1095-00-238 **Michaela Puck Rombach*** (puckrombach@gmail.com), UCLA Mathematics Department, Box 951555, Los Angeles, CA 90095-1555, and **Mason A Porter**, **James H Fowler** and **Peter J Mucha**. *Core-Periphery Structure in Networks.*

Intermediate-scale (or 'meso-scale') structures in networks have received considerable attention, as the algorithmic detection of such structures makes it possible to discover network features that are not apparent either at the local scale of nodes and edges or at the global scale of summary statistics. Numerous types of meso-scale structures can occur in networks, but investigations of such features have focused predominantly on the identification and study of community structure. In this paper, we develop a new method to investigate the meso-scale feature known as core-periphery structure, which entails identifying densely-connected core nodes and sparsely-connected periphery nodes. In contrast to communities, the nodes in a core are also reasonably well-connected to those in the periphery. Our new method of computing core-periphery structure can identify multiple cores in a network and takes different possible cores into account. We illustrate the differences between our method and several existing methods for identifying which nodes belong to a core, and we use our technique to examine core-periphery structure in examples of friendship, collaboration, transportation, and voting networks. (Received September 10, 2013)