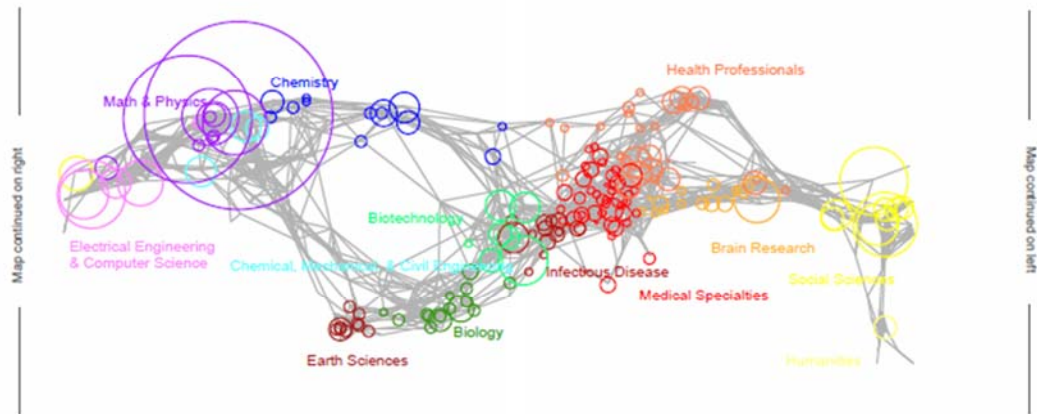


## Topical Visualization

Generated from 381 Unique ISI Records  
90 out of 112 publications were mapped to 182 subdisciplines and 13 disciplines.  
June 24, 2012 | 04:04 PM EDT



2008 The Regents of the University of California and SciTech Strategies.  
Map updated by SciTech Strategies, OST, and CNS in 2011.

### Legend

Circle area: Fractional Journal Count  
Unclassified = 22  
Minimum = 0  
Maximum = 98  
Color: Discipline  
See end of PDF for color legend.

### Area



### How To Read This Map

The UCSD map of science depicts a network of 554 subdiscipline nodes that are aggregated to 13 main disciplines of science. Each discipline has a distinct color and is labeled. Overlaid are circles, each representing all records per unique subdiscipline. Circle area is proportional to the number of fractionally assigned records. Minimum and maximum data values are given in the legend.

CNS ([cns.iu.edu](http://cns.iu.edu))

## Information Visualization MOOC

### Unit 4 – “What”: Topical Data

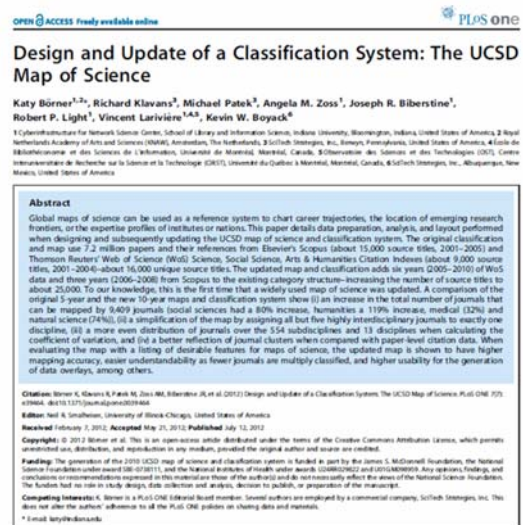
### Design and Update of a Classification System: The UCSD Map of Science

**Relevant Research Disciplines:**  
Scientometrics, Information Sciences

# Design and Update of a Classification System: The UCSD Map of Science

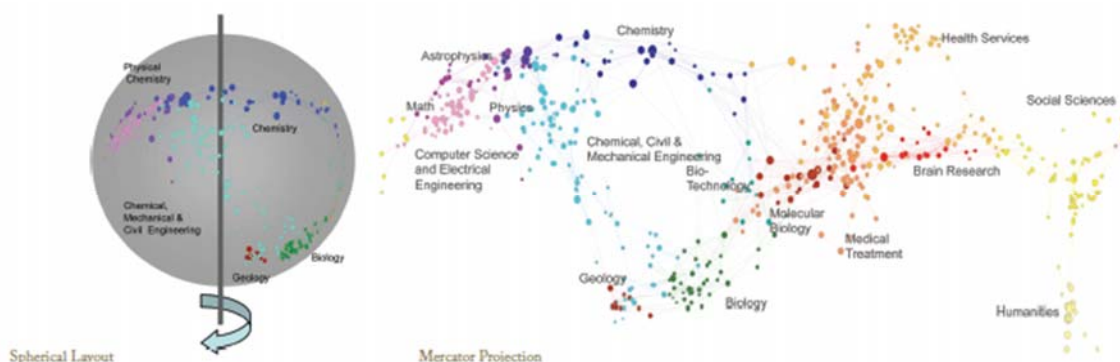
1. Original map
2. Initial Update Using Scopus
3. Final Updated Map
4. Validation
5. Applications

Börner, Katy, Richard Klavans, Michael Patek, Angela Zoss, Joseph R. Biberstine, Robert Light, Vincent Larivière, and Kevin W. Boyack. 2012. [“Design and Update of a Classification System: The UCSD Map of Science.”](#) *PLoS One* 7 (7): e39464.



