

Citation Network Analysis Report

Generated on: 2025-03-10 19:07:34
Institutions analyzed: IIT Madras, NIT Trichy

1. Network Overview

Total Papers	170
Total Citations	736

2. Papers by Institution

Institution	Papers
IIT Madras	100
NIT Trichy	70

3. Network Centrality Measures

PageRank

Paper Title	Institution	Score
A syntactic pattern-recognition approach for proce...	IIT Madras	0.0408
Efficient dispatching rules for scheduling in a jo...	IIT Madras	0.0341
A holistic model for total quality service...	IIT Madras	0.0323
Novel materials synthesis by mechanical alloying/m...	IIT Madras	0.0210
Locating sensors in complex chemical plants based ...	IIT Madras	0.0199

Citation Count

Paper Title	Institution	Score
Optical properties of SnO ₂ nanoparticles and nanor...	IIT Madras	13.0000
An assessment of impact strength and corrosion beh...	NIT Trichy	12.0000
Effect of weld metal chemistry and heat input on t...	NIT Trichy	11.0000
A holistic model for total quality service...	IIT Madras	10.0000
Node placement algorithm for deployment of two-tie...	IIT Madras	10.0000

Eigenvector Centrality

Paper Title	Institution	Score
Observation of gravitational waves from a binary b...	IIT Madras	0.0000
GW170817: observation of gravitational waves from ...	IIT Madras	0.0000
Advanced ligo...	IIT Madras	0.0000
GWTC-1: a gravitational-wave transient catalog of ...	IIT Madras	0.0000
Multi-messenger observations of a binary neutron s...	IIT Madras	0.0000

Betweenness Centrality

Paper Title	Institution	Score
Optimization of laser welding process parameters f...	NIT Trichy	0.0187
AC Impedance Spectroscopy, Conductivity and Optica...	NIT Trichy	0.0183
Evaluation of microstructures and mechanical prope...	NIT Trichy	0.0166
Fabrication of corrosion resistant, bioactive and ...	NIT Trichy	0.0165
Synthesis and characterization of nanocrystalline ...	IIT Madras	0.0149

Closeness Centrality

Paper Title	Institution	Score
A holistic model for total quality service...	IIT Madras	0.2801
Effect of weld metal chemistry and heat input on t...	NIT Trichy	0.2735
Efficient dispatching rules for scheduling in a jo...	IIT Madras	0.2636
Accuracy of outpatient endometrial biopsy in the d...	IIT Madras	0.2571
Mechanism of sulfate attack: A fresh look: Part 1:...	IIT Madras	0.2558

Hub Score

Paper Title	Institution	Score
Characterisation of microstructure, mechanical pro...	NIT Trichy	0.0343
On the throughput cost of physical layer security ...	IIT Madras	0.0305
Synthesis of a α -Fe ₂ O ₃ nanocrystal in its differen...	IIT Madras	0.0293
Fabrication of corrosion resistant, bioactive and ...	NIT Trichy	0.0266
Fault diagnosis using dynamic trend analysis: A re...	IIT Madras	0.0249

Authority Score

Paper Title	Institution	Score
Optical properties of SnO ₂ nanoparticles and nanor...	IIT Madras	0.0375
One-dimensional ZnO nanostructure arrays: Synthesi...	IIT Madras	0.0277
An assessment of impact strength and corrosion beh...	NIT Trichy	0.0271

Effect of weld metal chemistry and heat input on t...	NIT Trichy	0.0266
Node placement algorithm for deployment of two-tie...	IIT Madras	0.0254

