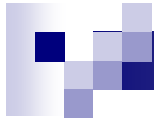


Mapping the Structure and Evolution of Research Methods in Library and Information Science

Yaşar Tonta and Güleda Düzyol

Hacettepe University
Department of Information Management
Ankara, Turkey

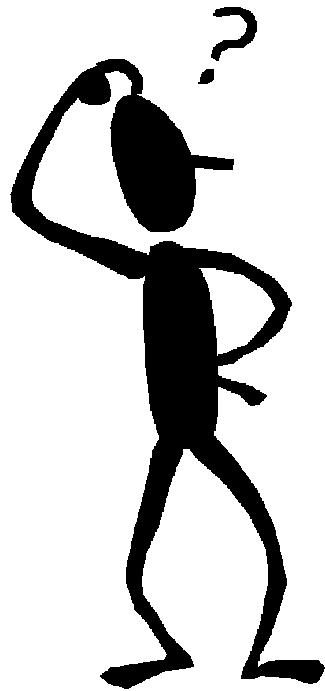


Outline

- Research Questions
- Mapping
- Studies Mapping LIS
- Data and Methods
- Results
- Comparisons
- Conclusion



Research Questions



- What are the research methods used in prominent LIS articles?
- Have research methods used in LIS changed over time?



Mapping

- Great interest in recent years
- Based on co-citation analysis
- Document co-citation analysis, author co-citation analysis
- Most frequently mapped knowledge domain
- Library and information science (LIS)
- Mapping research methods in LIS



Studies mapping LIS

Author (s)	Year	Journals	Time-interval
White and McCain	1998	12	1972-1995
Âström	2002	9	3 year
Janssens et al.	2006	5	
Âström	2007	21	1990-2004
Janssens, Glänzel and De Moor	2008		
Zhao and Strotmann	2008	12	1996-2005
Chen, Ibekwe-Sanjuan and Hou	in press	12	



Methods

- Document co-citation analysis
- CiteSpace
(<http://cluster.ischool.drexel.edu/~cchen/citespace/>)

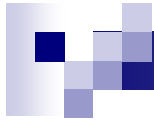


Data

- Journal Citation Reports (JCR), 2008
 - Information Science & Library Science
 - 20 journals with highest impact factor
 - Excluded 11 that were listed other subject categories

- JCR's journal lists, 1997-2008

- 6 LIS journals
 - Appeared in 8 or more JCR journal lists



Journals

1. Journal of the American Medical Informatics Association
2. Scientometrics
3. Journal of the American Society for Information Science (and Technology)
4. Information Processing and Management
5. Journal of Documentation
6. Journal of Information Science



Data

- Web of Science
- 8,649 articles
- 1980-2009
- Bibliographic records
 - authors, titles, reference lists



Total Number of Articles Published in 6 LIS Journals

Journal	Impact factor	1980-1989	1990-1999	2000-2009	Total
JAMIA	3,428	-	519	613	1.132
Scientometrics	2,328	375	533	963	1.871
JASIS / JASIST	1,954	418	739	1.312	2.469
Information Processing and Management	1,852	386	452	627	1.465
Journal of Documentation	1,712	128	167	320	615
Journal of Information Science	1,648	319	361	417	1.097
Total		1.626	2.771	4.252	8.649