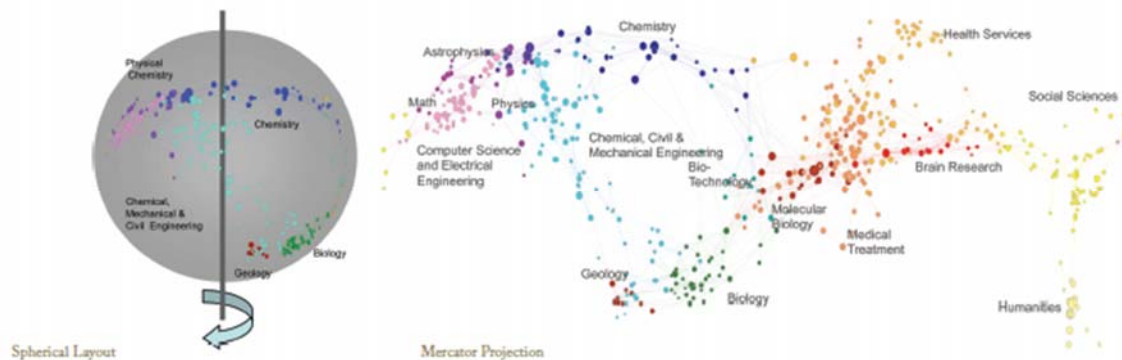
## 1. Original Map (5 years of Scopus and WoS)

**Data:** The original classification and map use 7.2 million papers and their references from Elsevier's Scopus (about 15,000 source titles, 2001–2005) and Thomson Reuters' Web of Science (WoS) Science, Social Science, and Arts & Humanities Citation Indexes (about 9,000 source titles, 2001–2004)—about 16,000 unique source titles.



**Similarity Metric:** Combination of bibliographic coupling and keyword vectors.

**Layout:** The 554 subdisciplines were laid out on the surface of a sphere; the spherical layout is then flattened using a Mercator projection to create a two-dimensional version of the map. Clusters are further aggregated into 13 main scientific disciplines that are labeled and color coded.

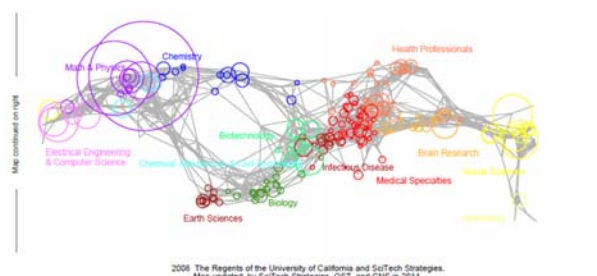


48

### Data Overlays:

Each node is labeled and has an extensive list of key phrases as metadata, which can be used to “science locate” nonjournal data, such as patents or grants. That is, key phrases from each patent or grant (titles and abstracts) are extracted; fractional assignment to map nodes proceeds by matching the associated metadata. Thus, each grant or patent is fractionally assigned to multiple nodes. Adding the fractions allows for the number of grants, dollars by agency, or patents associated with each node to be computed.

**Problem:** As time passes, new journals are created (e.g., *PLoS*) that cannot be mapped.



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## 2. Initial Update (5 years + Scopus) by Klavans & Boyack

**Data:** In June 2009, 7,464 new source titles (2006–2008) from Scopus were added to the existing category structure.

**Process:** Identified all new journals that were not in the existing classification system, and assigned each new journal to one of the existing categories by counting the numbers of times journals in each category were referenced by the articles in the new journals. Each journal was assigned to the category that it referenced the most, as long as it cited articles within that cluster a minimum of 10 times.

**Result:** Update increased the number of Scopus journals in the classification system by 47%; this only accounted for a 13% increase in the number of articles.

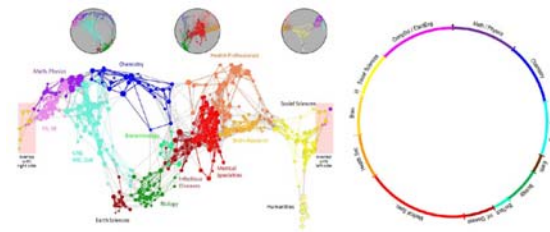


Figure 1. Visualizations of the UCSB Map: 2D Mercator projection (left) with three 3D spherical insets (top), 1D circular map (right). Note that the left hand side of the Mercator map connects to the right hand side. doi:10.1371/journal.pone.0039464.g001

