

# ITE/IEXMH

### **EMINAPIO**EMINAPIO

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Εφαρμογών & Τηλεπισκόπησης (ΙΑΑΔΕΤ)

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OEMA: The physical properties of luminous infrared galaxies: unveiling the dust

ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΙΤΕ/ΙΕΧΜΗ

ΗΜΕΡΟΜΗΝΙΑ: Δευτέρα, 2 Μαρτίου 2015

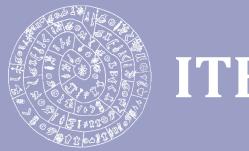
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### ΠΕΡΙΛΗΨΗ

A major result of the Infrared Astronomical Satellite - the first to survey the whole sky at mid and far-infrared wavelengths - was the discovery of a large population of luminous infrared galaxies (LIRGs). These are systems which emit more than 80% of their total luminosity in the far-infrared.

LIRGs cover the full range of morphologies from single isolated disk galaxies, to interacting systems and advanced mergers, exhibiting enhanced star-formation rates as well as a higher fraction of accreting supermassive black holes in their nuclei compared to less luminous galaxies. Although rare in the local universe LIRGs are 1000 times more abundant when the universe was half its age, dominating the total energy density production. I will present a summary of our current understanding on the physical properties of LIRGs based on the study of the Great Observatories All-Sky LIRG Survey, a complete infrared selected flux-limited sample. I will rely on recent mid- and far-infrared spectroscopy of the sample obtained using the Spitzer and Herschel Space Telescopes, which provide a nearly extinction free view of their nuclear regions.





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### ΣΥΝΤΟΜΟ ΒΙΟΓΡΑΦΙΚΟ

**Dr. Vassilis Charmandaris** completed his undergraduate studies in Physics at the University of Thessaloniki. He continued his graduate studies in the US and obtained his PhD in Astrophysics at Iowa State University. After a postdoctoral fellowship with the ISO/CAM group at the Astrophysics section of CEA/Saclay (France) he was awarded a Marie Curie fellowship at the millimeter and infrared department (DEMIRM) at the Observatoire de Paris, in Paris (France). In 1999 he moved back to the US and spent 6 years at the Astronomy Department of Cornell University. There, he worked with the group who developed the Infrared Spectrograph of the Spitzer Space Telescope, which was launched by NASA in August 2003. In February 2005, Dr. Charmandaris joined the faculty of the Department of Physics of the University of Crete and he is currently a Professor of Observational Astrophysics. In September 2013 he commenced his appointment as the Director of the Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing (IAASARS) of the National Observatory of Athens.

He has coauthored 182 papers published in refereed journals which have received ~8850 citations (h-index=45).

Η ομιλία του κ. Χαρμανδάρη υπάγεται στις δράσεις σεμιναρίων της πράξης «ΠΕΦΥΚΑ», η οποία υλοποιείται στο πλαίσιο της Δράσης «Αναπτυξιακές προτάσεις Ερευνητικών Φορέων-Κρηπίς», που χρηματοδοτείται από το Επιχειρησιακό Πρόγραμμα «Ανταγωνιστικότητα και Επιχειρηματικότητα» (ΕΠΑΝ-ΙΙ), Άξονα Προτεραιότητας (Α.Π.) 1 «Δημιουργία και Αξιοποίηση της Καινοτομίας Υποστηριζόμενης από Έρευνα και Τεχνολογική Ανάπτυξη» και από τα Περιφερειακά Επιχειρησιακά Προγράμματα (ΠΕΠ) στις 3 Περιφέρειες μεταβατικής στήριξης του Εθνικού Στρατηγικού Πλαισίου Αναφοράς (ΕΣΠΑ) 2007 – 2013. Η Δημόσια Δαπάνη συγχρηματοδοτείται από το Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης (ΕΤΠΑ) της Ευρωπαϊκής Ένωσης και από Εθνικούς Πόρους.









