

Analysis of the Scientific Report for 2011 of Centro de Matemática e Aplicações (CMA) by the External Advising Committee (EAC)

In this document we combine the remarks and comments of the members of the External Advising Committee, regarding the Scientific Report of 2011.

(http://www.cma.fct.unl.pt/sites/www.cma.fct.unl.pt/files/documentos/Relatorios/Scientific%20Report%202011_.pdf)

All the comments, made by e-mail, were shared among all the members of the EAC, and follow the original order.

Professor Charles Johnson:

1) The CMA has provided an exhaustive and informative Scientific Report for 2011. Though some additional detail might be provided, it seems to cover most important aspects of the activities well.

2) Despite many constraints (teaching obligations, limited resources, etc), CMA members and collaborators are very active in all aspects of mathematical activity, not only research, but speaking, conference organization and hosting, etc. Members continue to publish about one paper per year on average in serious journals.

3) Each of the 4 major areas of CMA seems to be active and to have particular strengths to offer.

4) With additional resources, it seems that most activities could improve further both in terms of quantity and quality. PhD advising and vital collaborative work are examples. It may be that distribution of scarce resources away from meetings and long term visitors who rarely interact and toward visitors likely to provide immediate benefit and PhD students who do some teaching might help. Careful allocation of resources is very important. For example, if the resources not spent on a meeting of the advisory committee this year went to productive research activities, I think that all committee members would find this beneficial

I hope that these remarks have been helpful, and I would be happy to comment further on any specific aspects of the report that might be useful.

Professor Barry Arnold:

Overall the report reflects commendable activity in almost all areas. One area in which some improvement would be desirable is the production of Ph.D.'s. Given the size of the faculty and their wide-ranging research activities, a higher rate of production of completed Ph.D. theses would be expected. The figures for the last 5 years, namely 12, 9, 7, 1, 1 document a disturbing downward trend. This may be a consequence of reduced available funding. If this is so, then high priority should be placed on rectifying this condition if at all possible. Of course, it may be the case that several students are in line to complete their PhD, program shortly and the low figures for the last two years do not correctly reflect achievement and activity in this area. It would be nice if this were the case, and if so, some comment regarding students who are nearing completion of their program might appropriately be added to the report.

Professor Roman Zmyslony:

I agree with the comments on Center's 2011 Report by Ch. Johnson and Barry.

I can add only that there is a group of scientists (mainly Statistic and Risk Management Team) witch collaborates with industry and some theoretical results come from this cooperation. Great increase of international activity (like invited speakers in the international conferences, organizing the international conferences and international cooperation of the members of all 4 groups should be mention in the report.

Professor Immanuel Bomze

A comment on the Center's 2011 Report, to supplement Barry's and Charles' comments.

The report is reflecting a healthy development of the center and is overall informative. I agree with below remarks about the treatment of the PhD figures, and think it could be preferable to explicitly monitor progress, at least from the second year on, also in the report.

In addition, some additional professional activities of the members of the center, which are crucial for international visibility, are not to be found in the report (and could be either added to the section "Internationalization" or under a new section "Visibility and Services to the international Scientific Community", depending on the usual roster for reports in Portugal.

Foremost, I miss an account on peer-reviewing activities. From my editorial experience, I for sure know that a remarkably high number of members of several Research Groups were highly active in 2011 (and continue to do so also this year, 2012) as referees in world-wide top-ranking journals like European Journal of Operational Research (only for this journal, I counted eight people, but take this as an estimate; also some of these for sure acted more than once as reviewers for that single journal). Also I know for sure (as a member of the steering committee for ICCOPT 2013) that, already in 2011, members of the center were actively involved in the successful application of UNL as a host for this highly renowned international conference which will take place in Caparica August 2013. The competition was tough as other highly reputed research institutions from Spain and China also applied, but finally the quality of the Portuguese proposal won this contest. The result - that ICCOPT 2013 is hosted by UNL - will have a huge positive impact on Lisbon and UNL in general, and on FCT and the center in particular. This should be mentioned and stressed in the report in an appropriate way. If this conforms with the general format of the reports, I also would appreciate an alphabetic (in particular informative in view of the complexity of Portuguese names) list of people active at the center, at the end of the report, or before the detailed description of the research groups. But this is a minor point.

Professor Rafael Ortega:

I very much agree with those (previous) comments and I will only insist on two of them.

1) I have found the report very informative. It includes a comparison with the list of publications of the previous year. This is very useful but this figure can experience large fluctuations in the short term and I would suggest including in the future another comparison with the averaged number of papers in the last 3 or 5 years. This might be related also to the number of PhD thesis. Very often this number has cycles. Perhaps in this case it would be useful to include the number of active PhD students. Perhaps this number was included and I missed it.

2) I agree that the work as referees of the members of the center is important and can give a good view of scientific development. Perhaps this information could include a list of journals and number of referees per journal.