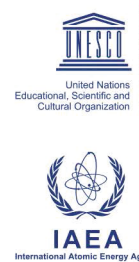




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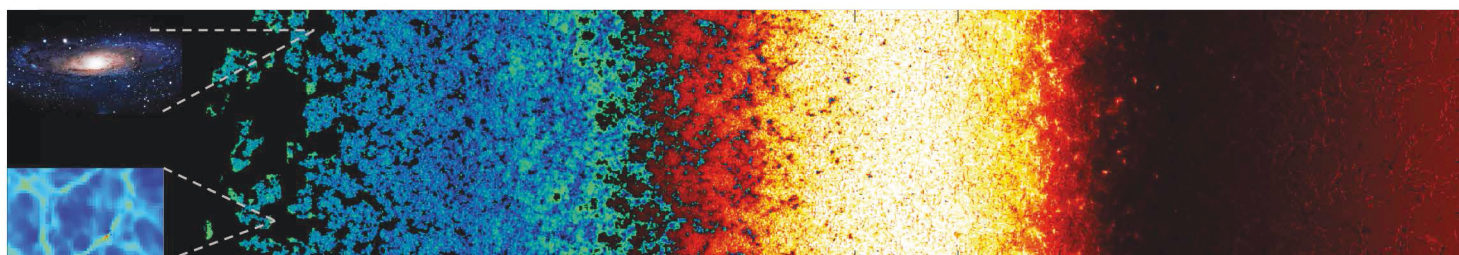


ADVANCED WORKSHOP on COSMOLOGICAL STRUCTURES from REIONIZATION to GALAXIES:

combining efforts from analytical and numerical methods

12 - 15 May 2015

Miramare - Trieste, Italy



TOPICS:

- **Expectations from data at low and high redshift**
- **Analytical methods for the clustering of dark matter and baryons: from perturbation theory to the halo model**
- **(Semi)-numerical methods for galaxy clustering and voids**
- **(Semi)-numerical methods for reionization**
- **Challenges and opportunities from large-volume observations**

The idea behind this Workshop is to bring together and foster discussion between groups that use similar analytical, numerical and statistical tools for the Large-Scale Structure but in different settings which together span multiple cosmological epochs.

The Workshop sessions will be structured around specific cosmological applications involving large galaxy surveys, epoch of reionization, Lyman alpha forest, HI intensity mapping, voids, the role of baryonic physics in cosmology, etc. In keeping with the over-arching theme, we also plan to have several review level talks aimed at a broad audience and focusing on the tools themselves (including the halo model and excursion set formalism, numerical simulations, semi-analytic techniques for galaxy evolution and 21cm, statistical methods for large volume surveys, etc.).

The Workshop will be followed by the First ICTP **Advanced School on Cosmology:**
<http://indico.ictp.it/event/a14277/>

PARTICIPATION

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the Workshop. As it will be conducted in English, participants should have an adequate working knowledge of this language. Although the main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation, students and post-doctoral scientists from advanced countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only for those who attend the entire activity. There is no registration fee to be paid.

HOW TO APPLY FOR PARTICIPATION:

The **application form** can be accessed at the Workshop website: <http://indico.ictp.it/event/a14279/>
Once on the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application forms.

WORKSHOP SECRETARY: Ms. Doreen M. Sauleek

Tel.: +39-040-2240346
Fax: +39-040-224163

Email: <mailto:smr2731@ictp.it>
ICTP Home page: <http://portal.ictp.it/>

Trieste, November 2014

IN COLLABORATION WITH



**THE ITALIAN INSTITUTE
FOR NUCLEAR PHYSICS**

ORGANIZERS:

A. Mesinger (SNS, Pisa)
A. Paranjape (IUCAA, Pune)
E. Sefusatti (INAF - Brera, Milan)

INVITED SPEAKERS:

J. Aguirre (UPenn, Philadelphia)
R. Angulo (CEFCA, Teruel)
C. Baugh (ICC, Durham)
M. Dijkstra (ITA, Oslo)
A. Ferrara (SNS, Pisa)
G. Guzzo (INAF – Brera, Milan)
L. Koopmans (KAI, Groningen)
I. McGreer (UA, Tucson)
J. Miralda-Escudé (U. Barcelona)
M. Ouchi (IPMU, Tokyo)
L. Pentericci (INAF, OA Roma)
A. Refregier (ETH, Zurich)
M. Santos (UWC, Cape Town)
R. Sheth (UPenn & ICTP)
T. Theuns (ICC, Durham)
F. van den Bosch (Yale)
M. Viel (INAF - Trieste)
S. Zaroubi (KAI, Groningen)

DEADLINE

for requesting participation:

20 FEBRUARY 2015