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## Editorial

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**Abstract:** Knowledge and learning are social phenomena as well as human-centric. In simple terms, the deployment of emerging technologies in knowledge and learning requires the multilevel support of individuals, teams, communities and networks. The evolution of technologies has made difficult the distinction between the various levels of reference. Put simply, people are not isolated from their micro- or macro-environment. However, technology-supported information highways have developed unforeseen

opportunities for knowledge and learning flows between the peers in this network. This paper summarises the Guest Editorial of the Special Issue on Learning and Interacting in the Web: Social Networks and Social Software in the Web 2.0.

**Keywords:** learning and interacting in the web; social networks; social software; Web 2.0.

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**Biographical notes:** Miltiadis D. Lytras is an Assistant Professor in the Computer Engineering and Informatics Department-CEID (University of Patras). His research focuses on semantic web, knowledge management and e-learning, with more than 80 publications in these areas. He has co-edited/co-edits, 25 special issues in International Journals (Like *IEEE Transaction on Knowledge and Data Engineering*, *IEEE Internet Computing*, *IEEE Transactions on Education*, etc.) and has authored/edited 12 books. He serves as the (Co) Editor-in-Chief of 12 international journals while he is Associate Editor or Editorial Board Member in seven more.

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Stephen Downes is a Senior Research Officer with the Institute for Information Technology at Canada's National Research Council located in Moncton, New Brunswick, Canada. He specialises in research in online learning, online communities and knowledge management. He is best known for his essays, *The Future of Online Learning and Learning Objects*. He publishes a daily newsletter about online learning, *OLDaily*.

Ambjorn Naeve leads the KMR-group in Royal Institute of Technology, Sweden. KMR-Group has been involved in Semantic Web research and development since 1999. The work of the KMR-group focuses on how to make use of Semantic Web technology in order to enable more efficient forms of technology-enhanced learning and administration, and support the emergence of a Public Knowledge and Learning Management Environment. He is also an Industry Consultant with extensive experience in conceptual modelling for software engineering and business applications. He is the inventor of *Conzilla* and of the conceptual modelling technique called *Unified Language Modelling*.

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## 1 Introduction: learning and interacting in the web: social networks and social software in the web 2.0

Knowledge and learning are social phenomena as well as human-centric. In simple terms, the deployment of emerging technologies in knowledge and learning requires the multilevel support of individuals, teams, communities and networks. The evolution of technologies has made difficult the distinction between the various levels of reference. Put simply, people are not isolated from their micro- or macro-environment. However, technology-supported information highways have developed unforeseen opportunities for knowledge and learning flows between the peers in this network (Lytras and Naeve, 2006; Lytras et al., 2006; Naeve et al., 2006; Sicilia et al., 2006).

According to Finin et al. (2005), social networks are

“explicit representations of the relationships between individuals and groups in a community. In the abstract, these networks are just simple graphs with nodes for the people and groups and links for the relationships. In practice, the links can encode all kinds of relationships – familial, friendship, professional or organizational. Social network theory, the study of such social networks, has developed techniques found useful in many fields, including sociology, anthropology, psychology and organizational studies. Virtual or online communities are groups of people connected through the Internet and other information technologies. These have become an important part of modern society and contribute to life in many contexts – social, educational, political and business. The communication technologies and infrastructures used to support virtual communities have evolved with the Internet and include electronic mailing lists, bulletin boards, usenet, IRC, Wikis, and blogs.”

Downes (2005), argues that personal descriptions, as found in social networks, and resource descriptions, as found in the semantic web, should be merged to form a single network, the semantic social network.

It seems that knowledge and learning domain enters a new era where microcontents (<http://www.microlearning.org/>) provide the most critical asset. Web 2.0 (<http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>) is the new buzzword with great potential.

The key motivation for this special issue is to go beyond the words and wishful thinking to examine the critical role of networks for the promotion of knowledge and learning. Within this context, we invited open minds – academics and practitioners alike – to contribute their research on how social networks and social software create new opportunities, exploiting leading edge approaches in the design and modelling of systems towards the vision of Web 2.0 for knowledge and learning. Some of the indicative topics are:

- social network analysis as applied to the web
- new forms of interaction in social systems
- FOAF and other metadata schema describing individuals and social ties
- folksonomies, tagging and other collaboration-based categorisation systems
- sharing contents in online communities
- blogging as a social activity and approaches to semantic blogs

- Wikis, semantic Wikis and other collaborative knowledge creation systems (Vossen et al., 2007)
- collaborative filtering in social settings
- analysing social interaction for finding knowledge on web users.

We are very happy since we made it after one year of preparation to prepare an excellent quality special issue, which contributes to the literature and offers excellent opportunities of exploitation. The titles of the selected papers after a peer review selection are:

- The self-organisation of virtual communities.
- The future of e-learning: a shift to knowledge networking and social software.
- Semantics-supported cooperative learning for enhanced awareness.
- Weblogs and internal communication in a corporate environment: a case from the ICT industry.
- Analysing interaction behaviour in network supported collaborative learning environments: a holistic approach.
- Social network analysis of self-taught e-learning communities.
- Using chat as a complement to discussion board in small-group online seminars: How is student participation affected?
- Sociality and learning in social software.
- From folksonomies to ontologies: employing wisdom of the crowds to serve learning purposes.
- Trialogical learning in public: FlashMeeting recording and reuse in a peer-learning context.
- Red gate corner: a web 2.0 prototype for knowledge and learning concerning China business.

We invite you to join us in the 1st World summit on the Knowledge Society, Athens, 26–28 September 2008, <http://knowledge-summit.org>, to discuss further the implications of Web 2.0 for knowledge and learning.

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