VOSviewer

A software tool for analyzing and visualizing scientific literature

Nees Jan van Eck
Centre for Science and Technology Studies (CWTS), Leiden University

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VOSviewer

- Software tool for visualizing (bibliometric) networks
- Built-in support for popular bibliographic databases
- Text mining functionality
- Layout and clustering techniques
- Advanced visualization features:
  - Smart labeling algorithm
  - Overlay visualizations
  - Density visualizations (‘heat map’)
Users of VOSviewer

• Researchers
• Research institutions
  – Universities
  – Academic libraries
• Research funders
• Scientific publishers
• Industry
Bibliometric networks in VOSviewer

Bibliographic database

Web of Science

Scopus

PubMed

Crossref

Citation network of pubs / journals / authors / orgs / countries

Co-authorship network of authors / orgs / countries

Co-citation network of pubs / journals / authors / orgs / countries

Bibliographic coupling network of pubs / journals / authors

Co-occurrence network of keywords / terms
Demo: Creating bibliometric maps using VOSviewer

• 2,667 publications in 3 journals (time period 2007–2016):
  – Journal of Informetrics
  – Journal of the Association for Information Science and Technology
  – Scientometrics

• Data downloaded from:
  – Clarivate Analytics Web of Science
  – Crossref
  – oaDOI
Term map
Interpretation of a term map

• Size:
  – The larger a term, the higher the frequency of occurrence of the term

• Distance:
  – In general, the smaller the distance between two terms, the higher the relatedness of the terms, as measured by co-occurrences
  – The horizontal and vertical axes have no special meaning; maps can be freely rotated and flipped

• Colors:
  – Colors indicate clusters of closely related terms
Term map: Time trend
Term map: Citation impact
Term map: Open access (green and hybrid)
Term map: Journals

- **JOI**
- **Scientometrics**
- **JASIST**

The images illustrate term maps for the journals JOI, Scientometrics, and JASIST, showing the relationships between various terms related to information science and technology.
Co-citation map of journals
Co-authorship map of authors
VOSviewer 2.0

• Users:
  – Management of research institutions
  – Research funders
  – Scientific publishers
  – Industry

• Functionality:
  – Interactive visual exploration of the scientific literature organized in a customizable fine-grained manner
  – Linking the interactive visualizations to the underlying scientometric data
  – Better handling of large scientometric data sets
  – Taking advantage of new scientometric data sources
Do it yourself!

www.vosviewer.com
Thank you for your attention!