4. Cross-institution Analysis

	NIT Trichy	IIT Madras
NIT Trichy	239	83
IIT Madras	130	284

5. Visualizations

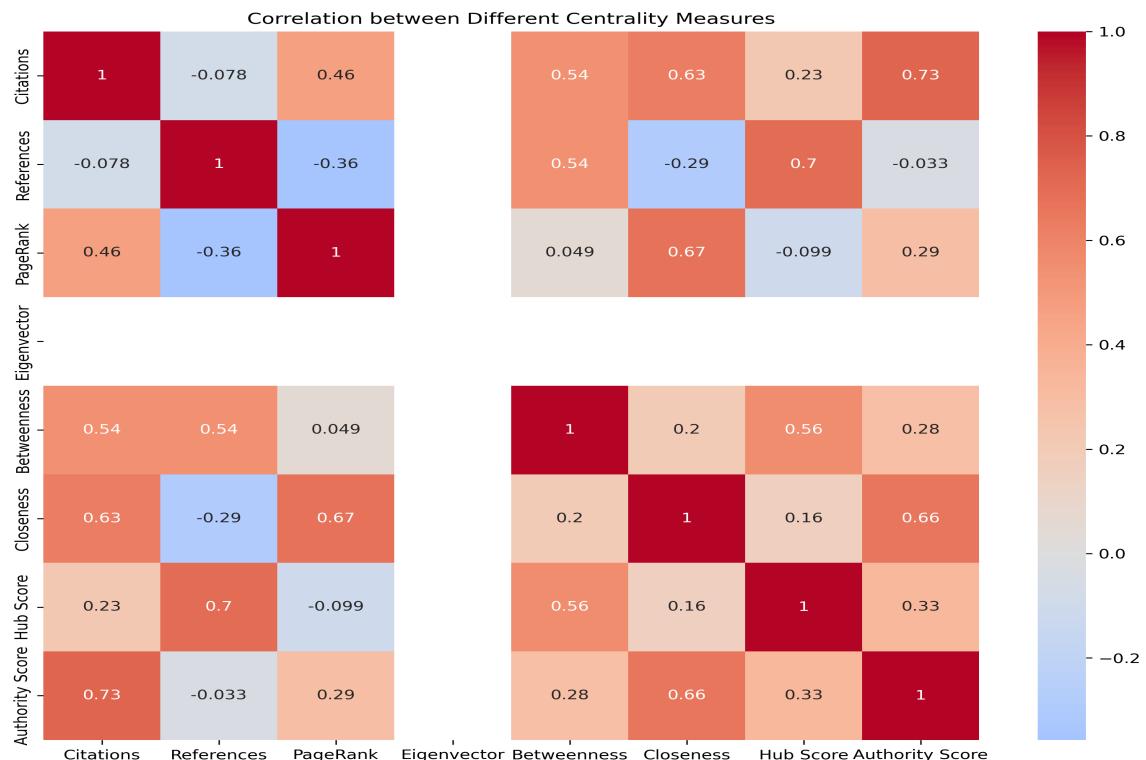


