# On the recent policy of FCT
# of using ORCID\SCOPUS to assess individual and research units' bibliographic productivity and impact

In the present evaluation cycle, FCT has introduced, after publication of the regulations and in the middle of the period of submission of the evaluation reports, the mandatory use of the ORCID generic identifier for bibliographic production. The *ORCID concept is itself open*, admitting to be fed from diverse indexers and DBs, and may constitute an interesting principle to have a normalized handle to access individuals' bibliographic production and impact. However, the FCT has further decided to confine the feeding of the researchers' portfolio to the SCOPUS database only. We have stated our extreme worries to the FCT about how this decision might *negatively affect the fairness and equity of the ongoing review*, regretfully without success. Such a position, which we regret, has prompted us to issue the position stated ahead, with regard to:

- the competitive disadvantage introduced by the use of bibliographic productivity and impact indicators which are inadequate for Computer Science and Engineering, such as SCOPUS alone;
- the generally inadequate use of such indicators in the evaluation of individual researchers and/or groups, if they are construed as an end, and not a means to support the desirable peer review, or likewise used for the preliminary screening of research units;
- the inadequacy of publishing blanket bibliometric statistics across research areas and domains, or likewise, using them to take strategy decisions affecting resources in a differentiated way.

It is essential that bibliometric tools have a high coverage and precision for the bibliographic production and impact factors under evaluation. However, it is established knowledge, by several bibliometrics researchers, that Elsevier SCOPUS (or Thomson-Reuters ISI WoS, for that matter) *do not cover the scientific publication of the CSE area robustly*, with levels of coverage hanging around 30-60% depending on the studies, whilst *inserting publications of doubtful relevance* to CSE (see e.g. http://informaticseurope.wordpress.com/2011/07/28/scopuss-view-of-computer-science-research/ or http://www.di.unipmn.it/index.php/news/107/70/On-the-unsuitability-of-WoS-and-Scopus-for-Computer-Science.html). The gap and lack of uniformity of coverage refers both to the number, quality, and nature of publications included, as the number of citations, mainly concerning heavyweight conferences. Alternative and open indexers have been developed, such as Google Scholar Citations, DBLP, as well as CORE which implements a well-respected ranking, being far more complete than the above-mentioned counterparts, and at least of recommended use as additional sources. The picture below, from http://www.harzing.com/popbook/ch16_2_2.htm, *depicts in fact a reality of objective competitive disadvantage with regard to other domains and areas, which FCT plans to apply to CSE researchers and research units, by confining ORCID to be fed only from SCOPUS*. Furthermore, SCOPUS deficiencies are not uniform across CSE sub-areas and, in consequence*, that may lead to significant deviations in the evaluation fairness inside the CSE area proper, further hurting the fairness of the process.*
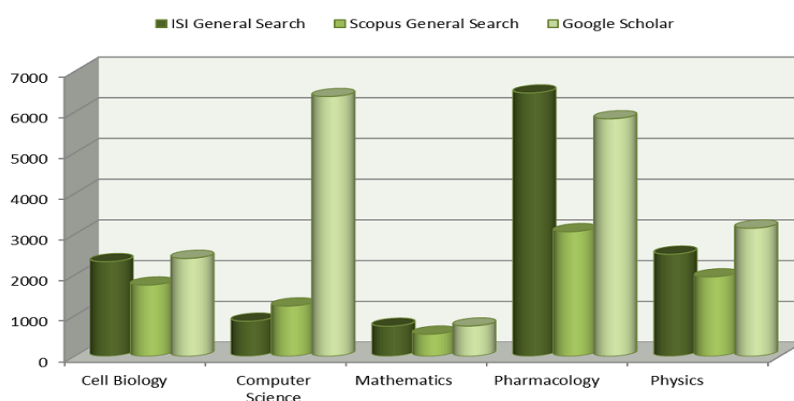
In reality, such *bibliometric indicators should be construed as means to educate peer assessment* and, whereas they are fundamental elements in the determination of the scientific impact of research centers, provided that they rely on data collected from a sufficiently large set to provide a statistically meaningful analysis, this condition is never satisfied when applied to individual scientists [IEEE statement on Appropr. Use of Bibliom. Indicators for the Assess. of Journals, Research Prop., and Individ., Sep 2013]. *However, FCT explicitly plans to construe the ORCID\SCOPUS content as one piece of evaluation of individual researchers' performance. At the very least, one should use multiple bibliometric performance indicators [Ibid], which ORCID allows, but was discarded by FCT.* Pruned Google Scholar Citations (GSC) profiles would have been a workable option or complement.

This is not the first time we are confronted with this problem and the CSE community of Portugal has actually formally addressed the President of FCT, on two occasions, referring not only to the use of inadequate bibliometric indicators, but also to the even more inadequate unprocessed use in *blanket, non-calibrated comparisons across areas and domains of research in Portugal*, *which the FCT has done on at least two occasions* [*Estatísticas da Produção Científica Portuguesa, 1981-2011 MEC-DGEEC; Diagnóstico do Sistema de Investigação e Inovação: desafios, forças e fraquezas rumo a 2020, FCT 2013*], whilst recent research has confirmed the existence of significant quantitative deviations across areas, between researchers of the same stature [Scaling the h- index for different scientific ISI fields, Iglesias et al. Scientometrics 73.3 (2007): 303-320]. Furthermore, these *facts have been recognised by the very institutions that perform such studies, but unfortunately ignored by the FCT*:

> "*CI coverage was below 50% for: […] Computer Sciences. Here in particular, the CI publications need to be supplemented with other non-CI documents for a full monitoring of research performance*" (in Bibliometric Study of the Universidade Nova de Lisboa, Portugal 2004-2010/2011, CTWS Leiden).

> "*In the present evaluation, the panel has seen reference to impact factors published by the Institute for Scientific Information (ISI): these are not sufficiently inclusive of computer science publications and may provide a skewed view of the impact of computer science research in comparison with other fields.*" (in Report of the Computer Science Research in Finland 2000-2006 – Publications of the Academy of Finland 8/07 [1])

> "*Evaluations of computer scientists based on the ISI Web of Science in its current form are at best meaningless and at worst misleading. Failure to abide by the above recommendations will have disastrous consequences for the field, as researchers will be encouraged to publish in journals or venues that have high impact according to ISI, but that none of their peers reads or takes seriously ...*" (in Report on Nederland Assessment of Research Quality – Computer Science 2002-2008 [2]).

We have reasons to fear, and sincerely hope this will not happen, that such *blanket statistics across research areas and domains, derived from ORCID\SCOPUS, will again be published* after the current evaluation cycle. Even more serious, we fear that they *may be used to take strategy or policy decisions in order to affect FCT resources in a differentiated way* across domains or areas.

Unfortunately, our worries about a *disinvestment of FCT in CSE* are short of being unfounded, since for example in the recent competitive FCT PhD Programmes call for all areas, CSE was contemplated with only one doctoral programme and 6 PhD scholarships in the whole country, whereas by almost any *correct* indicator, CSE is one of the most lively and well-achieved research areas, internationally and in Portugal. In so doing, the area of CSE would be disastrously affected, and with it, the capacities of development of the country in ICT, when the *heavy contribution of ICT to the GDP is a trademark of the most advanced countries in the world*. With the above-mentioned position, we are constructively trying to alert to the situation and hopefully inspire a reflection that might mitigate the consequences.

Portugal, 18th February 2014
List of signatures in the following page, in alphabetic order

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