

# Trends in Research Librarianship Literature: A Social Network Analysis of Articles

Umut Al, İrem Soydal & Gülten Alır

{umutal, soydal}@hacettepe.edu.tr , gulten.alir@aksaray.edu.tr

# Outline

- ❑ Social network analysis
- ❑ Methodology
- ❑ Findings
  - ❑ Authors
  - ❑ Journals
  - ❑ Documents
  - ❑ Terms
- ❑ Conclusion

# Social Network Analysis

- ❑ Investigates social structures
  - ❑ Co-citation networks
  - ❑ Collaboration types
  - ❑ Reveal the trends in scientific disciplines
- ❑ Views communities
- ❑ Focuses on the characteristics of ties rather than on the characteristics of the individuals
- ❑ Many softwares (Pajek, Ucinet, CiteSpace)

# Social Network Analysis Studies

Search Results - Library and Information Science Abstracts (LISA) - Windows Internet Explorer

http://search.proquest.com/lisa/results/12E946DEBF8F99147E/1/\$5bqueryType\$3dadvanced:lisa:shell\$3b+sortType\$3drelevance\$3b+searchTerms\$3d\$51

File Edit View Favorites Tools Help

Google Search

Convert Select

Search Results - Library and Information Science ...

You are searching: 1 database (See list | Change >>)

My Research (0 new) | Sign in

ProQuest Library and Information Science Abstracts (LISA)

Search | Advanced | Figures & Tables

"social network analysis" Search tips

Scholarly journals

Modify search | Advanced search | Recent searches

Set up alert Create RSS

133 Results

Suggested subjects Social

Powered by ProQuest® Smart Search

Add items 1-20 to My Research (0 new) Email Cite this Export

Sort results by Relevance Sort

Narrow results by Source type Scholarly Journals (133) Publication title Document type

1 Evaluation in health informatics: social network analysis Anderson, J G. Computers in Biology and Medicine 32.3 (May 2002): 179-193. Cited by (4) Citation/Abstract Preview

2 Social network analysis as a tool to evaluate IM in the public sector: a pilot study at the University of Tampere Huotari, M-L. T. D. Wson, D. K. Allen. Exploring the contexts of information behaviour. Proceedings of the Second International Conference on Research in Information Needs, Seeking and Use in Different Contexts, Sheffield, UK, 1998. London, UK, and Los Angeles, USA, Taylor Graham Preview

82 of 133 records belong to the years 2008-2010

# Social Network Analysis Studies

ISI Web of Knowledge [v.4.10] - Web of Science Results - Windows Internet Explorer

http://apps.isiknowledge.com/summary.do?qid=2&product=WOS&SID=W1cGkcg5ML28pHLaGL&search\_mode=Refine

File Edit View Favorites Tools Help

Google Search Share Sidewiki Bookmarks Check AutoFill

ISI Web of Knowledge [v.4.10] - Web of Science R...

Sign In | My EndNote Web | My ResearcherID | My Citation Alerts | My Saved Searches | Log Out | Help

## ISI Web of Knowledge<sup>SM</sup>

DISCOVER the new *Web of Knowledge* now!

Web of Science Additional Resources

Search Cited Reference Search Advanced Search Search History Marked List (0)

### Web of Science® – with Conference Proceedings

<< Back to previous

#### Results

Topic=("social network analysis")  
Refined by: Document Type=( ARTICLE )  
Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI.

Results: 759 Page 1 of 76 Go Sort by: Latest Date

Print E-mail Add to Marked List Save to EndNote Web Save to EndNote, RefMan, ProCite more options Analyze Results Create Citation Report

#### Refine Results

Search within results for

Subject Areas Refine

- INFORMATION SCIENCE & LIBRARY SCIENCE (95)
- MANAGEMENT (78)
- COMPUTER SCIENCE, INFORMATION SYSTEMS (72)
- SOCIOLOGY (70)
- COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS (43)