Figure: centrality_correlations

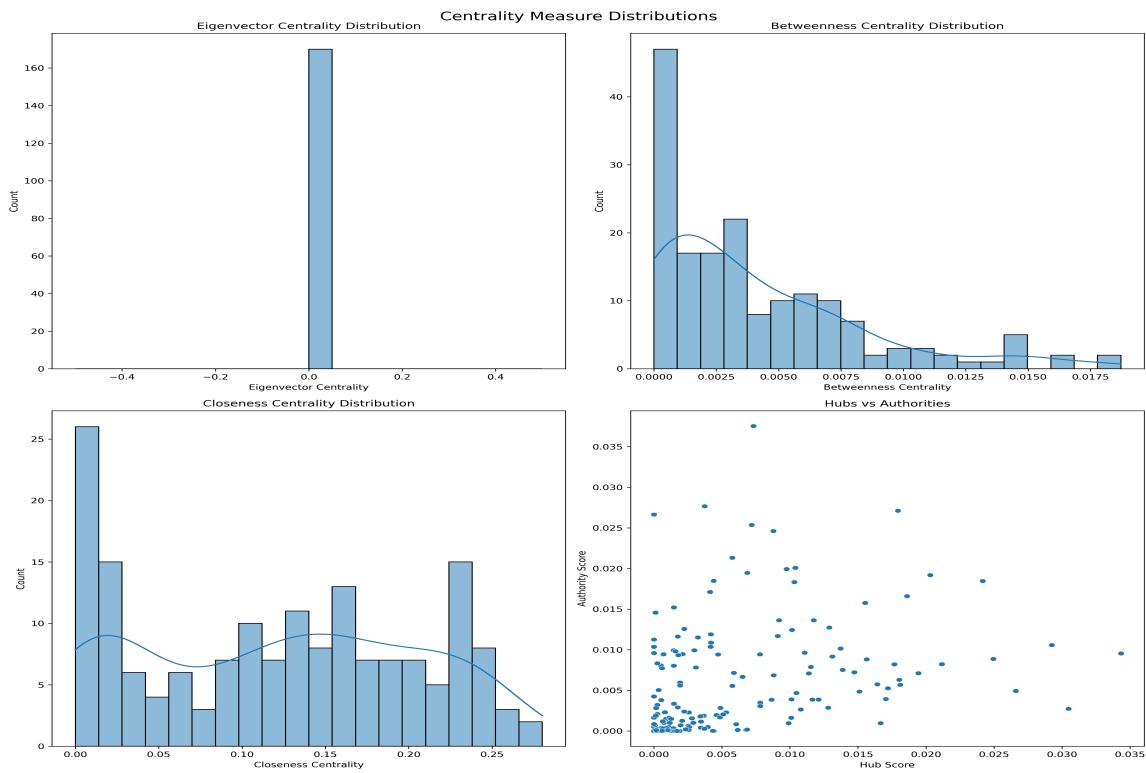


Figure: centrality_distributions

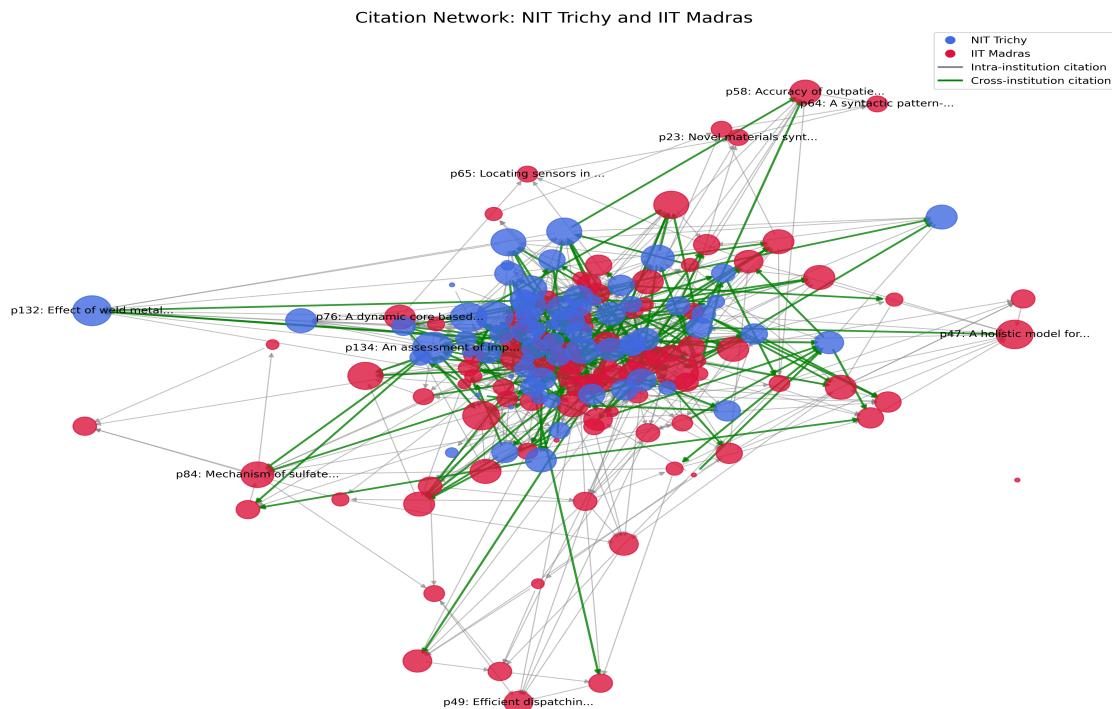


