Network Analysis Tools for Online Communities: 
The Koblenz Network Collection

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Abstract: First and foremost, online communities are characterized by their network characteristics, represented by online relationships, online communication and other interactions between people on the Internet. Thus, a necessary condition for the analysis of online networks is the availability of network analysis tools.

In this keynote, I present the Koblenz Network Collection (KONECT, http://uni-koblenz.de/), a network analysis tool developed at the University of Koblenz–Landau. KONECT is a project to collect network datasets in the areas of web science, network science and related areas, as well as to provide tools for their analysis. Due to the emergence of the World Wide Web in the last decades many network datasets are now available describing online communities and their processes. In this light, the KONECT project has the goal of collecting many diverse network datasets from the Web and in particular from online communities, and providing a way for their systematic study. The main parts of KONECT are (1) a collection of over 180 network datasets, consisting of directed, undirected, unipartite, bipartite, weighted, unweighted, signed and temporal networks collected from the Web, (2) a Matlab toolbox for network analysis, (3) a website giving a compact overview the various computed statistics and plots and (4) a comprehensive handbook of network analysis methods. In this talk, I give an overview of of methods for modeling online communities as networks, and review common network analysis methods. I finally give a short introduction to KONECT itself.