

# Updated Network Analysis of the Imprecise Probability Community Based on ISIPTA Electronic Proceedings

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In the last 15 years, the biennial ISIPTA symposia have established themselves as a central forum for the presentation and discussion of recent research in the field of interval or imprecise probability (IP). Revisiting our previous contribution for ISIPTA'11, where we derived and analyzed the research network in the IP community based on co-authorships of ISIPTA papers until and including ISIPTA'09 [2], we want to investigate more closely whether the population of ISIPTA contributors, or the structure of the contributor population, has changed. We thus update the research network by considering also the papers of subsequent ISIPTAs, updating our **R** package [3] accordingly.

Besides drawing the current network graph and updating the network characteristics usually studied in scientific collaboration networks [4, 5, 7] (like, e.g., the distribution of the number of collaborators, the number of papers per author, or the number of authors per paper), we want to focus on the network evolution [1]. We wish to identify trends and recent developments in network characteristics, especially with regards to the contributor population, and study the in- and outflow of authors in more detail by analyzing their position in the network. We also investigate whether trends or 'hot topics' are emerging from the symposia contributions, by analyzing the paper's keywords.

Furthermore, we consider models for scientific collaboration networks, like random graphs with preferential attachment [6, §8], to analyze the network dynamics of the ISIPTA coauthorship network.

**Keywords.** Network analysis, imprecise probability, scientific collaboration networks, network evolution.

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