

System Dynamics Collaboration Explorer

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Extended Abstract

Introduction

What is your Forrester Number? How many degrees of separation are there between you and Jay Forrester, the founder of system dynamics? The System Dynamics Society's bibliography dataset offers an opportunity to determine this number and to visualize co-author networks in the system dynamics community. Community members can find future collaborators, view their network of co-authors, see the path between themselves and any other author in the community, and investigate which organizations collaborate with each other.

Approach

The system dynamics bibliography includes over 16,000 articles, conference proceedings, dissertations, and other works in system dynamics. Co-author networks were constructed using the NetworkX library in Python. A web app (in beta) was developed so that community members can explore the results interactively.

Results

A publicly accessible web-based tool was developed as a prototype. The [System Dynamics Collaboration Explorer](#) covers 16,842 works related to system dynamics by 12,407 authors. These works include journal articles, conference proceedings, dissertations, and other records in the System Dynamics Society's bibliography. The tool enables community members to explore their co-author networks and degrees of separation to any other author. The tool can also display how prolific authors are connected and which organizations have collaborated with each other.

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Discussion

The prototype tool presented enables interactive exploration of co-author networks, publications, and other aspects of the system dynamics community. This work supports the System Dynamic Society's goal of facilitating further collaboration among members of the system dynamics community, and the 2026 conference theme which includes "crafting futures together." Community members can use these tools to identify their future collaborators and how they might connect.

Future opportunities

The System Dynamics Collaboration Explorer tool is an initial implementation and is still under development. Several directions are planned for future development. Additional efforts are needed to improve author metadata coverage, particularly organization and country affiliation. A map of authors in the bibliography may also be incorporated depending on author metadata. Last but not least, the tool is intended to be improved based on community feedback. Input from system dynamics community members on usability, utility, and additional use cases will be welcomed and will inform future work priorities.