

Editorial

Quantum Information Classification Scheme

Eight months ago a European coordination action in the field of Quantum Information Sciences and Technologies (QIST), founded under the European Commission's 6th Framework Program was launched. Its name is ERA-Pilot Project in QIST and its aim is to foster a European strategy for research in the QIST field at the national level as well as in preparation of the 7th Framework Program.

In particular, the Workpackage 1 (WP1) of the ERA-Pilot has the ambitious task of "Drawing a European Guideline for QIST". The actions taken to reach this goal are mainly two: the elaboration of a roadmap-like document (an excerpt of which has been published in this journal, Eur. Phys. J. D **36**, 203 (2005)), and the development of a **Quantum Information Classification Scheme** (QICS, <http://qist.ect.it/QICS/qics.html>).

The latter is a classification scheme of QIST related topics that is intended to become widely accepted by the entire (European and worldwide) Quantum Information Processing and Communication (QIPC) research community. QICS codes have been evidently inspired by the APS PACS scheme (the ultimate goal would be to have it compatible with PACS and eventually to join the latter). In fact, QICS codes are "orthogonal" to PACS ones, in the sense that if a code is in QICS, it is not in PACS (and vice versa). The QICS is arranged hierarchically, by subdivision of the whole spectrum of subject matter in the QIST areas into segments and then repeating the process of subdivision down to four levels (Categories, Topics, Fields, and Sub-fields). Therefore, as already happens in the APS PACS, similar subjects will be found grouped closely together, with browsing up and down near any entry revealing closely related entries.

As for any other document delivered by the ERA-Pilot WP1, QICS is intended to be a "living document", open to the (QIPC) community discussion.

It is with this goal in mind that the European Physical Journal D has accepted to collaborate with the ERA-Pilot WP1 for launching a test of the QICS codes. To this end, from now on a special note in the acknowledgment of receipt will invite the authors of the QIST and related areas to provide their QICS codes in addition to the usual PACS ones. QICS codes will then appear in the paper and electronic version of accepted articles (in addition to the usual PACS codes).

The purpose of this test is twofold: from the one hand it will spread the QICS inside the QIPC community; on the other hand, we expect it to trigger community feedback in the form of comments, suggested changes and/or new codes, that can be sent directly to the ERA-Pilot WP1 through the **QICS feedback form** (http://qist.ect.it/QICS/qics_feedback.html) available at the ERA-Pilot WP1 website. Community suggestions will be continuously addressed, and if relevant will appear in subsequent updates of the codes (which are scheduled to take place every two-to-three months).

D. Binosi,
T. Calarco,
R. Fazio,
P. Zoller