



The Abdus Salam
International Centre for Theoretical Physics


United Nations
Educational, Scientific
and Cultural Organization


International Atomic
Energy Agency

**Workshop on
Grand Unification
and Proton Decay**
July 22–26 2007



ICTP - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy in collaboration with INFN Trieste, Italy are jointly organizing the GUT2007 Workshop, to be held at ICTP, from 22 to 26 July 2007.

PURPOSE

Accumulated data on fermion masses and mixings in recent years allow today for the construction of well-defined and verifiable grand unified models. Many of them strongly indicate the possibility of observable proton decay. At the same time, a number of proposals for the next generation of proton decay experiments, improving the limits on proton lifetime have been put forward. The time is ripe for an in-depth discussion of both the theoretical and the experimental relevant issues in grand unification.

We plan to bring together a number of leading experts in both theory and experiment in order to assess the present day status of grand unified theories, with focus on the feasibility of testing them in the near future.

MAIN OBJECTIVE

To bring a number of experts, both theorists and experimentalists, and discuss the state of art in the field and the prospects for the new generation of proton decay experiments.

TOPICS COVERED INCLUDE:

- GRAND UNIFIED MODELS WITH AND WITHOUT SUPERSYMMETRY
- PROTON DECAY EXPERIMENTS, PRESENT AND FUTURE
- PROTON DECAY THEORY
- NEUTRINO MASSES AND MIXINGS IN THE CONTEXT OF GRAND UNIFICATION
- LEPTOGENESIS CONSTRAINTS ON GRAND UNIFIED THEORIES
- LEPTONIC AND HADRONIC FLAVOR TRANSITIONS IN SUPERSYMMETRIC UNIFICATION
- FUNDAMENTAL DISCRETE SYMMETRIES (P, CP) AND GRAND UNIFICATION
- DARK MATTER, INFLATION AND OTHER COSMOLOGICAL ISSUES
- NEUTRON-ANTINEUTRON OSCILLATIONS
- GRAND UNIFICATION IN MORE THAN FOUR DIMENSIONS
- MAGNETIC MONOPOLES
- GRAND UNIFICATION AND MODELS OF GRAVITY

PARTICIPATION

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the Workshop. Limited funds are available for some participants, who are nationals of, and working in, a developing country. Such support is available only for those who attend the entire activity. There is no registration fee.

The **Application Form** is obtainable from the Workshop's webpage or the ICTP agenda page, and should be completed and returned **before 20 May 2007** to:

Workshop on Grand Unification and Proton Decay (smr1854)
the Abdus Salam International Centre for Theoretical Physics (c/o Ms. F. Delconte)
Strada Costiera 11, 34014 Trieste, Italy.

or:
smr1854@ictp.it

(please send file attachments as: either pdf-preferably- or RTF zipped or .doc)

Workshop's webpage: <http://users.ictp.it/~smr1854>
ICTP agenda page: <http://agenda.ictp.it/smr.php?1854>

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**Deadline for
Requesting
Participation**

20 May 2007