Figure: iit_nit_citation_network

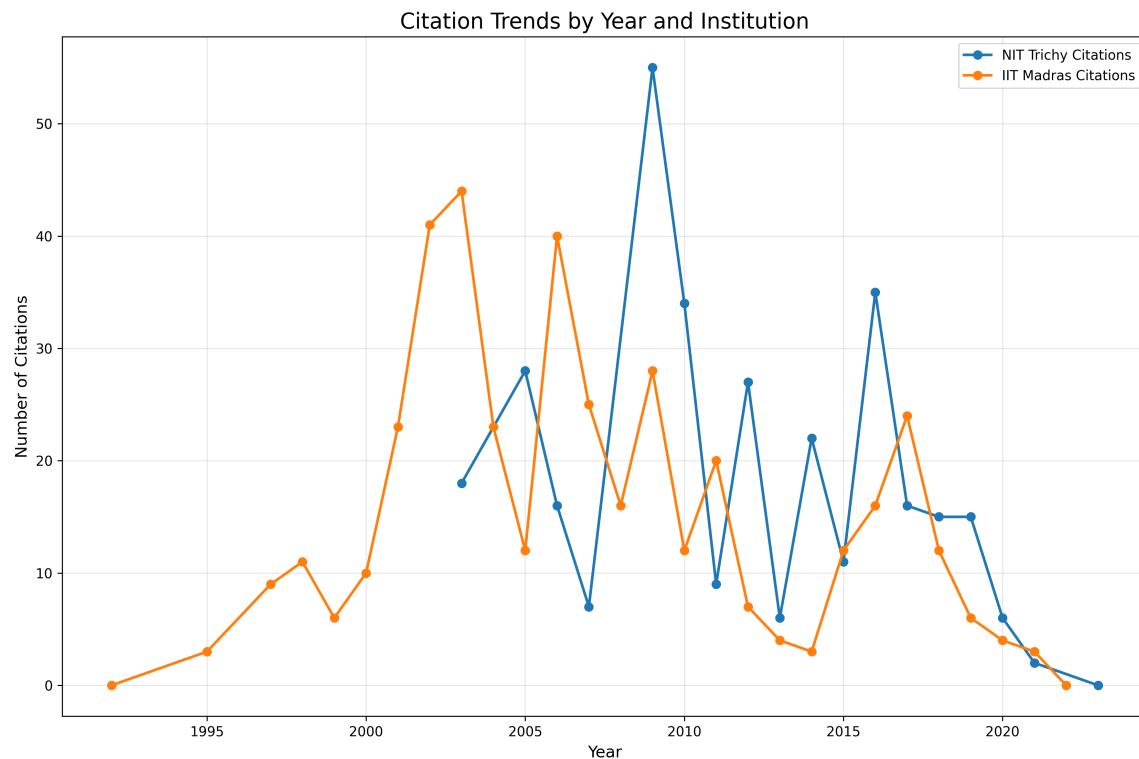


Figure: iit_nit_citation_trends

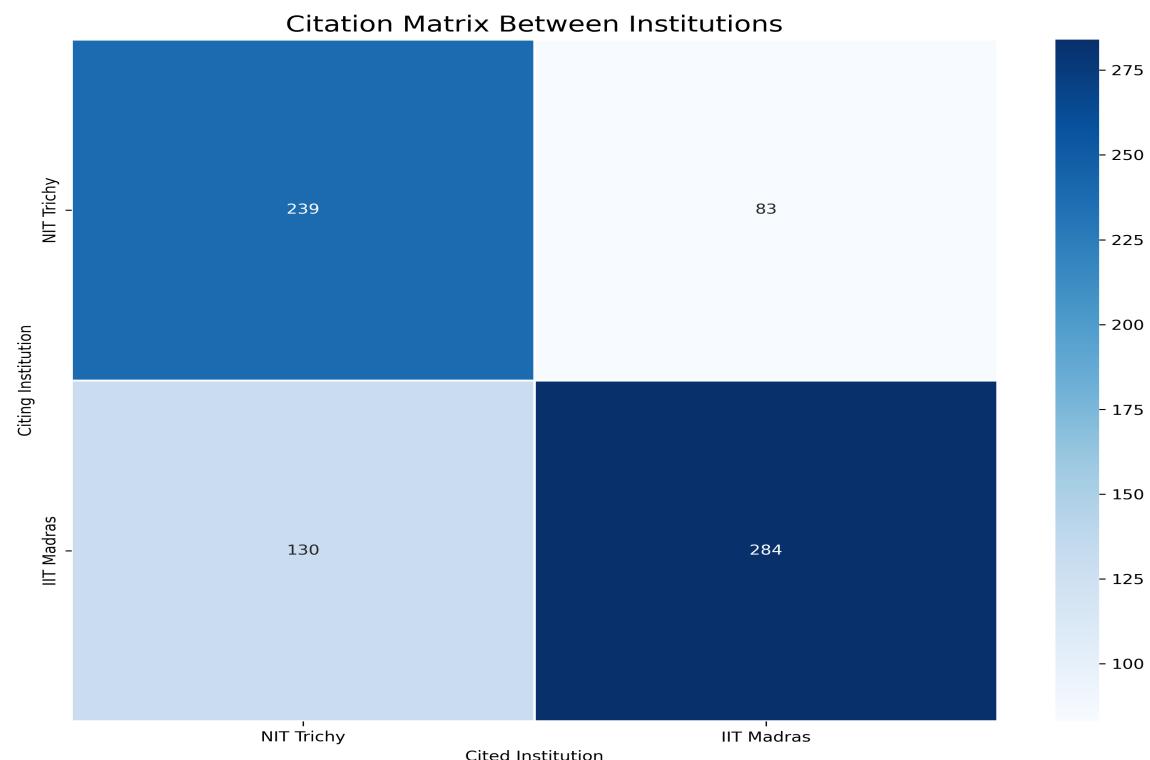


Figure: iit_nit_institution_matrix