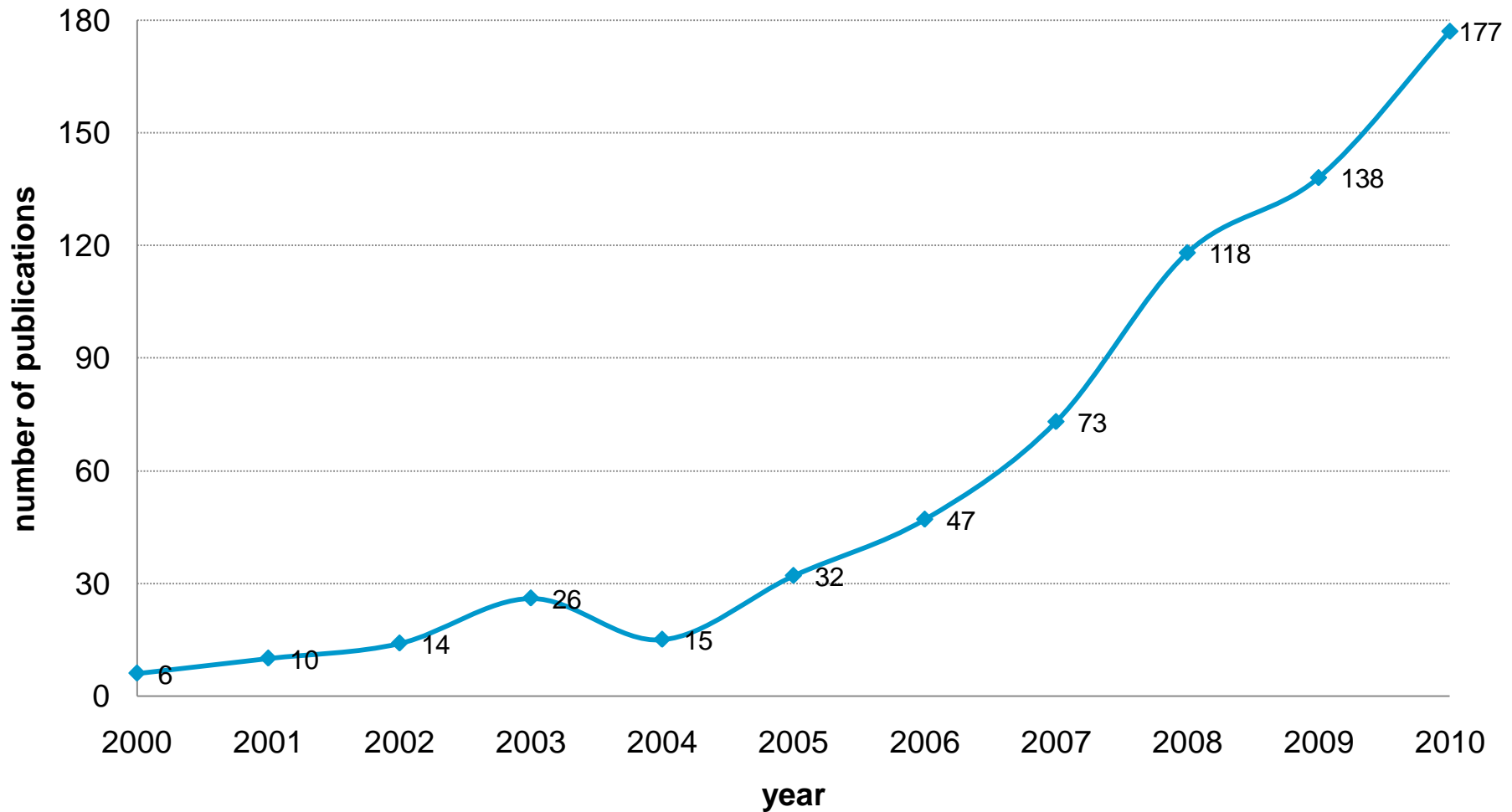
more options / values...

Document Types Refine

1. Title: [Improving learning management through semantic web and social networks in e-learning environments](#)  
Author(s): Cuellar MP, Delgado M, Pegalajar MC  
Source: EXPERT SYSTEMS WITH APPLICATIONS Volume: 38 Issue: 4 Pages: 4181-4189 Published: APR 2011  
Times Cited: 0  
[Link to Full Text](#) Full Text
2. Title: [The evolving structure of the technological landscape](#)  
Author(s): Carnabuci G  
Source: TECHNOLOGY ANALYSIS & STRATEGIC MANAGEMENT Volume: 23 Issue: 2 Pages: 145-158 Published: 2011  
Times Cited: 0  
[Link to Full Text](#)
3. Title: [The profile of Spanish journals in the field of communication \(2007-2008\)](#)  
Author(s): Fernandez-Quijada D  
Source: REVISTA ESPANOLA DE DOCUMENTACION CIENTIFICA Volume: 33 Issue: 4 Pages: 553-581 Published: OCT-DEC 2010

