Special issues on

Quantum Key Distribution

Celebrating 25 years since the publication of
Bennett and **Brassard**'s IEEE paper
"Quantum cryptography: Public key distribution and coin tossing"
[Bangalore, December 1984]

A joint **call for papers**

- **Theoretical Computer Science (TCS)** - Elsevier
- **Natural Computing (NACO)** - Springer

It is well known that the use of quantum information allows for the accomplishment of tasks that seem to be beyond the ability of classical information processing, and of other tasks that would be provably impossible in a classical world. Together with quantum teleportation and with Shor's quantum algorithm for factorizing large numbers, quantum key distribution is a fundamental cornerstone of quantum information processing.
We are soliciting papers concerning quantum key distribution and closely related topics. Quantum key distribution deals with the transmission of secret messages and is closely related to other cryptographic tasks, such as one-time signatures, quantum bit commitment, quantum coin flipping and quantum one-way permutations. More generally, topics closely related to quantum key distribution include all aspects of quantum cryptography on the one hand, and many aspects of quantum optical communication and quantum optical information processing, on the other hand. We encourage researchers to submit papers in these fields as well.

Both **TCS** (Section C) and **NACO** are devoted to the study of information processing using resources occurring in nature, including quantum information processing. For TCS-C we are soliciting theory papers, while for NACO we are soliciting theory, experimental, and applications papers. The guest editors will divide the accepted papers between the two journals in a way that optimizes the coherence of the papers in each issue. If the authors have a very strong preference for one or the other journal, this should be stated at the time of initial submission.

Please send submissions in PS or PDF format (leaving wide margins) to one of the guest editors via email. The final version must be submitted to the relevant journal, and prepared according to the instructions of that journal.

Papers will be carefully refereed to meet the standards of publication of these two journals. We will make every effort to provide notification of acceptance/rejection within four months of submission.

Important dates:

Submission deadline:	**28 February 2009**
Deadline for receipt of final manuscript:	**31 May 2009**
Publication:	**December 2009**

Guest Editors:
Tal Mor, Computer Science Department, Technion, Israel. Email: talmo@cs.technion.ac.il
Renato Renner, Institute for Theoretical Physics, ETH Zürich, Switzerland: renner@phys.ethz.ch