50

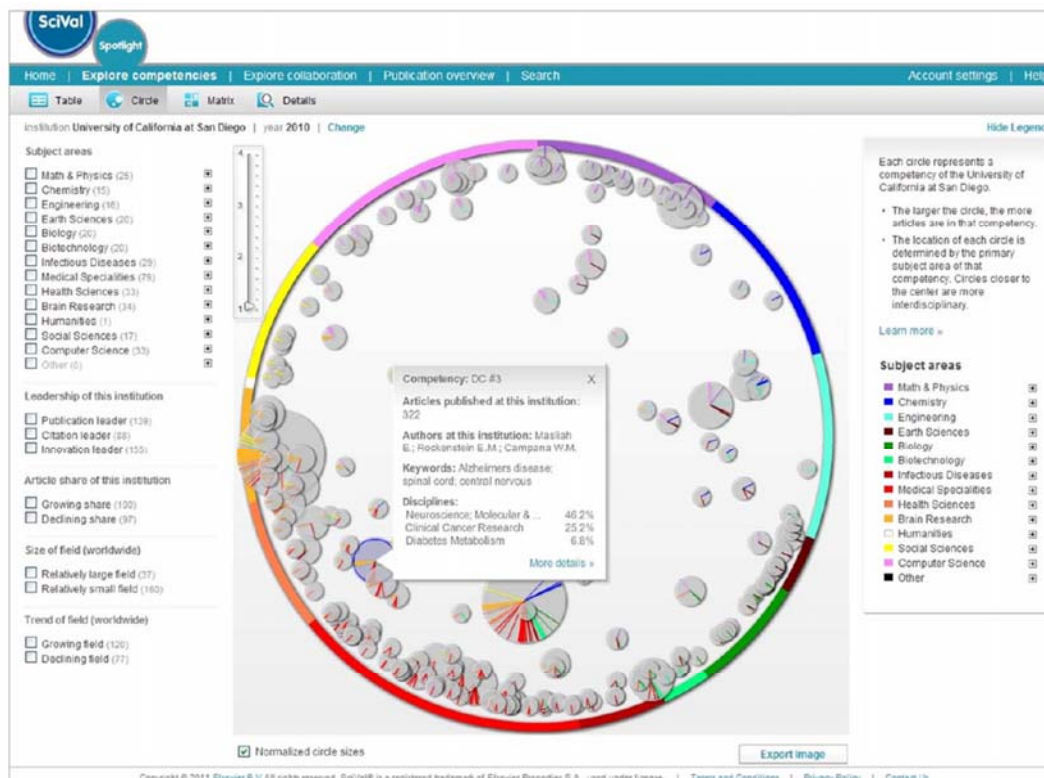


Figure 2. SciVal Spotlight map of one institution, here UCSD, showing institutional competencies. Each node within the circle map represents a competency (a group of linked topics), and is positioned at the average location of its articles. Node size reflects the number of articles. Coloured rays within each node show the disciplines that contribute to the competency. doi:10.1371/journal.pone.0039464.g002

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### 3. Full Update (10 years of Scopus and WoS)

by Börner, Klavans, Patek, Zoss, Biberstine, Light, Larivière, & Boyack

#### **Desirable features for a map of science classification system:**

1. Use highest quality/coverage paper-level data to generate the science map classification system. Using journal-level data or highly cited papers exclusively leads to distortions [22].
2. Employ advanced dimensionality reduction techniques to map a high-dimensional semantic space to a two-dimensional map that preserves the most important data structures [23].
3. Select a clustering and layout that has easy to read, distinct clusters (e.g., subdisciplines, which have about the same number of records), are disjoint (i.e., they do not overlap or occlude one other), and have meaningful labels to ease data interpretation and communication. The map must match the typical viewer's mental model of the domain.
4. Use graphic design (color, shape, size coding) and legend that can be understood by a large audience—map must empower users to form new hypotheses and get new answers.

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#### **Desirable features for a map of science classification system (cont.):**

5. Support interactivity—e.g., zoom, filter, details on demand [24]. Multi-level maps—e.g., two-levels comprising subdisciplines aggregated into disciplines, support multi-level studies.
6. Define a mapping process to classify new data and overlay it onto the map, e.g., journals based on journal names and other records, e.g., patents, funding data based on keywords. As users have a hard time with fractional associations/counting, each record should be associated with one or few subdisciplines.
7. The science map and classification system should be easy to update to capture the continuously evolving structure of science. Computational workflow should be well documented so that it is easy to understand in principle and can be replicated by other experts. Updates should preserve the main structure of the map as much as possible.
8. Alignment and comparison of any new science map and classification with commonly used science classifications (e.g., classifications used by Thomson Reuters' databases, Elsevier's Scopus, the Library of Congress, Universal Decimal Classification) and the translation of major ontologies into different languages (Science-Metrix, [25]).

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**Data:** The updated map and classification adds six years (2005–2010) of WoS data and three years (2006–2008) from Scopus to the existing category structure—increasing the number of source titles to about 25,000.

**Process:**

For each of the 4,021 new journals, we counted the number of citations to/from papers published in that journal to/from each subdiscipline of the original map. This yielded for each journal an outgoing and incoming citation count for each subdiscipline of the original map. To account for the fact that some subdisciplines publish more papers than others and that, thus, the probability of citing and being cited by these subdisciplines is greater than for smaller ones, we normalized each of these citation counts by the total number of papers published among all journals assigned (even only fractionally) to that subdiscipline. The top subdiscipline citing/cited was then assigned to these new journals.

**Multidisciplinary journals:** *PLoS ONE* and *SCHWEIZERISCHE MEDIZINISCHE WOCHENSCHRIFT* (Swiss Medical Weekly) have the highest combined relative importance across sub-disciplines, yet were assigned to one subdiscipline.

To further simplify the 2010 UCSD map, all multi-assigned journals were examined and only 34 were kept, among them *Science*, *Nature*, *The Lancet*, *British Medical Journal*, and *Journal of the American Medical Association*.