# Social Network Analysis Studies

## WoS Search Results



# Methodology

- ❑ Data source *Social Sciences Citation Index*
- ❑ “Research librarianship” articles
- ❑ Data set cover 1956-2010

The screenshot shows a web browser window displaying the ISI Web of Knowledge search results page. The browser's address bar shows the URL: [http://apps.isiknowledge.com/summary.do?qid=3&product=WOS&SID=X2mA9neDocopaoC3oME&search\\_mode=Refine](http://apps.isiknowledge.com/summary.do?qid=3&product=WOS&SID=X2mA9neDocopaoC3oME&search_mode=Refine). The page header includes navigation links like "Sign In", "My EndNote Web", "My ResearcherID", "My Citation Alerts", "My Saved Searches", "Log Out", and "Help". The main content area shows the search results for the query "research libra\*" with the following refined criteria: "Refined by: Subject Areas=( INFORMATION SCIENCE & LIBRARY SCIENCE ) AND Document Type=( ARTICLE ) Timespan=All Years. Databases=SSCI." The results are sorted by "Latest Date" and show 664 results on page 1 of 67. A red oval highlights the search criteria and the "Results: 664" text. The "Refine Results" sidebar on the left shows the "Subject Areas" section with "INFORMATION SCIENCE & LIBRARY SCIENCE (664)" selected. The main results list includes three entries:

1. Title: [Annual Reports to Shareholders: Historical Collections in Libraries](#)  
Author(s): Nixon JM  
Source: **COLLEGE & RESEARCH LIBRARIES** Volume: 71 Issue: 6 Pages: 525-531 Published: NOV 2010  
Times Cited: 0
2. Title: [Academic/Research Librarians with Subject Doctorates: Experiences and Perceptions, 1965-2006](#)  
Author(s): Gilman T, Lindquist T  
Source: **PORTAL-LIBRARIES AND THE ACADEMY** Volume: 10 Issue: 4 Pages: 399-412 Published: OCT 2010  
Times Cited: 0
3. Title: [The emergence of electronic books publishing in Spain](#)  
Author(s): Garcia .IAC, Arevalo .IA, Rodero HM

# CiteSpace

CiteSpace 2.2.R11 - (c) 2003-2011 Chaomei Chen ~ Home: C:\Users\Umut

File Project Data Text Network Visualization Geographical Analytics Preferences Help

Web of Science PubMed Local Database

Projects

New liber 2011 More Actions ...

Project Home: C:\liber2011\project

Data Directory: C:\liber2011\data

GO! Stop Reset JVM Memory 108 (MB) Used 61 %

Space Status

Process Reports

Time Slicing

From 1996 To 2003 #Years Per Slice 1 Entropy

Text Processing

Term Source

Title  Abstract  Descriptors  Identifiers

Term Type

None  Noun Phrases  Burst Terms Detect Bursts

Network Configuration

Node Types

Author  Institution  Country  Term  Keyword  Category

Cited Reference  Cited Author  Cited Journal  Paper  Grant

Links

Strength Cosine Scope Within Slices

Top N per slice Top N% per slice Threshold Interpolation Select Citers

Select top 30 most cited or occurred items from each slice.

