



ΣΕΜΙΝΑΡΙΟ ΠΜΣ ΥΠΟΛΟΓΙΣΤΙΚΗΣ ΦΥΣΙΚΗΣ ΤΜΗΜΑ ΦΥΣΙΚΗΣ

Τρίτη 14 Δεκεμβρίου 2021

ώρα 12:00

Zoom link: <https://authgr.zoom.us/j/93408351002>

ΑΡΙΣΤΟΤΕΛΕΙΟ
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΘΕΣΣΑΛΟΝΙΚΗΣ

Σεμινάρια ΠΜΣ Υπολογιστικής Φυσικής 2021-2022

ΥΠΟΛΟΓΙΣΤΙΚΗ ΔΥΝΑΜΙΚΗ, ΑΣΤΡΟΔΥΝΑΜΙΚΗ & ΧΑΟΣ

Φρακταλικές δομές & Χaos, Παράδειγμα ελαστικής, Μελέτη του προβλήματος των 3 σφαιρών

ΥΠΟΛΟΓΙΣΤΙΚΗ ΒΙΟΦΥΣΙΚΗ

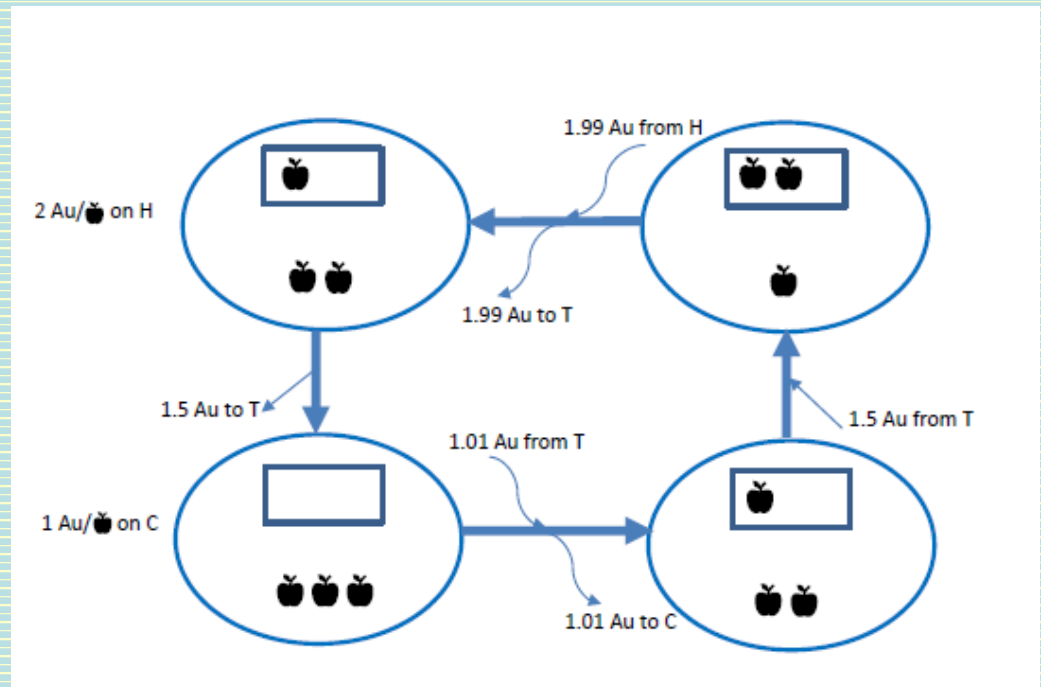
Μελέτη της ροής & δομής του αγγειακού δικτύου, Ρευστοδυναμική & θερμική ανάλυση ανθρώπινων οργάνων, Ελαστική ροή απόσπαστος (SAR), Προσομοίωση δομής πρωτεΐνης με τη μέθοδο πακέτου scales

ΠΥΡΗΝΙΚΗ ΦΥΣΙΚΗ & ΣΤΟΙΧΕΙΩΔΗ ΣΩΜΑΤΙΑ

Υ ROOT, Σωματίδια, Στοιχειώδη σωματίδια & κοσμική ακτινοβολία

Εκπαίδευση Root (object-oriented program and library developed by CERN), Μικροσκοπικά & μακροσκοπικά τμήματα αστέρα

Thermodynamics of Economic Systems



Robert MacKay
University of Warwick

We take a set of axioms that was developed by Lieb & Yngvason for thermodynamics and apply it to economics, at least for exchange economies. Subject to the assumptions, we deduce existence of a function S such that a state Y of an economic system is accessible from another state X if $S(X) \leq S(Y)$. We call it entropy and think of it as an aggregate utility. So S determines which trades between two or more economies can happen. We deduce also existence of a function T such that nett money flows from system A to system B when put in financial contact iff $T(A) > T(B)$. We call it temperature. And for each type of good we deduce a market price μ . We propose how to measure temperature ratios and show how to make money out of them. We speculate on extensions to include production, consumption, manufacturing, and migration. Joint work with Nick Chater.

Το προφίλ του ομιλητή



Robert MacKay is a Professor in the Mathematics Institute of the University of Warwick and Director of Mathematical Interdisciplinary Research at Warwick. His principal area of research is the theory and applications of Nonlinear Dynamics. Highlights are the discovery and renormalization explanation of how invariant tori break for magnetic fields and Hamiltonian systems. His research was recognized by the first Stephanos Pnevmatikos International Award for Research in Nonlinear Phenomena (1993), Junior (1994) and Senior (2015) Whitehead prizes of the London Mathematical Society, election to Fellowships of the Royal Society (2000), the (UK) Institute of Physics (2000) and the (UK) Institute for Mathematics and its Applications (2003), and entry to the ISI Highly cited list under Mathematics in 2008. He has extensive research leadership and management experience, including establishing and running the Nonlinear Systems Laboratory at Warwick with Rand (1986-95) and the Nonlinear Centre in Cambridge (1995-2000), contributing scientific direction to a King's College Cambridge research programme on Spatially Extended Dynamics (1998-2002). His current research interests include Robustness of near-integrability for magnetic fields with low or reversing shear, Cross-field energy transport by interaction of charged particles in a magnetic field, Design of stellarators, Action-minimising orbits for Lagrangian systems, Dynamic stochastic optimisation for energy stores.