1023-D1-48   **Mason A Porter*** (`mason@caltech.edu`), MC 114-36, California Institute of Technology, Sloan Annex 130, Pasadena, CA 91125-3600. *Community Structure in the United States Congress.*

Social networks, modeled by graphs, consist of interconnected functional modules that describe different levels of hierarchical organization. To formalize the description of such organization, mathematicians, physicists, and computer science have developed the notion of community structure and derived numerous algorithms to detect communities in graphs. Here we study the community structure in the United States Congress using both the network determined by committee and subcommittee assignments and that determined by legislation cosponsorship. We reveal collaborative ties among different committees and Congressmen and examine their correlations with political positions determined using roll call voting data. (Received July 14, 2006)