Pruning

Pathfinder  Pruning sliced networks

Minimum Spanning Tree  Pruning the merged network

Visualization

Cluster View - Static  Show Networks by Time Slices

Cluster View - Animated  Show Merged Network

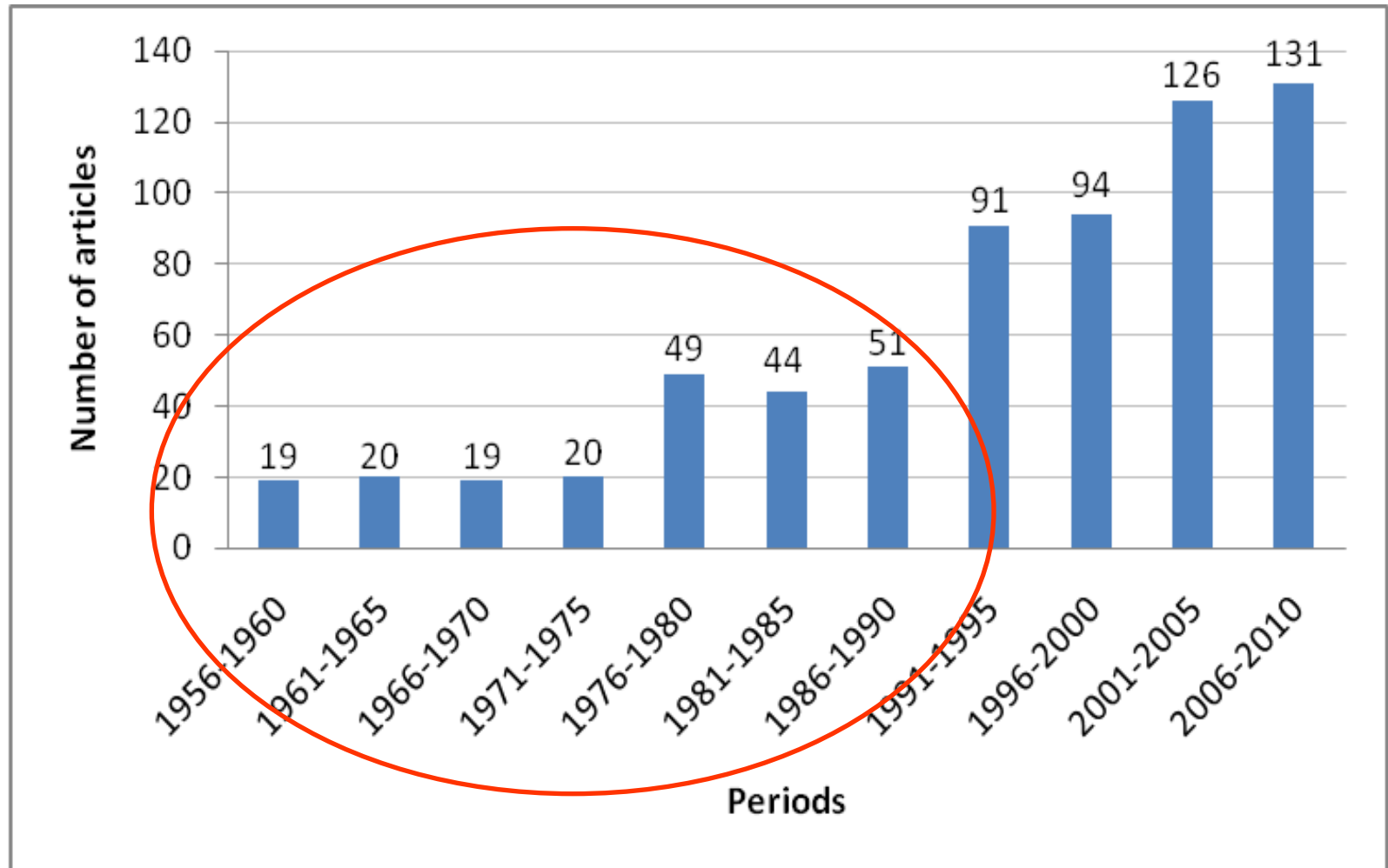


# Research Questions

- ❑ Who are the most productive and most cited authors of research librarianship field?
- ❑ Which journals publish more articles on research librarianship and which ones are highly cited in the literature?
- ❑ What are the most frequently used words in the abstracts of articles related to research librarianship?
- ❑ Which new words related to research librarianship are added to literature in time?

