

Bibliographical approach to the scientific production on marine technology indexed in Web of Science database (1995-2005)

Margarita Ceña Cosials, Maria Hortènsia Álvarez Suau, Josep Vives i Gràcia

Universitat Politècnica de Catalunya. Biblioteca EPSEVG. Rambla Exposició, 37. 08800 Vilanova i la Geltrú (Barcelona, Catalunya).
+34 93 896 77 12 margarita.cenya@upc.edu

1. Introduction

The application of bibliometry in the scientific production developed for the last ten years in the field of marine technology allows us to know which authors and institutions lead the development of this speciality.

Moreover, the result of this analysis identifies the most important scientific journals for publishing works on this subject.

To carry out this analysis it has been interrogated the Web of Science database, produced by the Institute for Scientific Information (ISI). This database includes the bibliographic records of what is considered the most relevant worldwide technical and scientific literature. This relevance index is fixed by the impact index of all the articles published in 8.000 scientific journals.

Our bibliographic research has been obtained searching these keywords “marine technology” and “engineering ocean”, but, in order to identify the whole existing literature in the database about this subject, a second search has been executed with other synonyms and related words.

To determine the pertinence of the results retrieved in Web of Science and to detect possible deviations, we have carried out another similar search in the Scopus database, produced by Elsevier. This database analyses a total of 14.200 journals and although it does not work with impact indexes, it shows the publication frequency in a specific subject, for an author, institution or publication.

2. Results and Discussion

The results we have achieved show which authors and institutions are more relevant in this subject as well as which scientific publications, analyzed by Web of Science, contain works on marine technology.

Field: Institution Name	Record Count	% of 57	Bar Chart
SOUTHAMPTON OCEANOGR CTR	3	5.3 %	■
Univ Aberdeen	3	5.3 %	■
Univ Glasgow	3	5.3 %	■
CALTECH	2	3.5 %	■
Univ Hawaii Manoa	2	3.5 %	■
Washington Dept Fish & Wildlife	2	3.5 %	■
Woods Hole Oceanogr Inst	2	3.5 %	■
Autonomous Undersea Syst Inst	1	1.8 %	■
B WHEELER ASSOCIATES	1	1.8 %	■
British Antarctic Survey	1	1.8 %	■
British Geol Survey	1	1.8 %	■
BRITISH NATL SPACE CTR	1	1.8 %	■
Cardiff Univ	1	1.8 %	■

Figure 1. Institutions with more publications in marine technology..

Field: Source Title	Record Count	% of 57
MARINE TECHNOLOGY SOCIETY JOURNAL	7	12.3 %
IEEE JOURNAL OF OCEANIC ENGINEERING	6	10.5 %
SEA TECHNOLOGY	6	10.5 %
UNDERWATER TECHNOLOGY	4	7.0 %
DEEP-SEA RESEARCH PART I-OCEANOGRAPHIC RESEARCH PAPERS	2	3.5 %
JOURNAL OF EXPERIMENTAL MARINE BIOLOGY AND ECOLOGY	2	3.5 %
MARINE TECHNOLOGY AND SNAME NEWS	2	3.5 %
MATERIALS AND CORROSION-WERKSTOFFE UND KORROSION	2	3.5 %
NAVAL ARCHITECT	2	3.5 %

Figure 2. More outstanding scientific Publications in marine technology..

3. Conclusions

From the bibliometrical analysis, we conclude:

- Existence of a strong dispersion of published works about marine technology. Probably, this concept is not fully adopted and consequently, these terms are not included in all these works.

- Identification of the main journals, the core collection on this subject.
- Identification of the main research centers and the most relevant authors.

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