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Librarian Authors Article on E-Prints

A research article by New Mexico State University Librarian Kate Manuel, entitled “The Place of E-Prints in the Publication Patterns of Physical Scientists,” was published in *Science & Technology Libraries* 20 (2001): 59-85. E-prints are the electronic equivalents of paper preprints used by scientists for rapid, informal communication of research. Using the technique of bibliometric survey, Manuel examined a total of three hundred e-prints dating from 1989 to 1999 from three scientific e-print servers, MPRESS (mathematics), ArXiv (chemical physics), and SPIRES (high energy physics), to assess:

the relative percentage of e-print authors employed by academic institutions, research laboratories, and industry

the relative percentage of e-print authors working in various countries

the frequency with which authors collaborate in producing e-prints

the degree to which e-prints cite other e-prints or traditional peer-reviewed sources

the frequency with which e-print authors have recently participated in traditional peer-reviewed publishing, and

the percentage of e-prints transformed into peer-reviewed journal articles, as well as the time interval between e-print and journal article.

Ms. Manuel found that:

on two of three e-print servers, researchers in industry make up the lowest percentage of authors

most e-prints are authored by researchers working in “first world” or “developed” countries

the average number of co-authors per e-print varies by disciplinary field, with the lowest number in math-

ematics and the highest number in high energy physics

e-print authors' citations are still primarily to articles in peer-reviewed publications rather than to other e-prints

e-print authors are active participants in traditional paper publishing, including peer-reviewed scholarly journals and non-peer-reviewed letters journals, and

only 50-60% of e-prints are transformed into corresponding peer-reviewed journal articles within an interval of six to twelve months.

According to Manuel, librarians, in particular, have been interested in understanding how scientists produce and communicate research because this information can be used to facilitate patrons' retrieval of scientific information. She concludes that continuing scholarly attention needs to be paid to the blurring of the boundary between informal and formal scientific communication. Manuel was formerly a senior assistant librarian/physical sciences at California State University, Hayward (CSUH), and her research was funded by a 1999-2000 CSUH Faculty Support Grant. For more information, contact Manuel at NMSU's Zuhl Library at 646-6932.