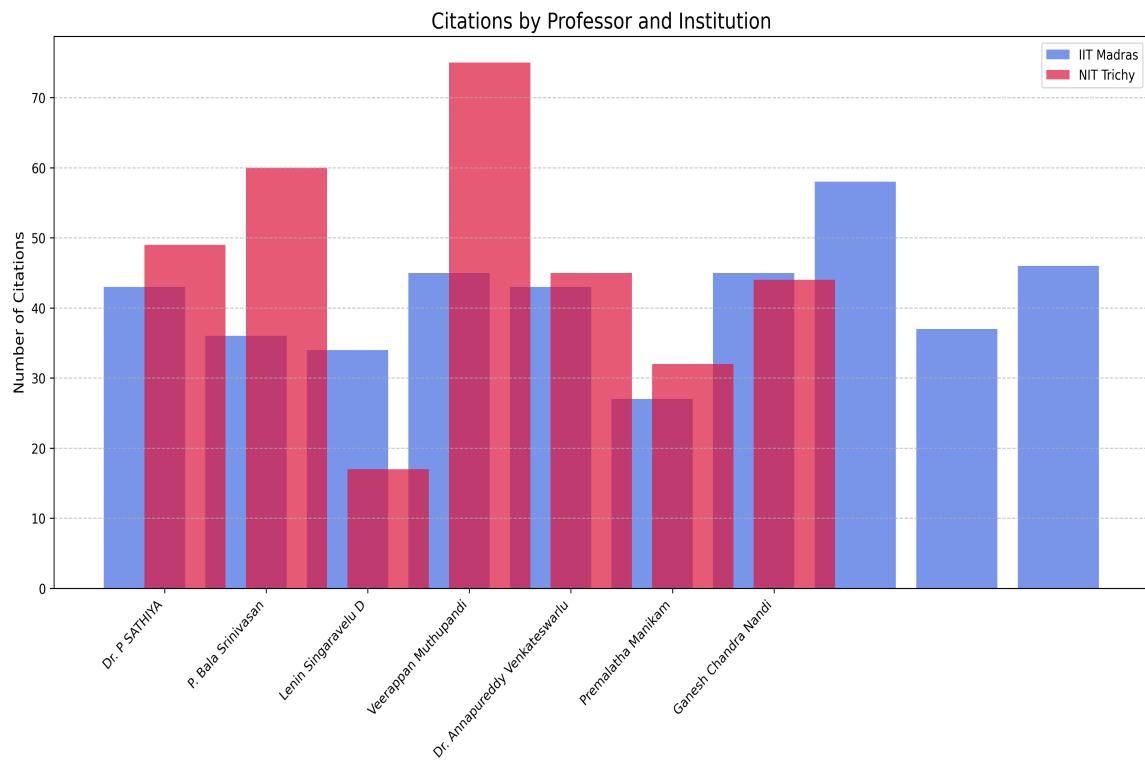


Figure: iit_nit_professor_citations

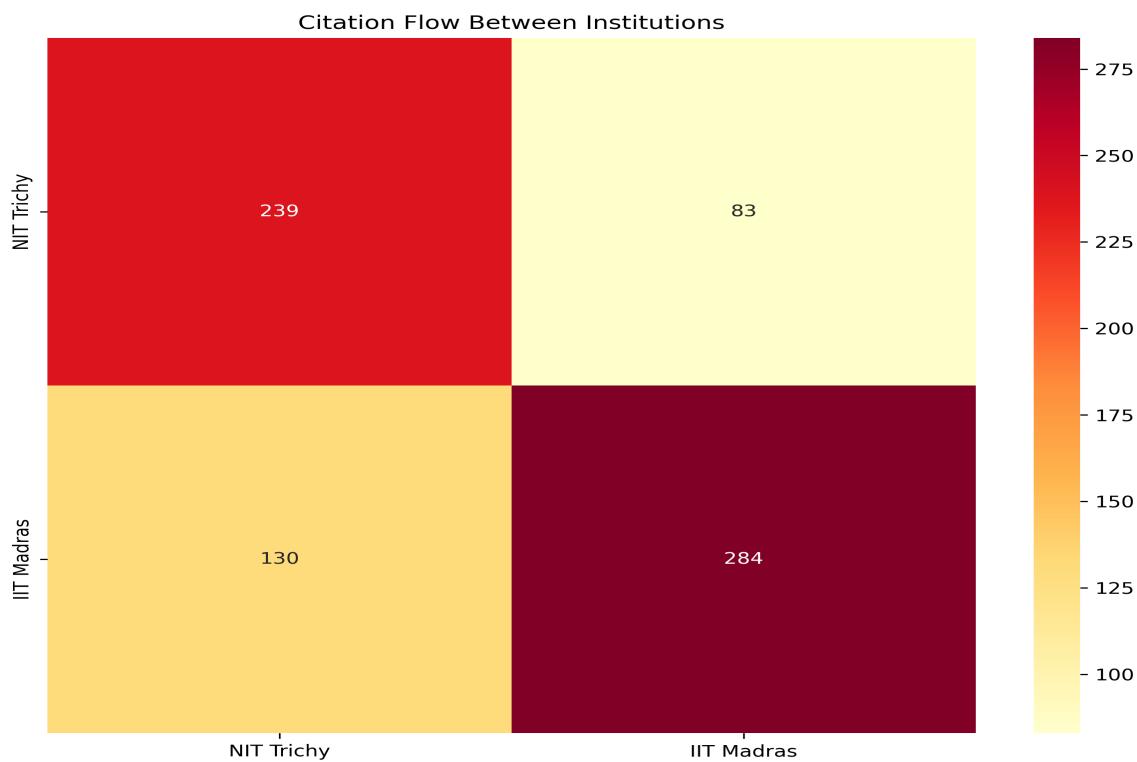


Figure: institution_citations

