



Beitrag ID: 141 Beitragskennung: 91

Typ: **Poster**

## Legal Hypergraphs

Network analysis has been widely adopted to investigate law as a complex system. However, the utility of dynamic higher-order networks in the legal domain has remained largely unexplored. Setting out to change this, we introduce temporal hypergraphs as a powerful tool for studying legal network data. Temporal hypergraphs generalize static graphs by (i) allowing any number of nodes to participate in an edge, and (ii) permitting nodes or edges to be added, modified, or deleted. We develop models and methods to explore legal hypergraphs that evolve over time and present case studies on legal citation and collaboration networks that change over more than 70 years. Our work demonstrates the potential of dynamic higher-order networks for studying complex legal systems.

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### Keywords

legal networks  
temporal networks  
higher-order networks  
hypergraphs  
complex systems

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