The visualization begins by displaying the central node representing all of the author's work. Over time, nodes appear around the center representing important papers (those papers with higher Eigenfactor) that have cited the author's work. These nodes send out links to the center as well as to other nodes that appear in the visualization. This is an egocentric network, with alter (non-ego) nodes placed radially around the center in order of time. In this way, spatial placement encodes time; in addition, color encodes category (field of study) and size encodes influence (Eigenfactor score). In order to reduce the visual complexity of the graph, the number of nodes in the visualization is restricted to 275, giving preference for the alter nodes to highly ranked papers that have category information available. See [7] for more detail on this visualization.

4.3 Linking the visualizations

The citation visualization shows the influence of a scholar's entire body of work (condensing all of the papers into a single central node), while the timeline visualization shows the individual papers authored by the scholar. By opening the visualizations in separate browser windows (with a dual monitor display, or in side-by-side windows), the timeline can be used to drill down deeper into the citation visualization. Pointing the mouse at a paper on the timeline causes the papers that cited this selected paper to be highlighted in the citation visualization (Figure 2).

5. CONCLUSIONS AND FUTURE DIRECTIONS

We presented a pair of linked visualizations generated from the open Microsoft Academic Graph data to explore a scholar's influence through citations to her work. These visualizations could be included in author profiles to offer an interactive tool to explore any author's publications and citations.

We plan to further develop these tools, in particular improving paper selection and management and allowing the use of different category groupings, so that papers can be colored by journal, citation-based community, etc. We would also like to collect and incorporate user feedback to evaluate how these profiles can be used and improved. Finally, we plan to make these profiles easier for authors to share and present among colleagues and evaluators.

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