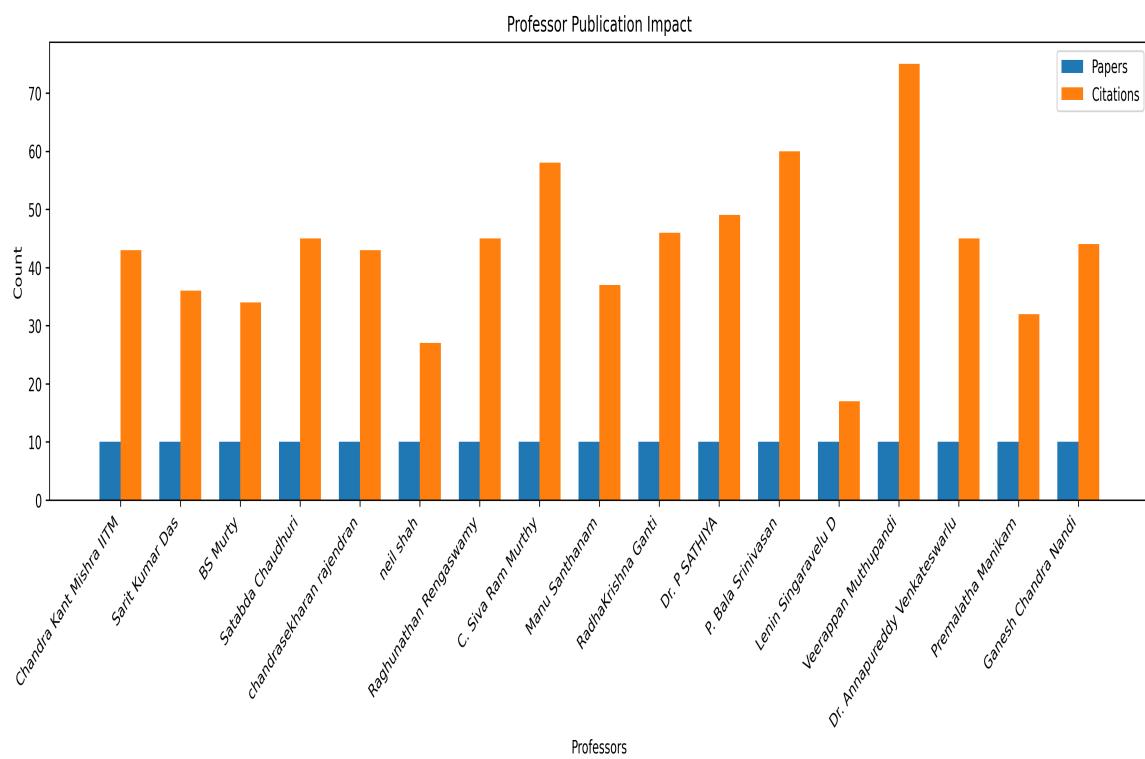


Figure: professor_impact

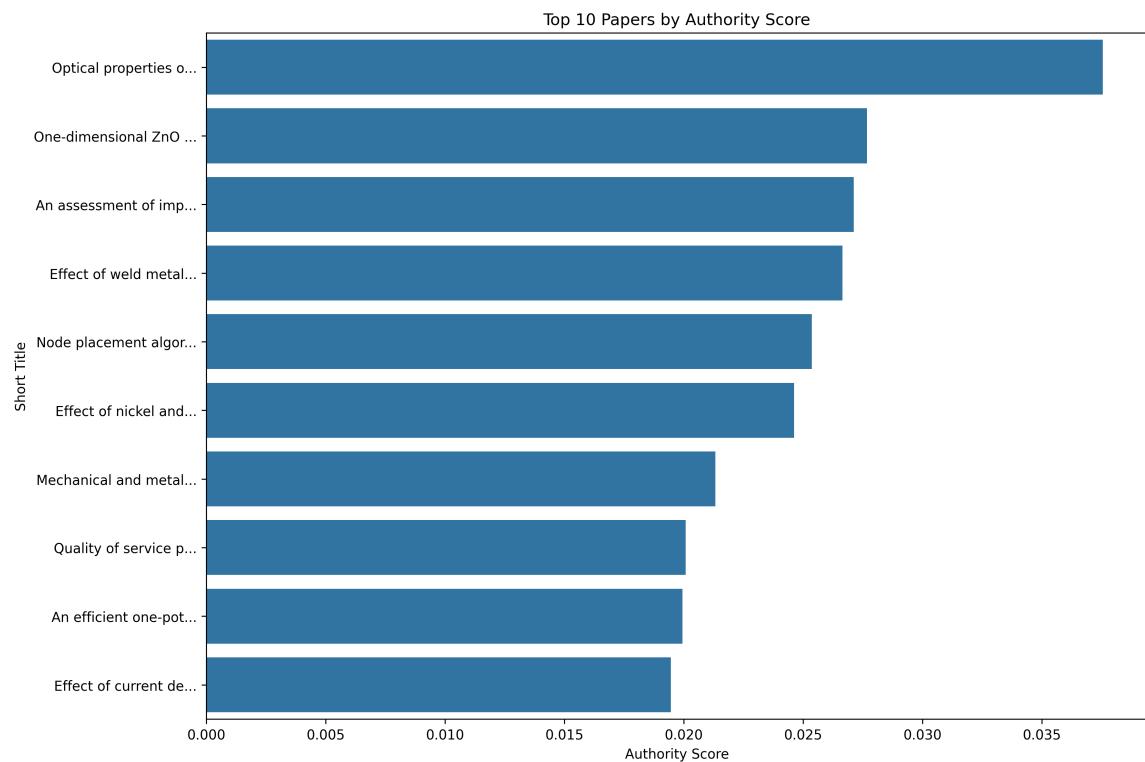


Figure: top_authority_score