# Findings

# Research Librarianship Articles in the *SSCI* (1956-2010)



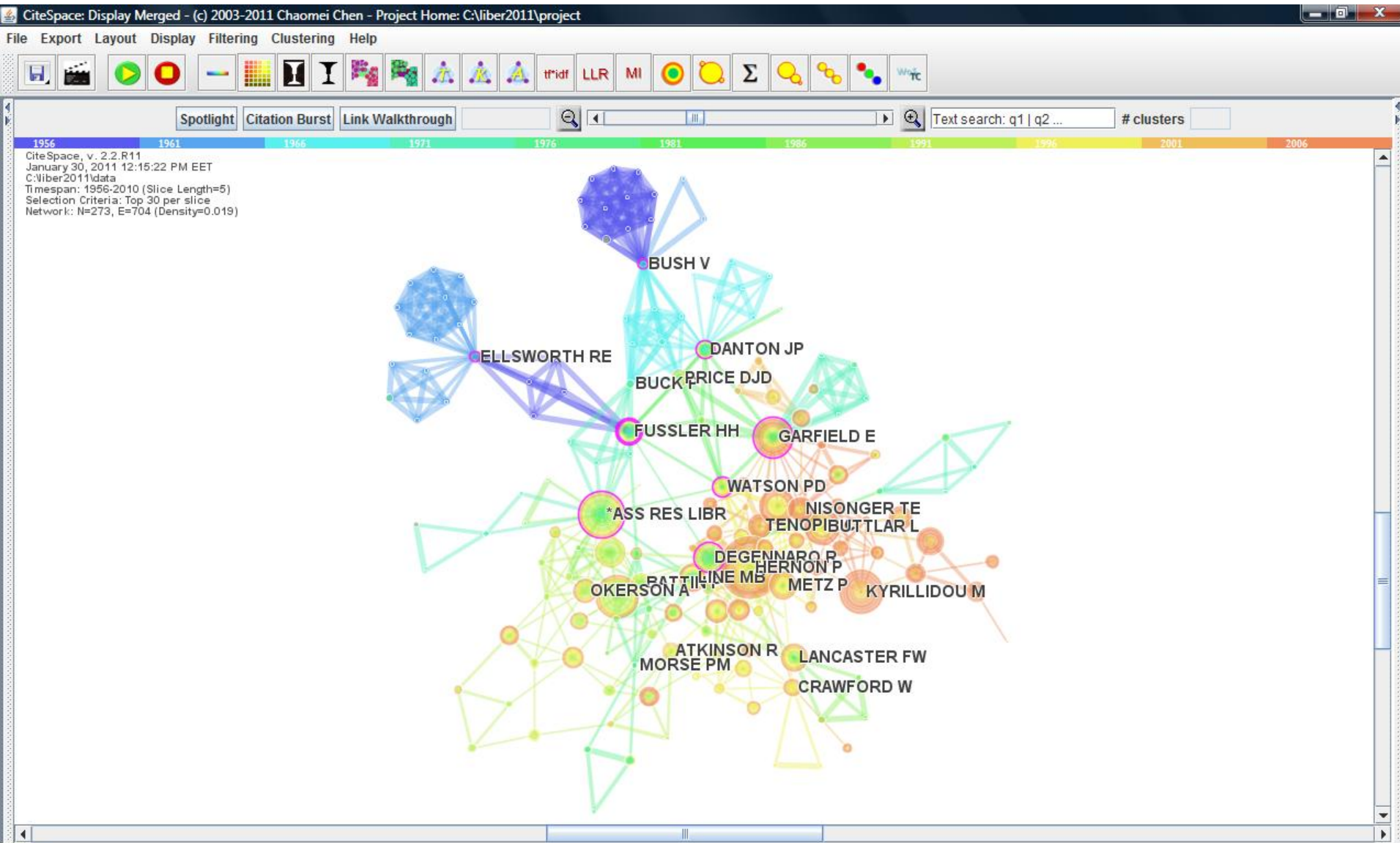
# The Most Productive Authors of Research Librarianship

Author	N
Karen Schmidt	7
Tina Chrzastowski	5
Colleen Cook	5
Peter Hernon	5
Susan Lazinger	5
Richard Dougherty	4
Peter Graham	4
Mary Jackson	4
Lewis Guodo Liu	4

# The Most Cited Authors

Authors	# of unique articles that cite a particular author	# of total citations
Peter Hernon	31	45
Martha Kyrillidou	23	46
Herbert S. White	22	31
Eugene Garfield	19	45
John M. Budd	18	20
Lois Buttlar	18	19
Richard Dougherty	15	21
Paul Metz	15	15
Beverly P. Lynch	14	16
Richard DeGennaro	14	19
Maurice B. Line	14	27
F. Wilfrid Lancaster	14	20
Hong Xu	12	13
Ann Okerson	12	14
Thomas E. Nisonger	12	25
Blaise Cronin	12	15
Carol Tenopir	12	25
Mary Jo Lynch	12	14
Christine L. Borgman	11	21
Michael Gorman	11	13

