ΥΠΟΛΟΓΙΣΤΙΚΗ ΒΙΟΦΥΣΙΚΗ

Μελέτη της ροής & δομής του αγγειακού δικτύου

Βιοστοχαστική & θερμική ανάλυση ανθρώπινων οργάνων

Ειδικοί αριθμοί απορρόφησης (SAR)

Προσομοίωση όρασης τριτάτης με τη μέθοδο phase-cube

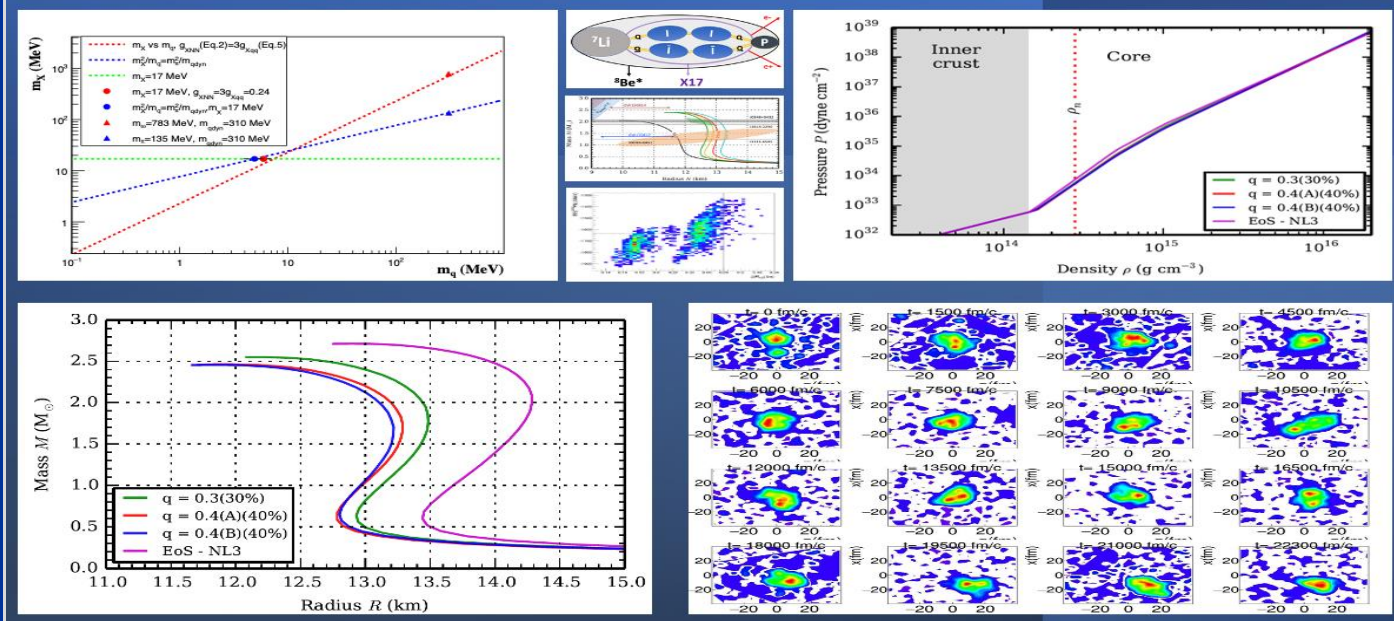
ΠΥΡΗΝΙΚΗ ΦΥΣΙΚΗ & ΣΤΟΙΧΕΙΩΔΗ ΣΩΜΑΤΙΑ

Εφαρμογή ROOT object-oriented program and library developed by CERN

Μακροσκοπικά & μικροσκοπικά παρατηρούμενα

Στοιχειώδη σωματΙΑ & κοσμική ακτινοβολία

Few new concepts of nuclear physics in a neutron star environment



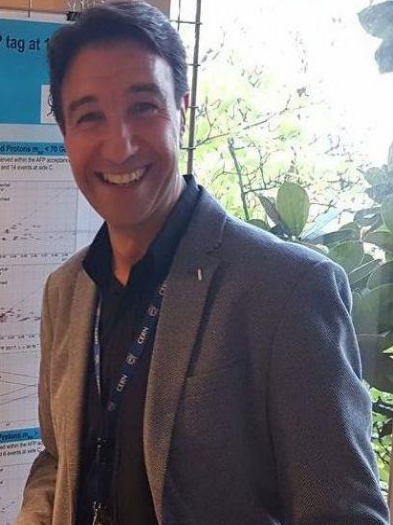
Dr. Vlasios Petousis

Institute of Experimental and Applied Physics- Czech Technical University in Prague (IEAP-CTU)

Neutron stars are nuclear physics laboratories, providing a unique opportunity to apply and search for new physics. In that spirit during this talk, we will explore few new concepts of nuclear physics studied in a Neutron Star environment:

- In the first concept, the reported 17 MeV boson, which has been proposed as an explanation to the ⁸Be and ⁴He anomaly, is investigated in the context of its possible influence the neutron star structure, defining a universal Equation of State as well.
- In the second concept, the synthesis of hyper-heavy elements is investigated under conditions simulating the neutron star environment.

Το προφίλ του ομιλητή



Vlasios Petousis is a Greek senior physicist at the Institute of Experimental and Applied Physics- Czech Technical University in Prague (IEAP-CTU). He studied physics at the University of Ioannina in Greece and earned his PhD in applied physics from the University of Thessaly and the University of Würzburg. Has worked as Lecturer at the Technological Education Institute of Lamia in Greece and later on, as a postdoc researcher at the Rudjer Boskovic Institute of Nuclear Physics in Zagreb-Croatia, working with silicon pixel detectors for the CMS collaboration at LHC. Has continued as a postdoc fellow at the Nuclear and Heavy Ion Physics Laboratory at the University of Cyprus, on behalf of HADES collaboration (at GSI in Darmstadt-Germany) and after that as an external scientist at the APEX experiment in Jefferson Lab. Since 2018 become a member of the IEAP-CTU working for the ATLAS – Forward Proton Detectors (AFP) project, with contribution to di-muon analysis with proton tagging and detectors alignment.

He is an amateur astronomer and science communicator, has interest in the history of physics and has translated in Greek language the book "For the Love of Physics from the End of the Rainbow to the Edge of Time". His current research interests include phenomenological and theoretical interpretation of the X17 ATOMKI anomaly, the structure of the Neutron Stars and its cooling processes.