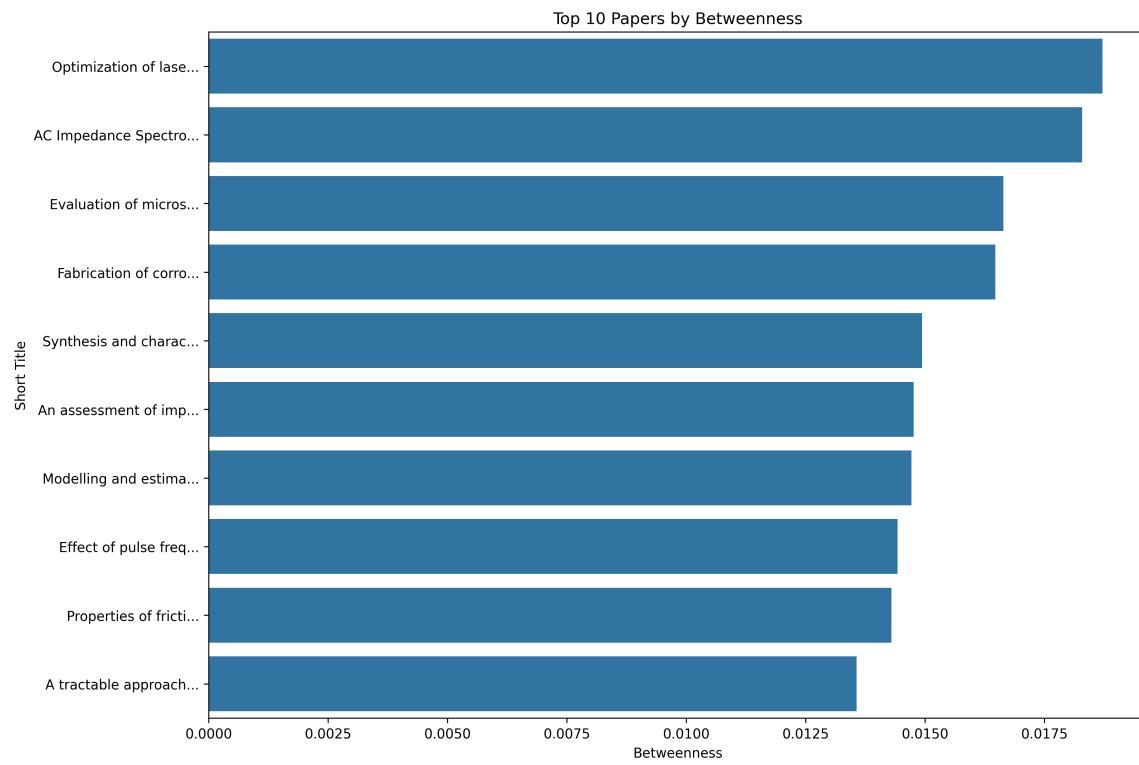


Figure: top_betweenness

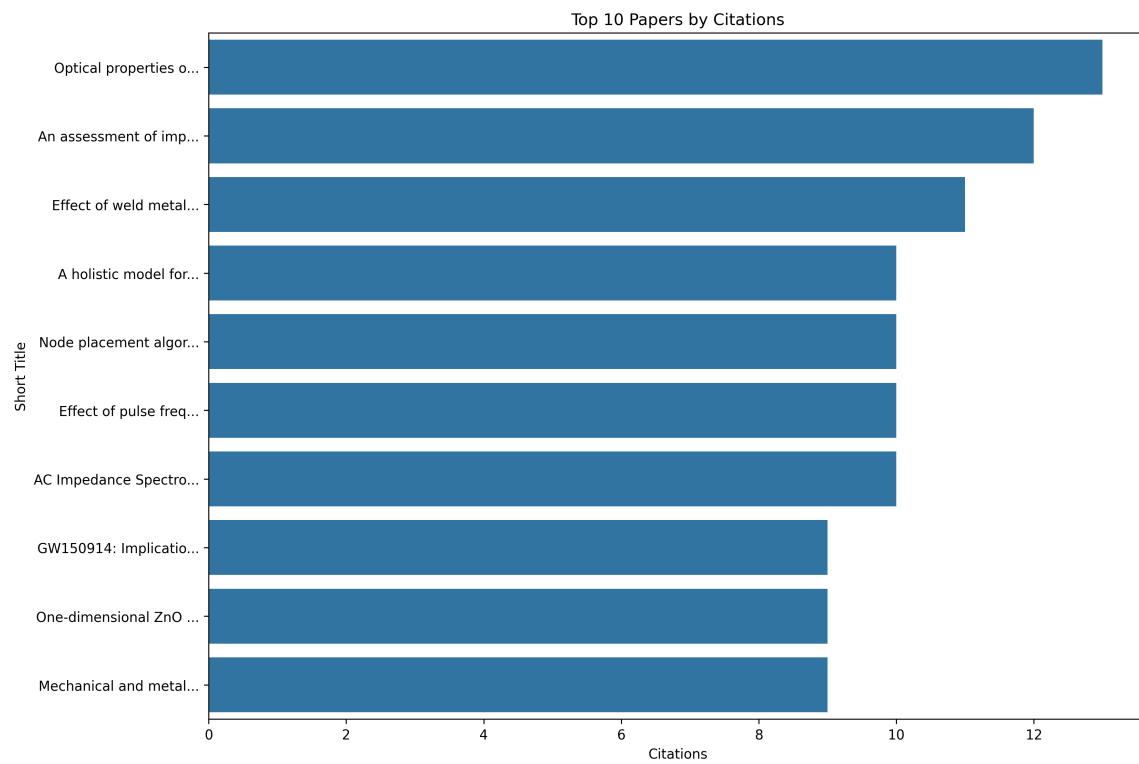


Figure: top_citations

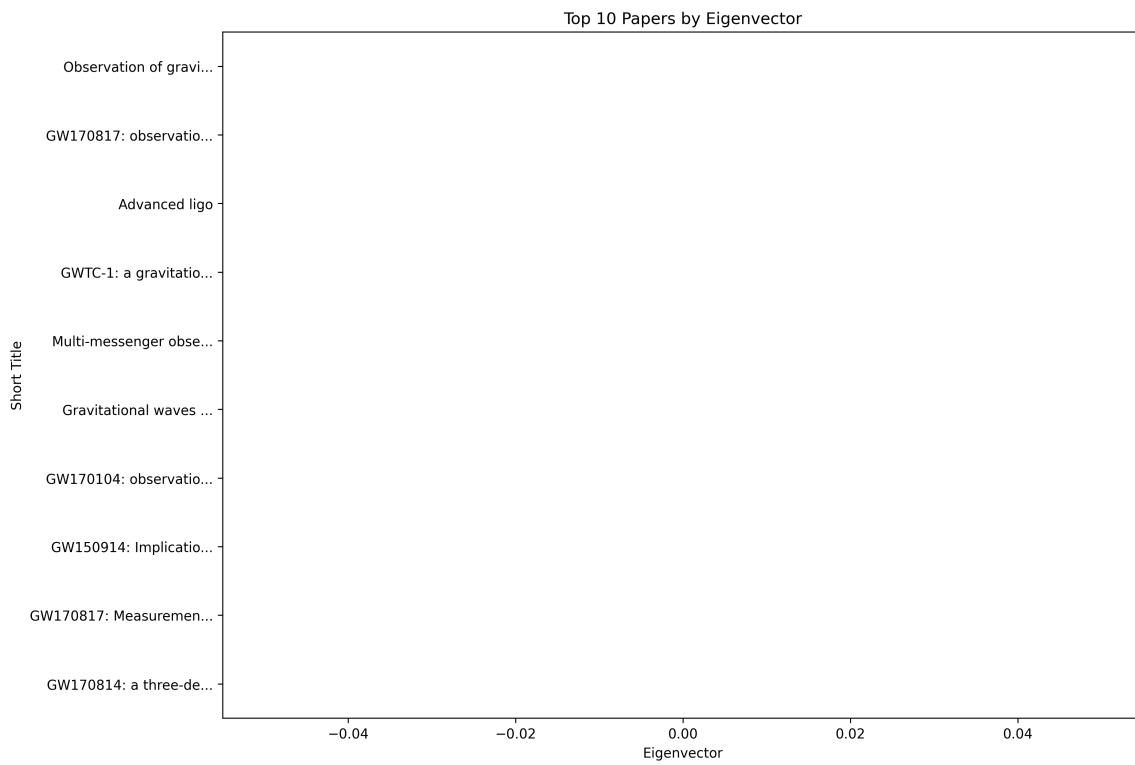