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**Results:**

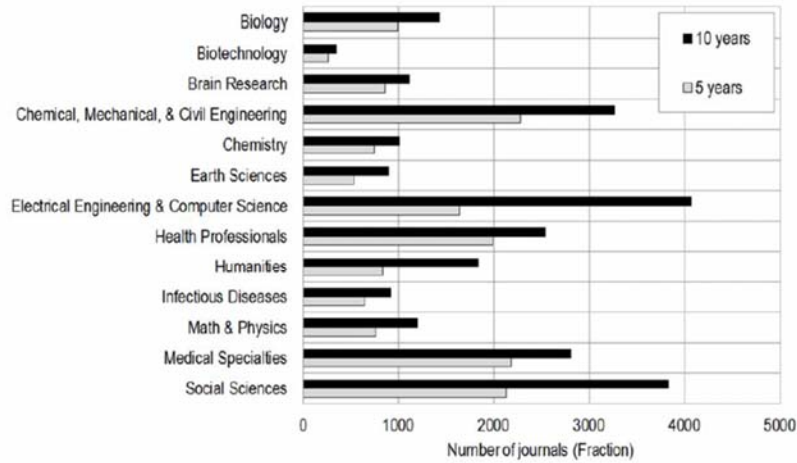
A comparison of the original 5-year and the new 10-year maps and classification system show: (i) an increase in the total number of journals that can be mapped by 9,409 journals (social sciences increased by 80%, humanities by 119%, medical by 32%, and natural science by 74%); (ii) a simplification of the map by assigning all but five highly interdisciplinary journals to exactly one discipline; (iii) a more even distribution of journals over the 554 subdisciplines and 13 disciplines when calculating the coefficient of variation; and (iv) a better reflection of journal clusters when compared with paper-level citation data. When evaluating the map with a listing of desirable features for maps of science, the updated map is shown to have higher mapping accuracy, easier understandability as fewer journals are multiply classified, and higher usability for the generation of data overlays, among others.

To our knowledge, this is the first time that a widely used map of science was updated.

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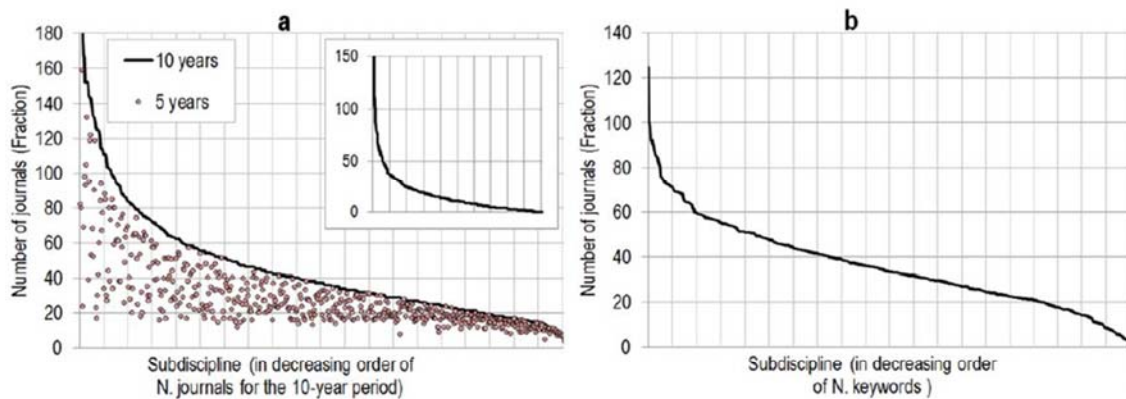


#Journals	5-Year Map	10-Year Map	Difference
WoS	9,499	13,520	4,021
Scopus	14,789	22,253	7,464
WoS & Scopus	15,849	25,258	9,409



**Figure 4. Number of journals per discipline for 5-year (grey) and 10-year (black) UCSD science map.**  
doi:10.1371/journal.pone.0039464.g004

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**Figure 5. Number of journals per subspecialty for 5-year (grey/red circles) and 10-year (black line) UCSD science map. Inset: distribution of the gain in number of journals for each subspecialty (a). Number of (fractionally assigned) terms per 554 subspecialties (b).**  
doi:10.1371/journal.pone.0039464.g005

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## Deployment:

The UCSD map of science data is available at  
<http://sci.cns.iu.edu/ucsdmap/>

### Data

The 2010 UCSD map of science and classification system covering 10 years (2001-2010) of Web of Science data and 8 years (2001-2008) of Scopus data with subdiscipline assignments by SciTech Strategies.

1. Data as [MS AccessDB](#) and as [MS Excel](#) file (identical info as MS AccessDB) as well as [data dictionary](#) and [database schema](#).
2. [Network .net file](#) to visually render science map. Also provided as [.net file](#) with discipline nodes and names.

### Usage Conditions

This map is shared under the Creative Commons, Attribution-NonCommercial-ShareAlike 3.0 Unported (CC BY-NC-SA 3.0) license (<http://creativecommons.org/licenses/by-nc-sa/3.0/>). That is, you are free to share, e.g., to copy, distribute and transmit the work, and to remix, i.e., to adapt the work under the following conditions:

- Attribution — You must attribute the work in the following manner (but not in any way that suggests that they endorse you or your use of the work): Cite the above paper and use the following acknowledgment text: "*The authors wish to acknowledge The Regents of the University of California, SciTech Strategies, Observatoire des Sciences et des Technologies, and the Cyberinfrastructure for Network Science Center for making the 2010 UCSD Map of Science and Classification System available for this work.*"
- Noncommercial — You may not use this work for commercial purposes.

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## Data:

The 2010 UCSD map of science and classification system covers ten years (2001-2010) of data from Thomson Reuters' Web of Science and eight years (2001-2008) of Elsevier's Scopus, specifically the fractional assignment of about 25,000 journal names to 554 subdisciplines grouped into 13 disciplines of science.