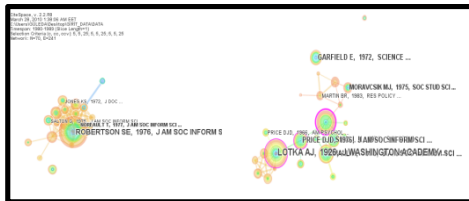


Results

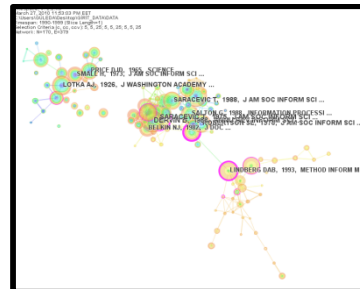
1980-2009



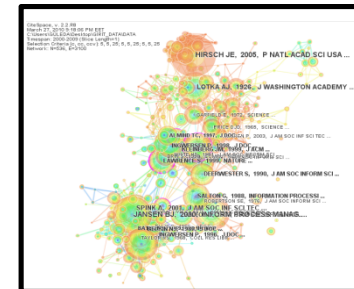
1980-1989

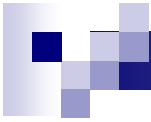


1990-1999

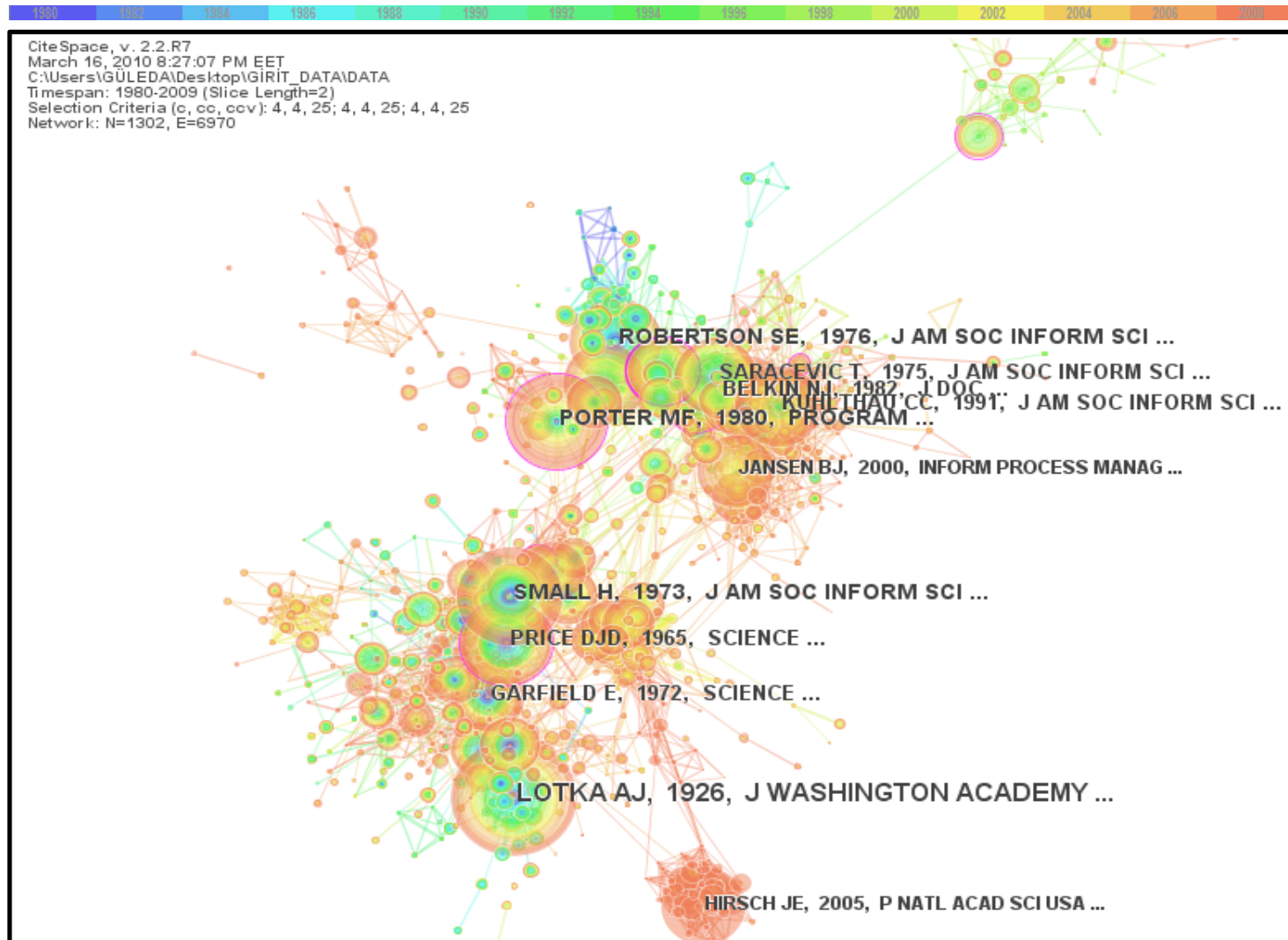


2000-2009



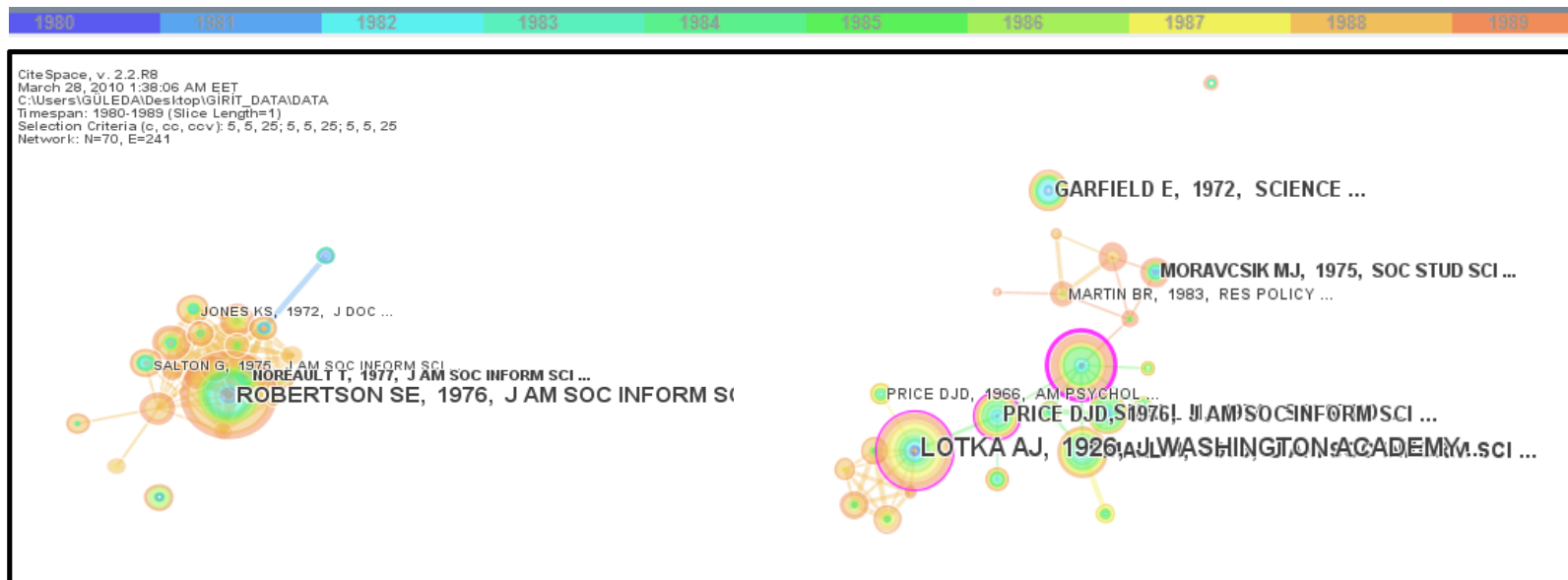


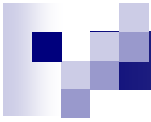
1980-2009



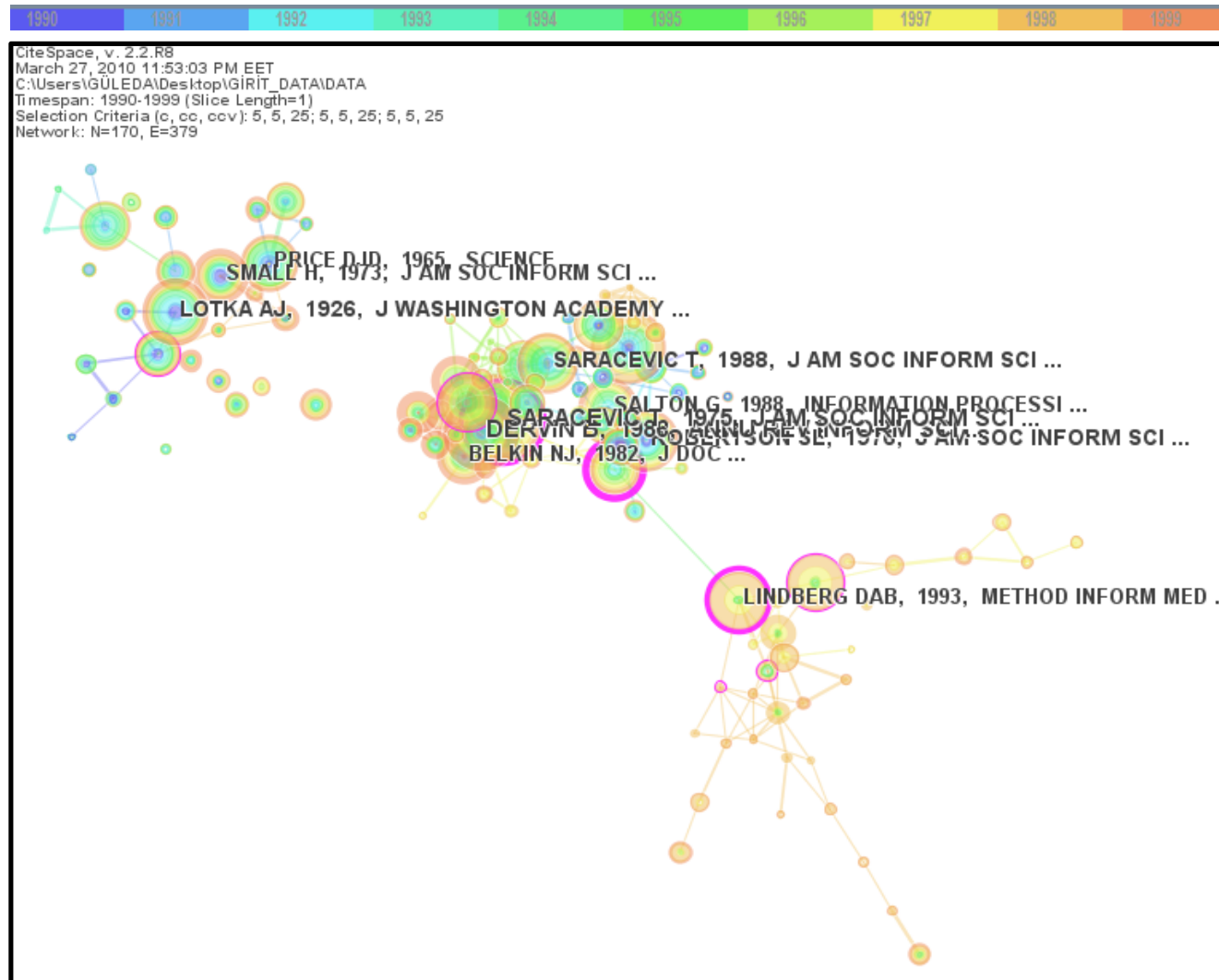


1980-1989



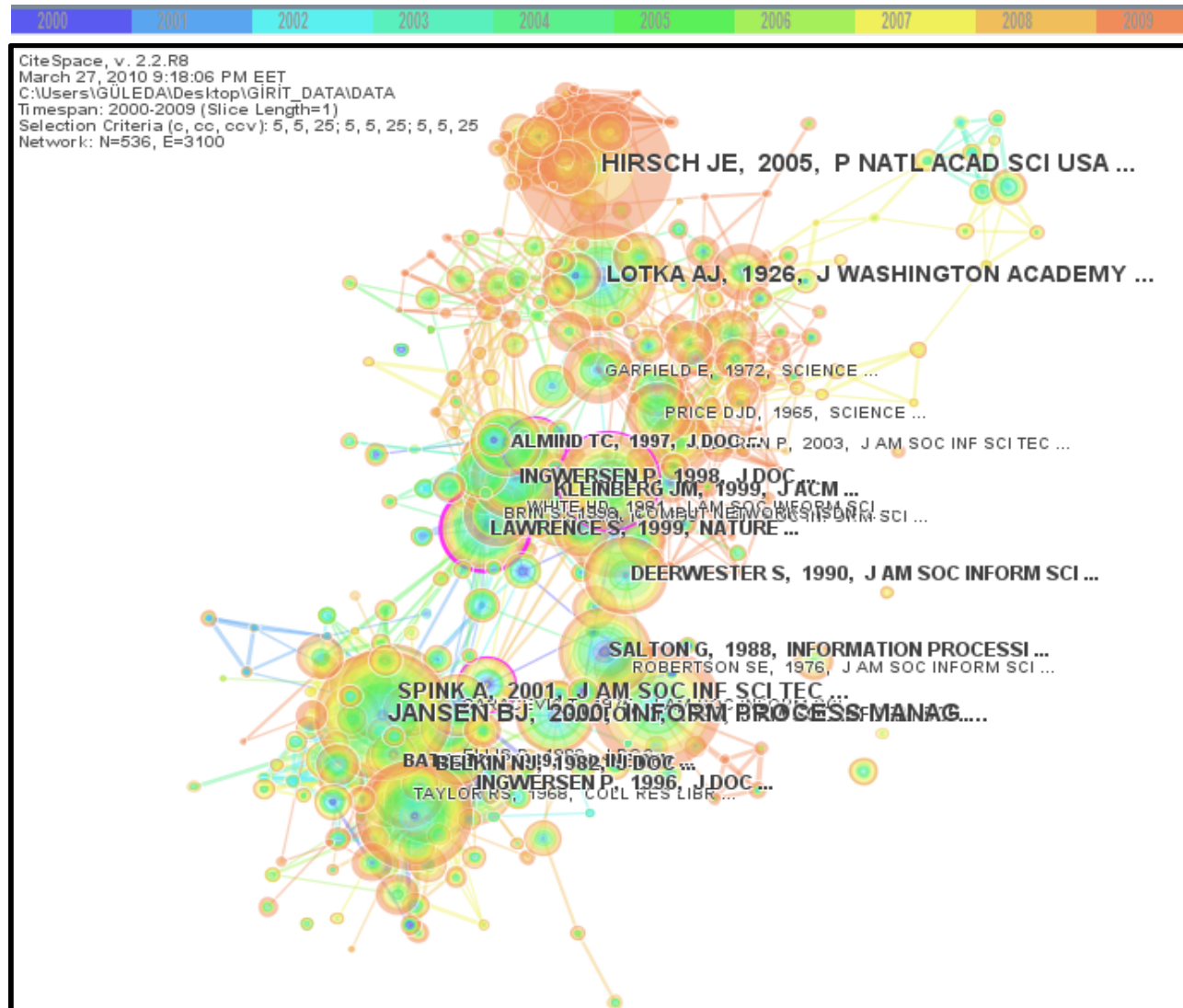


1990-1999





2000-2009