Figure: top_eigenvector

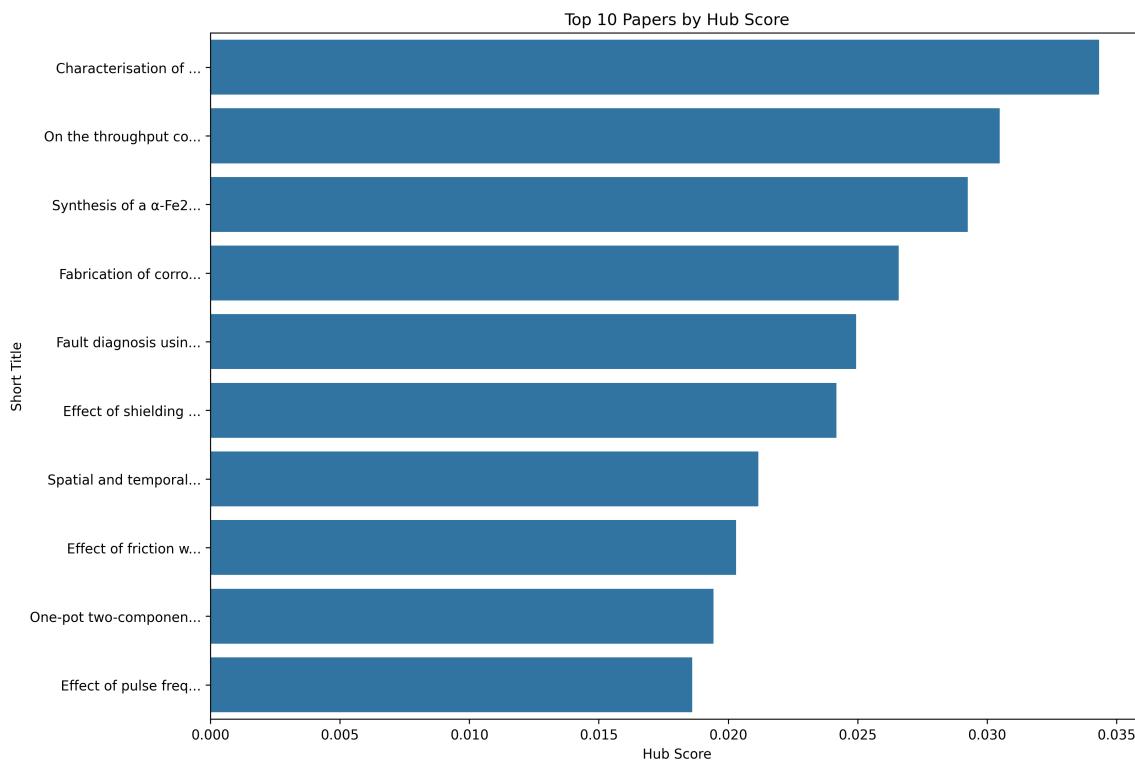


Figure: top_hub_score

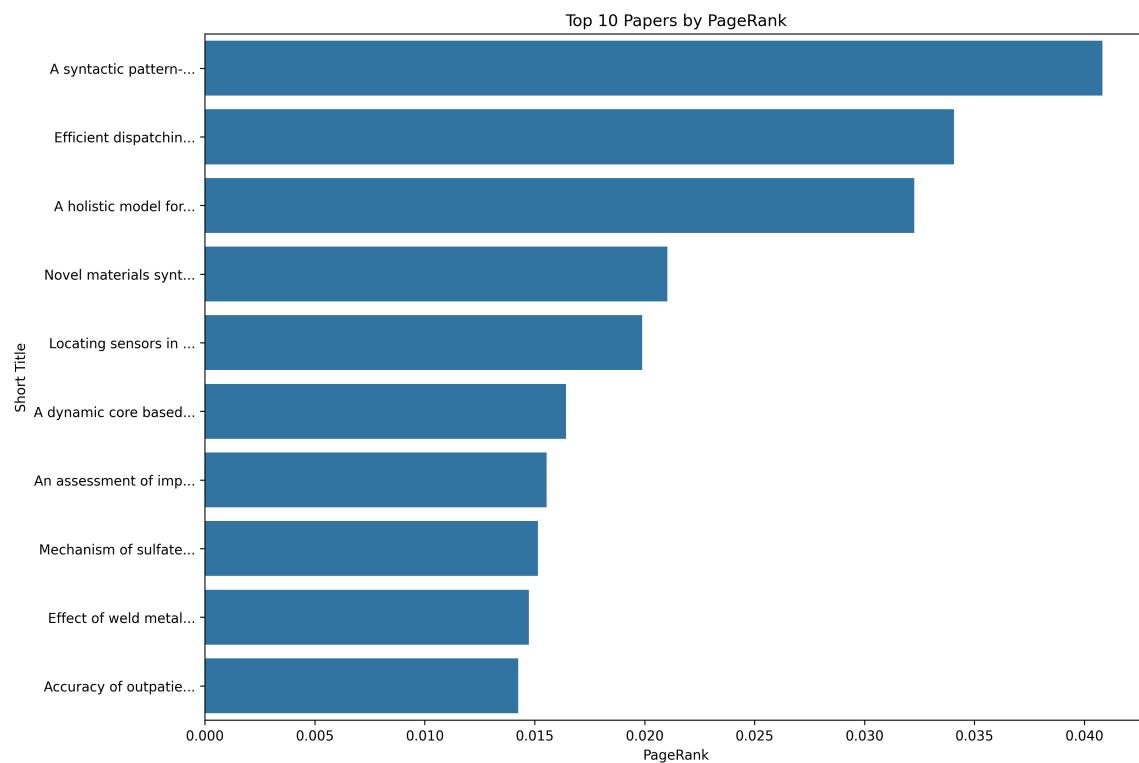


Figure: top_pagerank