The counts for major record types are given here:

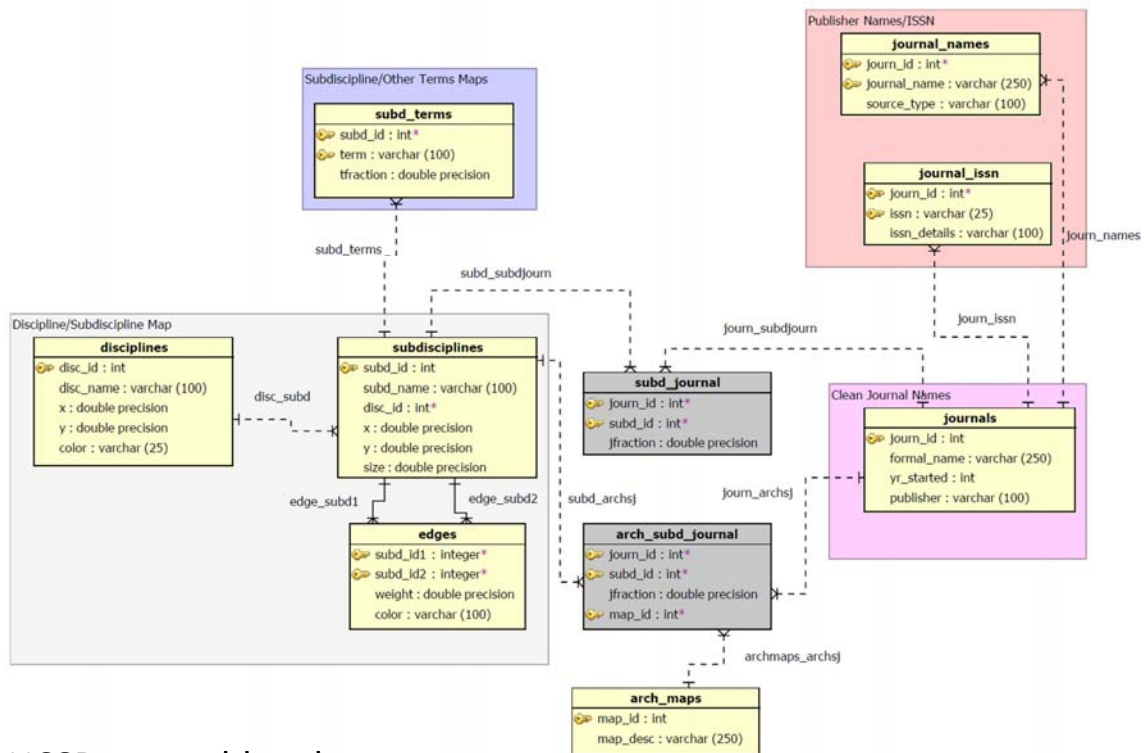
1. 13 disciplines with labels and color codes
2. 554 subdisciplines with x, y positions and size
3. 15,849 journals captured by 5-year map
4. 25,258 journals captured by 10-year map
5. 13,520 journal names used by Thomson Reuters
6. 22,253 journal names used by Scopus
7. 21,630 Scopus journal ID numbers
8. 19,988 ISSN numbers
9. 66,759 terms

See Data Dictionary in Supplement 2 in

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0039464>

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UCSD map table schema

<http://sci.cns.iu.edu/ucsdmap/data/UCSDmapDBSchema.pdf>

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**Note:** There are no standards on how to render .net files!

Some define the zero point on the top left (e.g., GUESS), while others define the bottom-left point as 0,0 (e.g., Gephi, Pajek). This only becomes important when rendering a dataset that has a predefined left and right, top and bottom such as the UCSD map of science.

Simply multiply all node's y-position with -1 to solve this issue.



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# 4. Validation: Consensus Map of Science

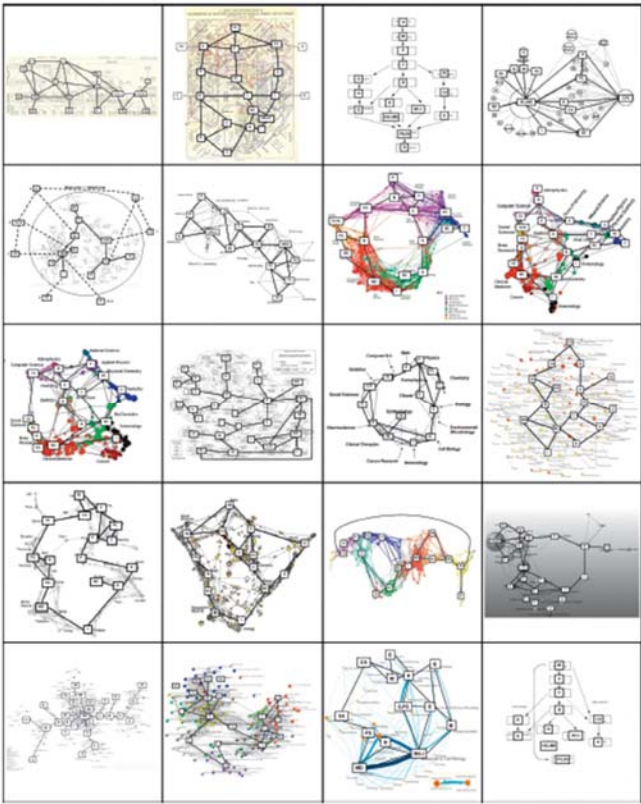
Klavans, Richard, and Kevin W. Boyack. 2009. "Toward a Consensus Map of Science." *JASIST* 60 (3): 455-476.