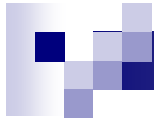
Results

- Two research methods/two clusters: Citation analysis and methods of information retrieval
- Prominent articles in these clusters
- Latent semantic analysis, web impact factor, h-index
- Web search queries, web accessibility



Comparisons

White and McCain, 1998	Information retrieval, citation analysis/bibliometrics/scientometrics
Åström, 2002	Citation analysis, experimental retrieval, visualization of knowledge domain
Jansens et al., 2006	Applied bibliometrics/research evaluation, methodological/theoretical issues
Åström, 2007	Bibliometrics, information retrieval, a library science oriented sub-field
Janssens, Glänzel and De Moor, 2008	The same two camps as White and McCain, 1998
Zhao and Strotmann, 2008	Information retrieval, bibliometrics/scientometrics
Chen, Ibekwe-Sanjuan and Hou, in press	Information retrieval, citation analysis (h-index sub field)



Discussion

Co-citation maps discussed in this paper are based on references that appeared in articles published in 6 journals in our sample.

Different maps could have obtained if more journals were included, although we believe the main trends and actors would not have changed much.



Thank you for your attention !

Questions ?

For further information, please contact:

gduzyol@hacettepe.edu.tr



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Hacettepe University
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Ankara, Turkey