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Bibliometric Analysis of the Output of German Technological Universities by Means of the J Factor

The performance-oriented allocation of funds and excellence initiatives is now widespread in science and research and has led to questions concerning fair national and international bibliometric benchmarks for comparing scientific institutions becoming a hot topic. As publication and citation practices strongly depend on scientific fields, field normalisation is widely recognised as necessary for a fair comparison of figures in bibliometrics and evaluation studies.

A form of normalisation for the evaluation of citation data on multidisciplinary research was recently presented [Ball 2008]. This method is based on the existing classification according to publishing journal and not the classification of output according to ISI subject categories. In order to calculate the J factor, a publication profile is created for each institution to be investigated. This profile takes account of the weighting of publications in a journal, represented by the number of publications as a proportion of the total output of the institution. In accordance with this weighting, the citation rate of each journal is compared to a qualified relative indicator. The final result is a relative citation rate J, which is the relative perception of the performance of an institution taking account of its publication and citation habits, and makes a transdisciplinary comparison possible.

This presentation compares the scientific output of the institutions of German IATUL members. A comparison is made with other popular rankings like "The Times Higher Education - QS World University Rankings", "Academic Ranking of World Universities", compiled by the Shanghai Jiao Tong University, and the Germany-oriented rankings of the Centre for Higher Education Development (CHE).

References:

[Ball 2008] Ball R, Mittermaier B and Tunger D: Creation of Journal-Based Publication Profiles of Scientific Institutions – A Methodology for the Interdisciplinary Comparison of Scientific Research Based on the J Factor, DOI 10.1007/s11192-008-2120-x, *Scientometrics* (accepted for publication)

Bernhard Mittermaier obtained a PhD in Analytical Chemistry from the University of Ulm in 2001 and a MA (LIS) at the Humboldt University Berlin in 2006. He is employed at the Central Library of the Forschungszentrum Jülich since 2004; after working in the User Services, he became Head of the Central Library in 2008.