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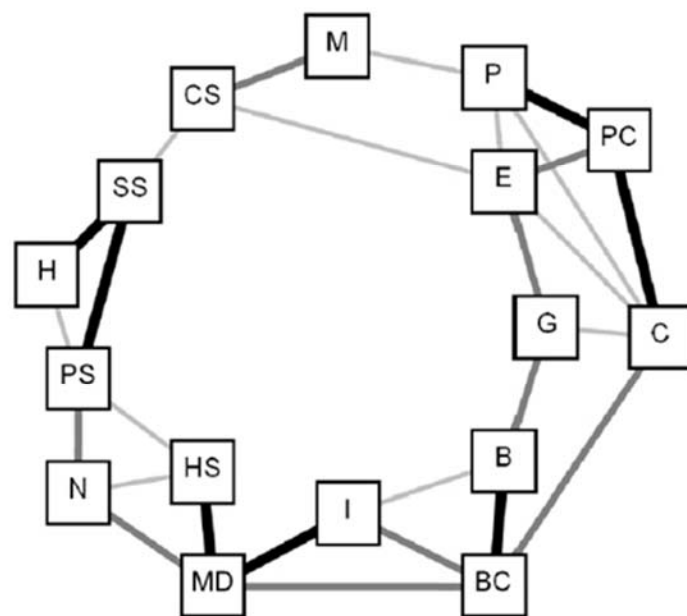
20 maps of science were examined and found to have a high level of correspondence.

Source map	Year	Type
KB06-SC	2006	Paper
Backbone	2004	Jnl
UCSD	2007	Jnl
Ellingham	1948	Expert
KB-Para	2005	Paper
Bernal	1939	Expert
Scimago-I	2004	Categ
KB06-TS	2006	Paper
B03-ST	2005	Jnl
BBK02-S	2004	Jnl
Rosvall	2007	Jnl
Small99	1999	Paper
Balaban-II	2007	Pre-req
K02	2002	Jnl
L-R	2007	Categ
Balaban-I	2007	Expert
Small85	1985	Paper
Small74	1974	Paper
B-Z	1999	Jnl
Scimago-II	2007	Categ

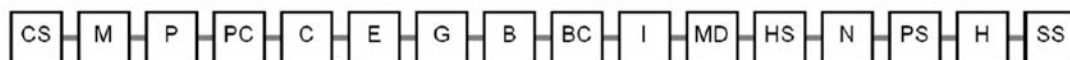


63

M – Mathematics  
 CS – Computer science  
 P – Physics  
 PC – Physical chemistry  
 C – Chemistry  
 E – Engineering  
 G – Earth sciences (geoscience)  
 BC – Biochemistry  
 B – Biology  
 I – Infectious disease  
 MD – Medical specialties  
 HS – Health services  
 N – Brain research (neuroscience)  
 PS – Psychology/psychiatry  
 SS – Social sciences  
 H – Humanities



64



M – Mathematics  
 CS – Computer science  
 P – Physics  
 PC – Physical chemistry  
 C – Chemistry  
 E – Engineering  
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 I – Infectious disease  
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 H – Humanities