# Author Co-citation Network of Research Librarianship



# Journals Published 21 or more Articles on Research Librarianship

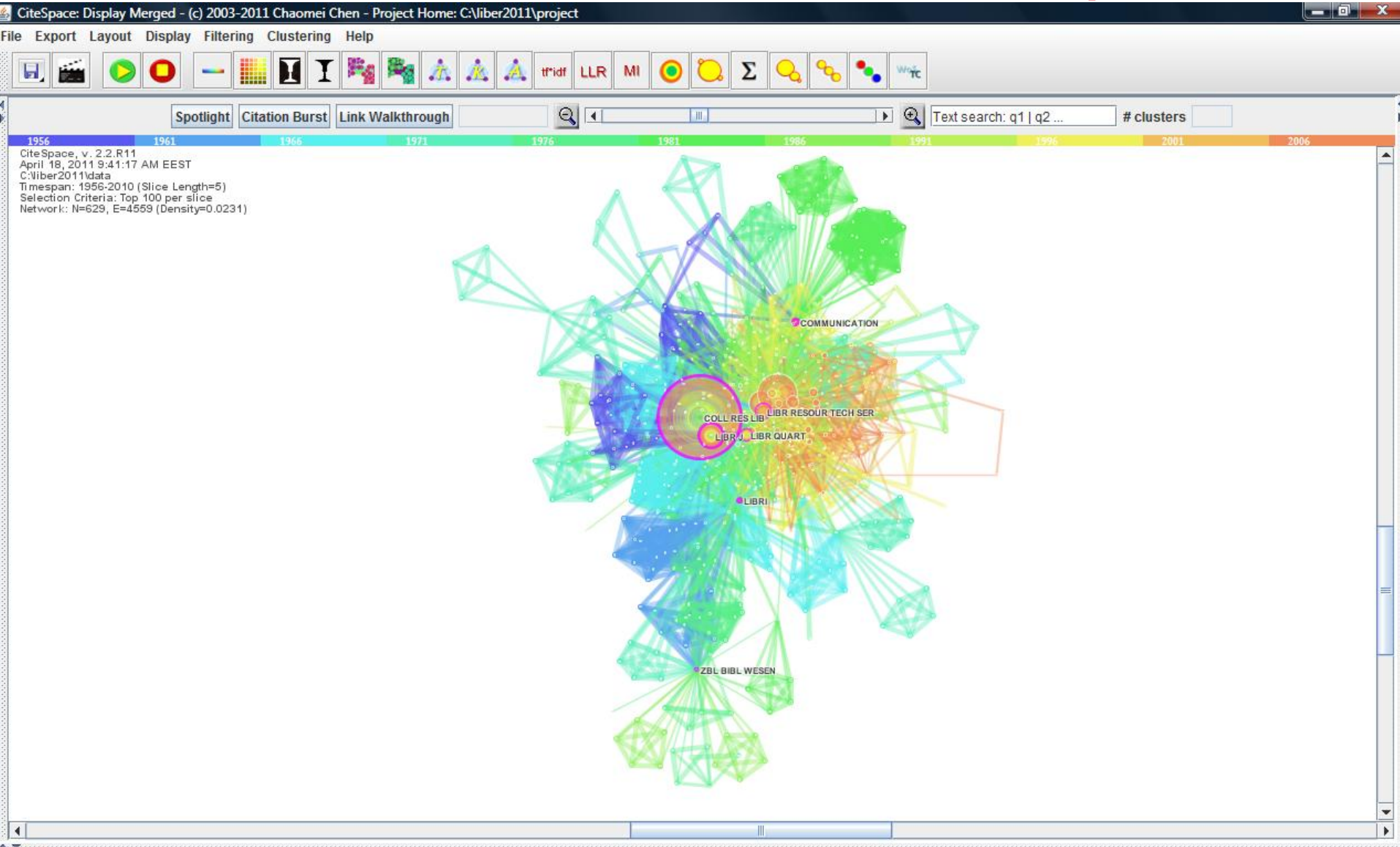
Journal	N
College & Research Libraries	137
Journal of Academic Librarianship	50
Library Resources & Technical Services	49
Library Trends	39
Portal-Libraries and the Academy	32
Zentralblatt für Bibliothekswesen	28
Library Collections Acquisitions & Technical Services	22
Information Technology and Libraries	21
Interlending & Document Supply	21

