

# How Social Networks will Change Research

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**Abstract:** *Social Networks have become an integral aspect of our lives in recent years. Developments such as the small-world phenomenon, social curation, and eCommunities are evolving as noteworthy game-changers in an emergent web ecosystem. This paper describes how the way of conducting academic research will change when the resulting omnipresent communication and sharing technology is taken into account. Researchers will have no choice but to embrace SN technologies to fully exploit the true potential of the emerging ecosystem.*

**Index Terms:** *Social Networks, Small World Phenomenon, eCommunities, Social Curation*

## 1. INTRODUCTION

The web has brought about significant changes in the way we do research. Developments such as Google Scholar and its citation network, Google's massive digitization project and Massive Open Online Courses (MOOC) are enabling access to state of the art research materials, large collections of digitized books as well as specialized courses delivered by the best researchers in the world. Researchers are therefore able to gain access to vast amounts of knowledge in supporting various collaborative and cooperative efforts for expanding and advancing their research.

Being a researcher for the past 25 years and coming from a developing nation, I have seen a vast difference in the way research is being carried out. E.g. by standing on the shoulder of giants, upcoming or underserved researchers (particularly in under-developed nations) are able to level the field by bridging the ever-widening knowledge gap between the 'those who have' and the 'those who do not have.'

In the past, researchers worked within closed communities relying on meetings at conferences with a well-defined peer review mechanism for maintaining and measuring their research impact. The physical library used to be considered the

major source of reference with large collections of books and audio-visual material. Things are fast changing with the emergence of new conference models [1]. Discourses surrounding the conferences can now be extended beyond the restrictions and boundaries of a geographical setting and its in-site interactions. Social Network (SN) tools such as Blogs and Twitter are widely being employed to extend these networks and to prolong discourse relating to conference themes. Emerging online journals are increasingly assimilating and mashing up [2] SN functions for enabling improved interactions with research communities. Also, web giants such as Google Scholar (along with its SN extensions), are fast replacing the need to visit the library via its expanding, authoritative, up-to-date, scholarly contents.

Notable technological advances that can be seen as defining future scenarios for research include:

- i. The way in which eScience and eResearch is supporting multi-disciplinary research teams via shared workflows, libraries and infrastructure [3]
- ii. The emergence of expertise oriented search engines such as AMiner [4] (as shown in Figure 1) facilitated by a scholarly social network [3], and
- iii. The emergence of large scholarly networks such as Academia.edu and ResearchGate with 25 million researchers [5] and 7 million researchers [6] respectively.



Figure 1: Expert Oriented Search Engine

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In this way, SN tools are opening up many more opportunities for researchers to network