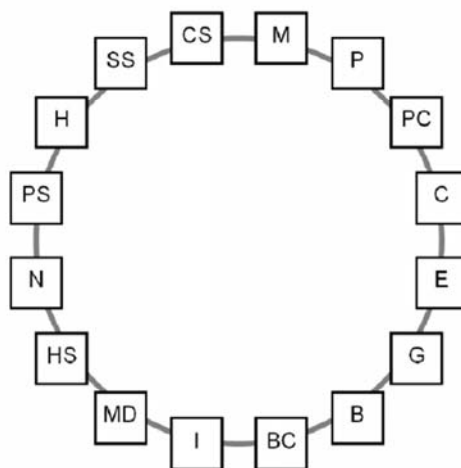


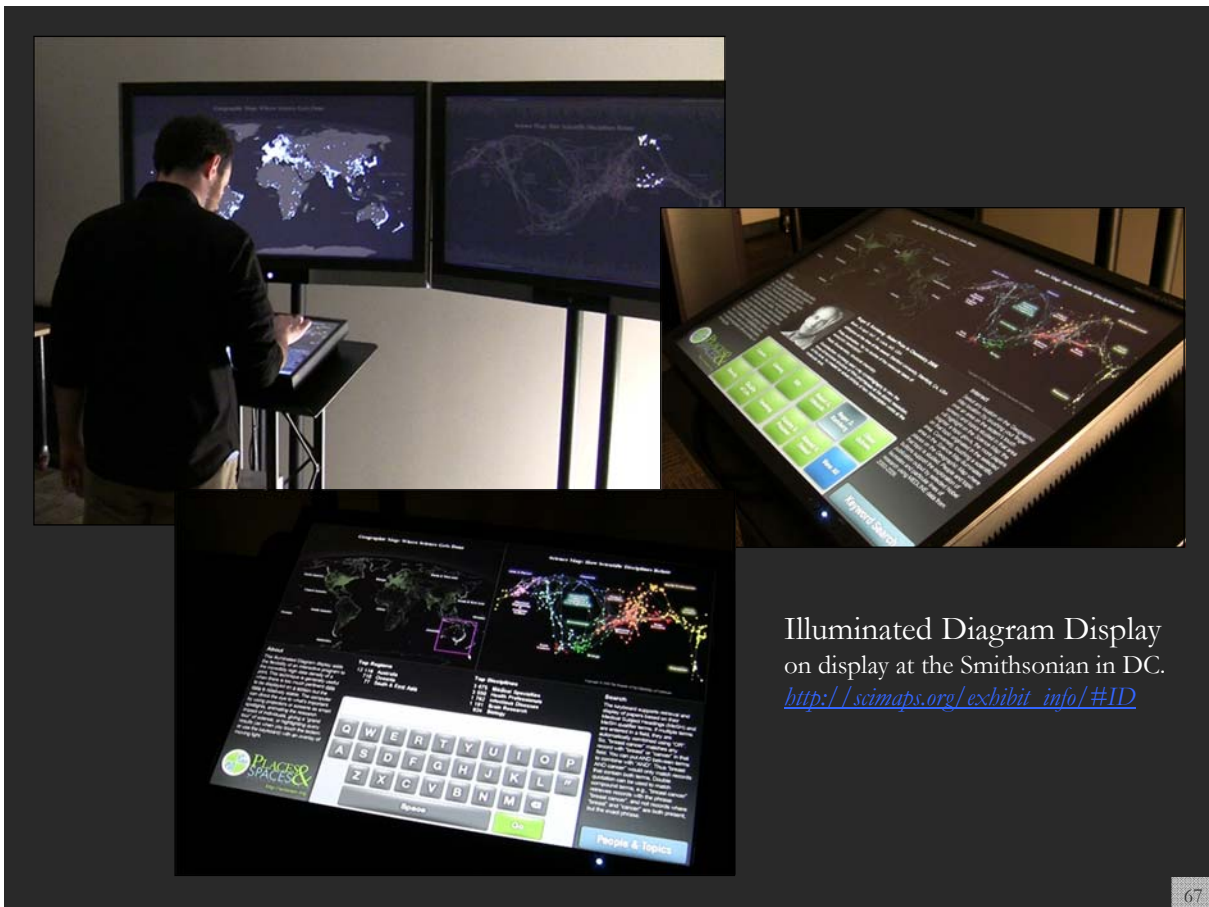
FIG. 6. One-dimensional consensus maps of science, Euclidean (top) and Riemannian (bottom).

65

## 5. UCSD Map Applications

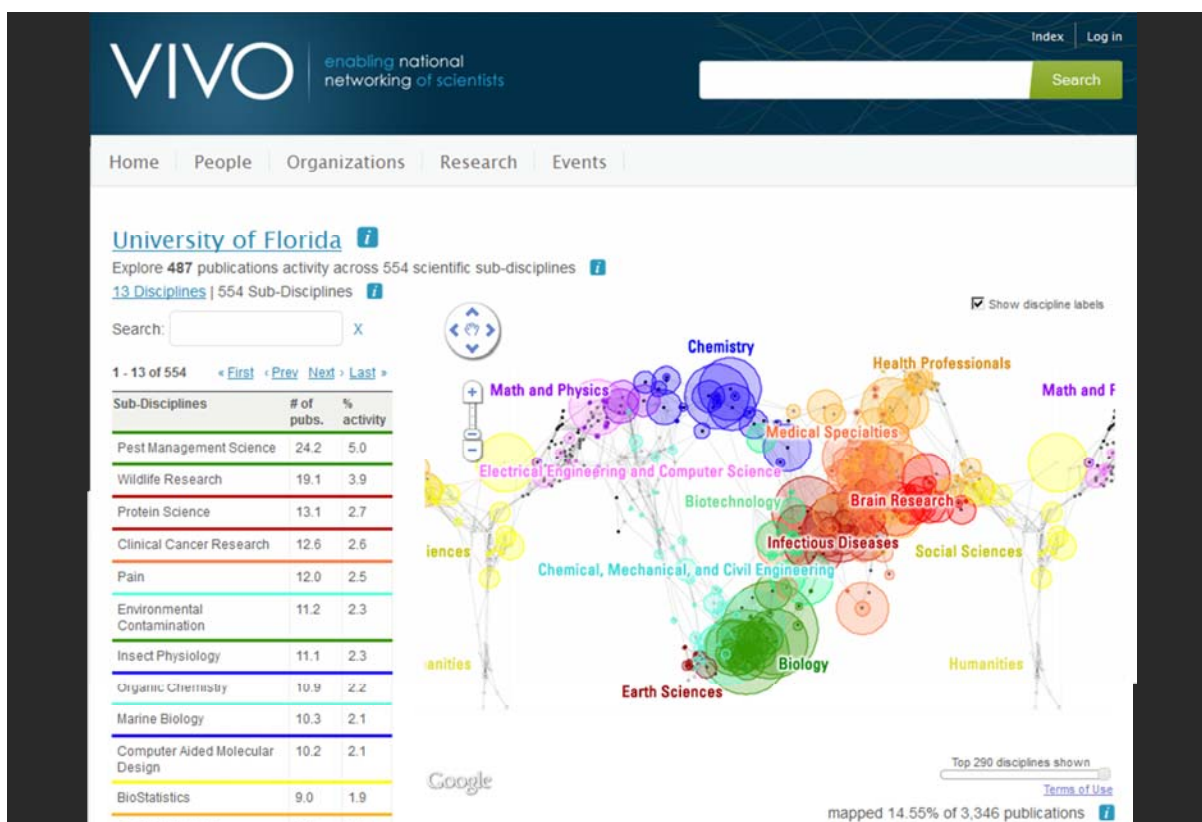
- Illuminated Diagram Display
- VIVO National Researcher Network
- MapSustain Interactive Online Interface
- Sci2 Tool

