

ELECTRONIC PREPRINT DISTRIBUTION: A CASE STUDY
OF PHYSICISTS AND CHEMISTS AT THE
UNIVERSITY OF MARYLAND

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(ABSTRACT)

As use of the Internet for scholarly communication increases, many scientists from several disciplines including Astronomy, Mathematics, and Physics are using electronic networks to distribute preprints. The innovation of electronic preprint archives on the web, specifically those set up by Paul Ginsparg at Los Alamos, where scientists can submit manuscripts and access papers before the formal peer review process, has gained the attention of scholarly scientific publishers and researchers around the world. This case study of twelve physicists and chemists at the University of Maryland reveals divergent attitudes and behaviors about preliminary electronic dissemination of research. Several hypotheses including economic considerations, historical and technical patterns of work, social and structural factors, community norms, and the attitudes of scientific publishers, are investigated to explore the social aspects of this phenomenon called e-print archives.

Preliminary findings suggest that theoreticians in particle physics and condensed matter physics are the most active users of the e-print archives. While graduate students and post-doctoral researchers are called on to navigate the technical difficulties of electronically submitting papers, it is the older more established scientists who promote usage. The influential attitudes of editors and publishers of scientific journals also contribute to understanding current practices and attitudes about the e-print archives.

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