This presentation will introduce the value chain research approach and its utility in evaluating competitive and collaborative dynamics among firms in the nanotechnology industry. The research approach has two main parts; mapping and analysis. Value chain mapping is the process of identifying firms (& products) in each stage of the supply chain including their geographic location. Value chain analysis uses the information discovered in the mapping process to explain how and why firms are linked in the chain and how this differs by segment of the chain, industry, and location. A nanotechnology-specific value chain research approach along with educational and visual tools were developed for the CNS-UCSB summer internship program and are currently being applied in the California Nanotechnology in the Global Economy website project. The latter will highlight California’s position in the national and global value chain and showcase how visual analytic tools can be used to do this. Both projects will be discussed and resources will be presented for anyone interested in applying this approach in their own research.

Based at Duke University’s Center on Globalization, Governance, and Competitiveness, Dr. Frederick works as an extramural collaborator with the Center for Nanotechnology in Society at UCSB, where she previously focused on a global value chain analysis of China, the United States, and North Carolina. With a PhD and B.S. in Textile Technology Management from NC State University, she is currently examining California’s footprint in nanotechnology and its emerging research networks and resources.