# The Most Heavily Cited Journals in Research Librarianship

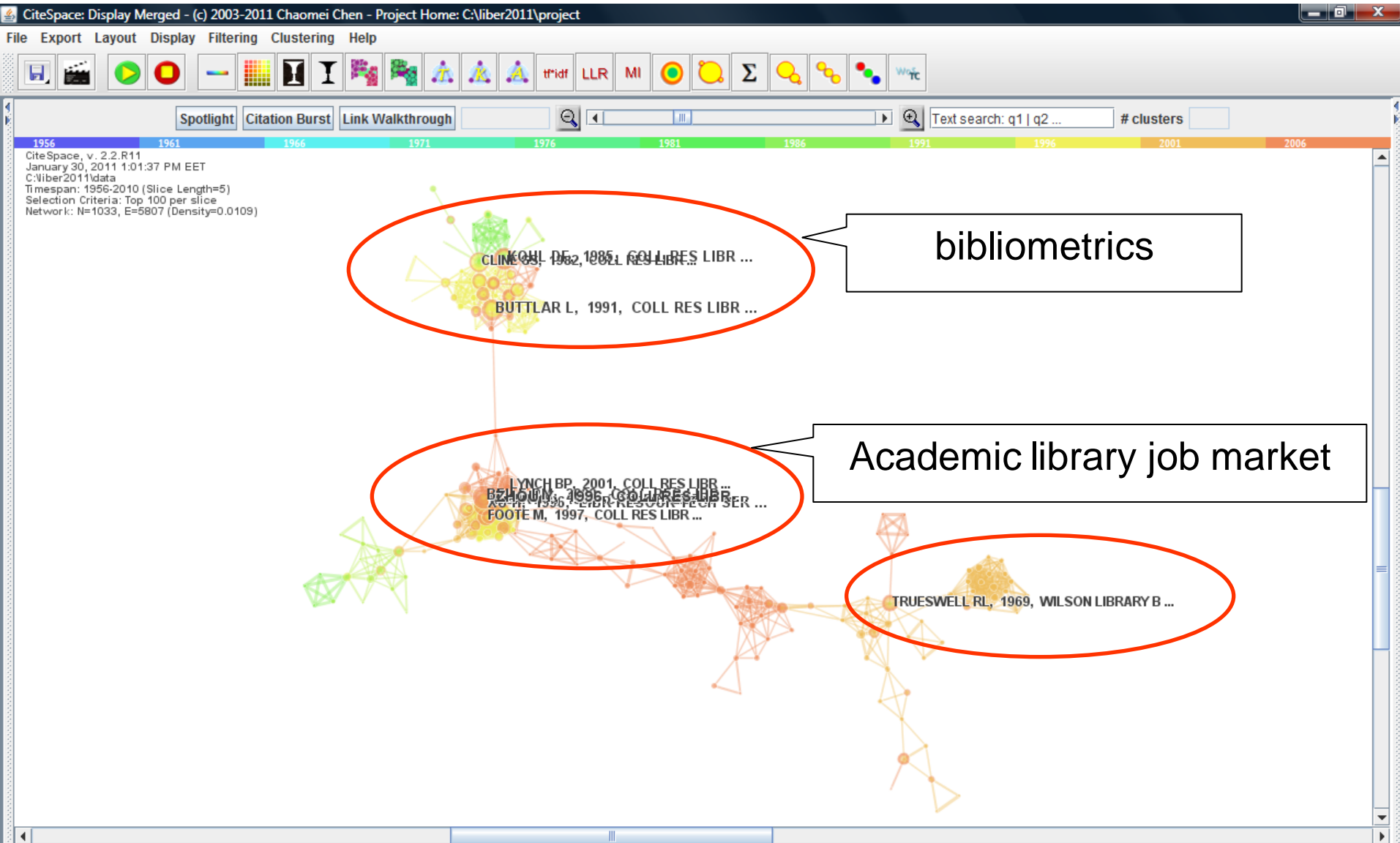
Journal	N
College & Research Libraries	231
Journal of Academic Librarianship	138
Library Journal	107
Library Trends	90
Library Resources & Technical Services	80
JASIST	73
Library Quarterly	65
Journal of Library Administration	56
Serials Librarian	46



