

Demival Vasques Filho
University of Auckland

Investigating the Interdependency between Collaboration Networks

There has been a recent development in research about the growth and evolution of scientific collaboration networks. Empirical studies and mathematical growth models have tried to understand the dynamics of citation and co-authorship networks both studied separately and together. This is one of the best examples that relates network analysis to the real-life behavior of interactions (collaborations) between nodes (authors). Literature suggests a strong correlation between the growth of citation and co-authorship networks. In this project, we perform the core-periphery analysis on the dynamic co-authorship network and try to relate the observed changes with the changing citations of authors. Our main aim is to propose a more sophisticated mechanism to understand the strong correlation between collaboration networks (citation and co-authorship) and model the simultaneous dynamic evolution of both the networks. We believe that systematic network analysis can be a major tool to build arguments and mathematical framework for questions driven by intuition.