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As is customary, the report provides a well-organized overview of activities in the Center during 2016.

The emphasis continues to be on research activity including both research conducted wholly within the Center and research conducted in collaboration with external colleagues. There is still limited attention paid to the teaching activities of the individual researchers but some anonymous information is provided in the current report. This information should help explain variability in research productivity of individual investigators..

Using, as a simple but crude summary statistic, the average number of papers published in WoS publications per researcher, it can be argued that 2016 represents a noticeable improvement over the previous year. An average of at least one such publication per year is a reasonable minimum benchmark for researchers in the mathematical sciences. The CMA researchers are exceeding that mark and a positive trend in research productivity is evident.

There are variations in the journal publication records of the four research groups. For example, the Statistics and Risk Management group lists more peer reviewed papers than other groups, but less WoS publications. It can be noted that the SRM group has however improved its WoS percentage in 2016.

Continued growth in research funding is evident. The level of international cooperative research continues to be high.

A change in the definition of integrated membership of the Center has apparently reduced the number of such individuals from 74 to 66. This somewhat complicates the year to year comparisons of average individual productivity. But, assuming no further changes in the definition, this problem will not continue.

The number of Ph.D. students currently being supervised is about one fifth of the number of integrated members. This seems to be an area in which more activity could be expected. That about one fourth of the Ph.D. students completed their dissertations in 2016, is about what is to be expected, assuming an approximate average of 4 years to complete a Ph.D. Hopefully, the fact that all three students completing their programs are from the SRM group, is coincidental, and future years will have representatives from most if not all of the four groups.

Overall, the 2016 report documents a continuing pleasing positive trajectory in research at the Center and this can, with some confidence, be expected to continue in future years.

Dear Professor Chalub, Thanks for the current (2016) CMA report, which I have now read with some care. Here are my thoughts about it.

1) I continue to be impressed with the care and precision of the reporting. I have noticed that, as you mentioned, there is less detail about the budget and how it was used. Personally, I would like to see more about this, rather than less. The information about the teaching responsibilities of the members is useful to place in perspective the amount of research done. In fact, even more detail (eg actual average number of hours taught by the members) could be useful. Another statistic that might be useful re the publications could be the number of pages published in certain categories of outlets. I understand that there is some variation and ambiguity here, but it still might be useful.

2) I also continue to be impressed with the progress in research productivity that is shown. Although there may be some consolidation of the progress lately, the "internals" show that the progress continues and that this Center has clearly joined the top few of the country. This is really important. I have also seen personally from top to bottom that this is the result of enthusiasm and a high degree of professionalism.

3) I note that the productivity of the Center is a true group activity. There does not appear to be just a few highly productive people that keep the statistics up. Of course, this is partly due to the membership criteria, but, nonetheless the observation seems to be intact, and it is important for sustainability.

4) I know that it is partly the result of urging and guidelines from FCT, but I also very much like that the activities include a broad range of things that promote the progress of mathematics (especially in Portugal).

5) I understand that there is a delicate trade-off between "Inclusion" (membership in the Center) and per capita statistics that result in more funding. However, I am still of the mind that there is great value in promoting activity by those Department members who fall below Center membership criteria. For this reason, I would still advocate measures that reach out to such members, or ways that they can explicitly be assisted to be more active if they wish. As you might guess, I am always a bit distrustful of explicit (and necessarily arbitrary) criteria. beyond what is written, is there any mechanism, in special cases for granting a variance from the criteria. We have discussed the importance of book publication, which may not be fully valued in the system, but this might be one good reason for a variance.

I hope that these remarks have been useful. Let me know if there is anything further on which explicit comment might be helpful.

Sincerely, Charles R. Johnson



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To whom it may concern

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**Review of the Scientific Report 2016 of
CMA/FCT/UNL**

The 2016 Scientific report has been augmented by a highly convenient pictorial part, and documents another productive year for the Centro de Matemática e Aplicações (CMA) at FCT/UNL. This has been achieved despite the adverse circumstances regarding teaching load that were mentioned in already several previous reports. Perhaps legal and administrative constraints allow for countermeasures, e.g. written multiple-choice exams for large courses and/or hiring (advanced and qualified) students as teaching assistants, if extension of faculty is more difficult.

After the expansion 2015, the reported year 2016 marks (from a humanpower perspective) a consolidation phase. In view of above mentioned constraints on research time resources, the significant increase in WoS publications per capita is the more admirable.

International visibility of all groups has been further increased by several scientific activities, first and foremost by publications in international peer-reviewed journals and proceedings, but also by presenting research results in conferences, workshops and seminars. Worldwide recognition and excellent reputation have also been augmented by organizing national and international conferences (with an autonomous budget now), and likewise by active participation in peer-reviewing and submission evaluations for top publication outlets and international conferences.

As a future perspective, it may pay to continue efforts in attracting early-stage researchers both for short (months) or longer periods (PhD or Postdocs with multi-year contracts).

Summarizing, the report shows again a significant progress and opens good perspectives of the future of CMA, either staying on a growth path or consolidating at an already high level.

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