# Journal Co-citation Network of Research Librarianship



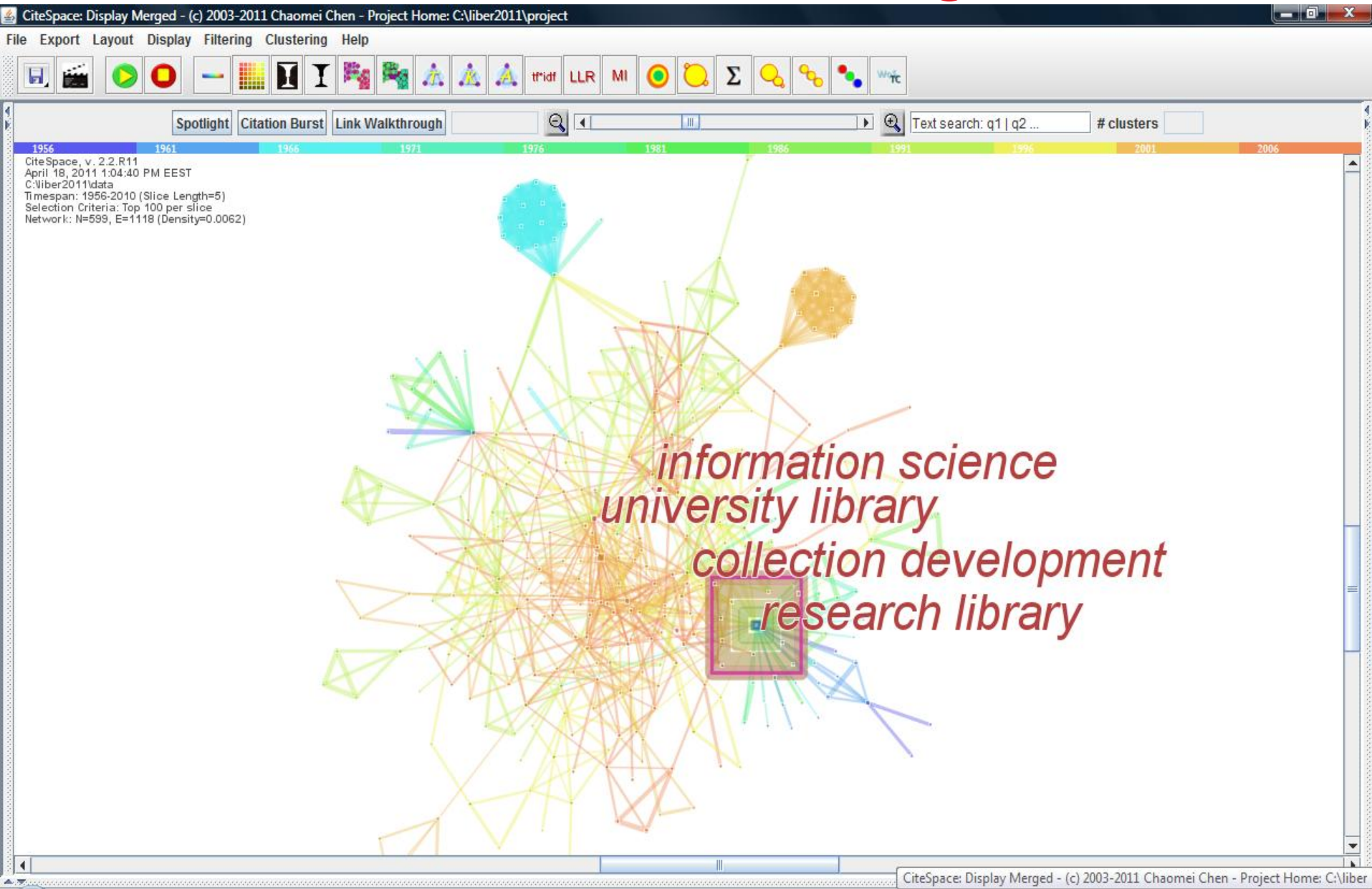
# Document Co-citation Network of Research Librarianship



# The Most Frequently Used Words in the Abstracts

Words	N
research library	289
collection development	22
electronic resources	19
university library	16
information science	15
ARL library	13
web site	12
document delivery	12
electronic journals	11
digital library	11

# Network of Co-occurring Phrases



# Conclusion

- ❑ *College & Research Libraries*
- ❑ Association of Research Libraries
- ❑ Authors and cited persons are different
- ❑ There is not new words in time

# Trends in Research Librarianship Literature: A Social Network Analysis of Articles

Umut Al, İrem Soydal & Gülten Alır

{umutal, soydal}@hacettepe.edu.tr , gulden.alir@aksaray.edu.tr