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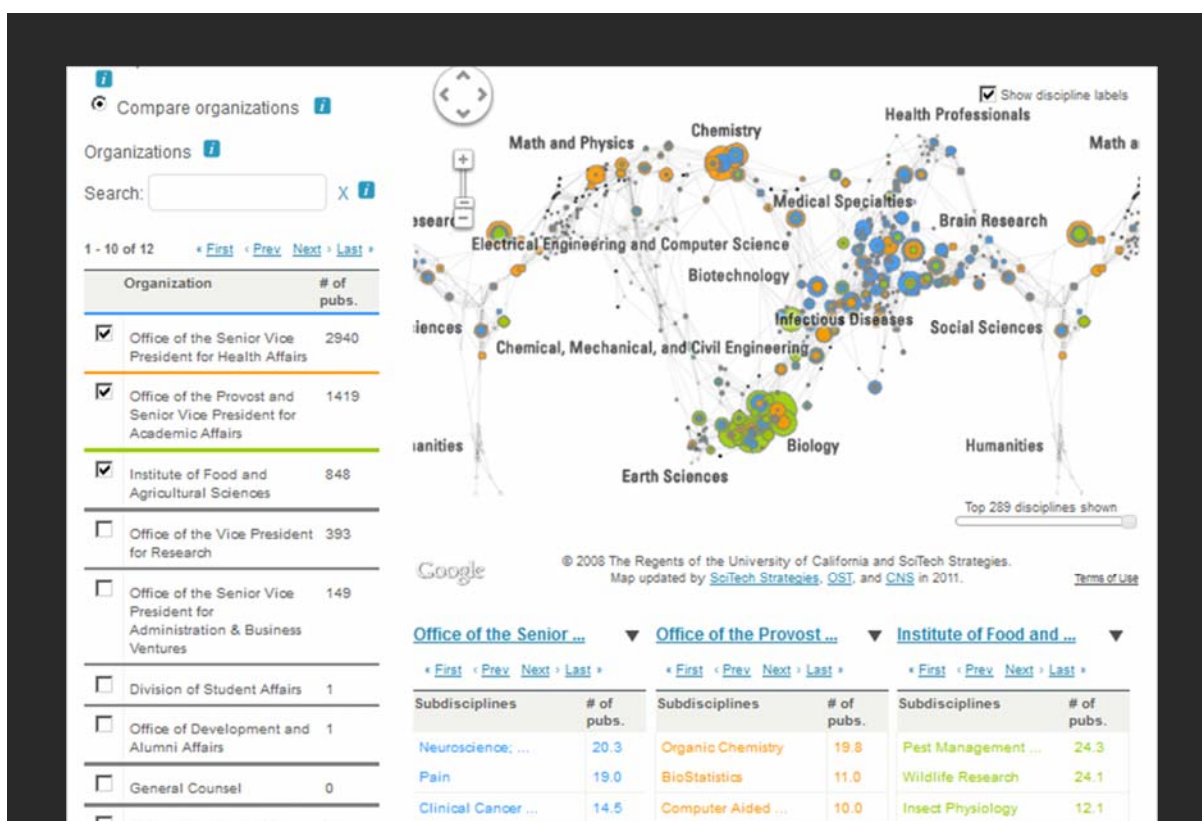
67





**Topical Analysis (What)** Science map overlays will show where a person, department, or university publishes most in the world of science. (in work)

68



**Topical Analysis (What)** Science map overlays will show where a person, department, or university publishes most in the world of science. (in work)

69



## Geographic Map Science Map



☒ Funding  
☒ NIH  
☒ NSF  
☒ USDA

☒ Publications  
☒ DOE  
☒ ISI  
☒ Medline

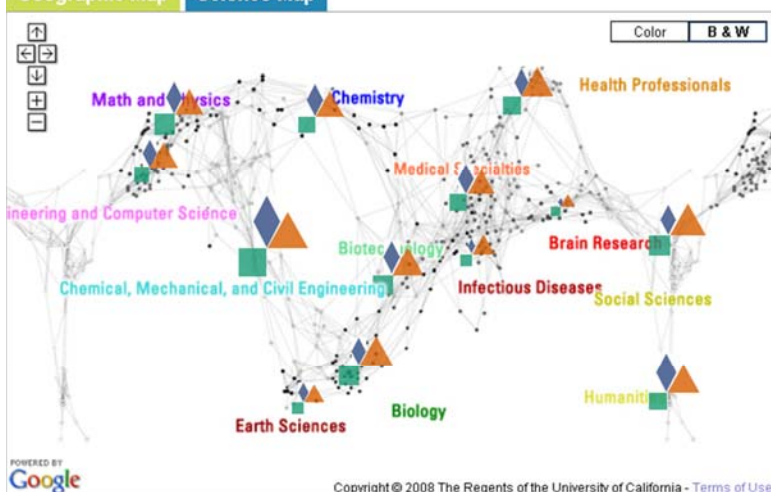
☒ Patents  
☒ USPTO

Amount ☐ Count ☐  
 Citations ☐ Count ☐

From year 1901 to year 2009  
 Search by keyword

<http://mapsustain.cns.iu.edu>

## Geographic Map Science Map



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366 to 3,300

867 to 7,853

16 to 671

Math & Physics  
 Chemistry  
 Computer Science & EE  
 Other Engineering

Biotechnology  
 Earth Sciences  
 Biology  
 Infectious Diseases

Medical Specialties  
 Brain Research  
 Health Professionals  
 Social Sciences  
 Humanities

## Maps Detail Data About

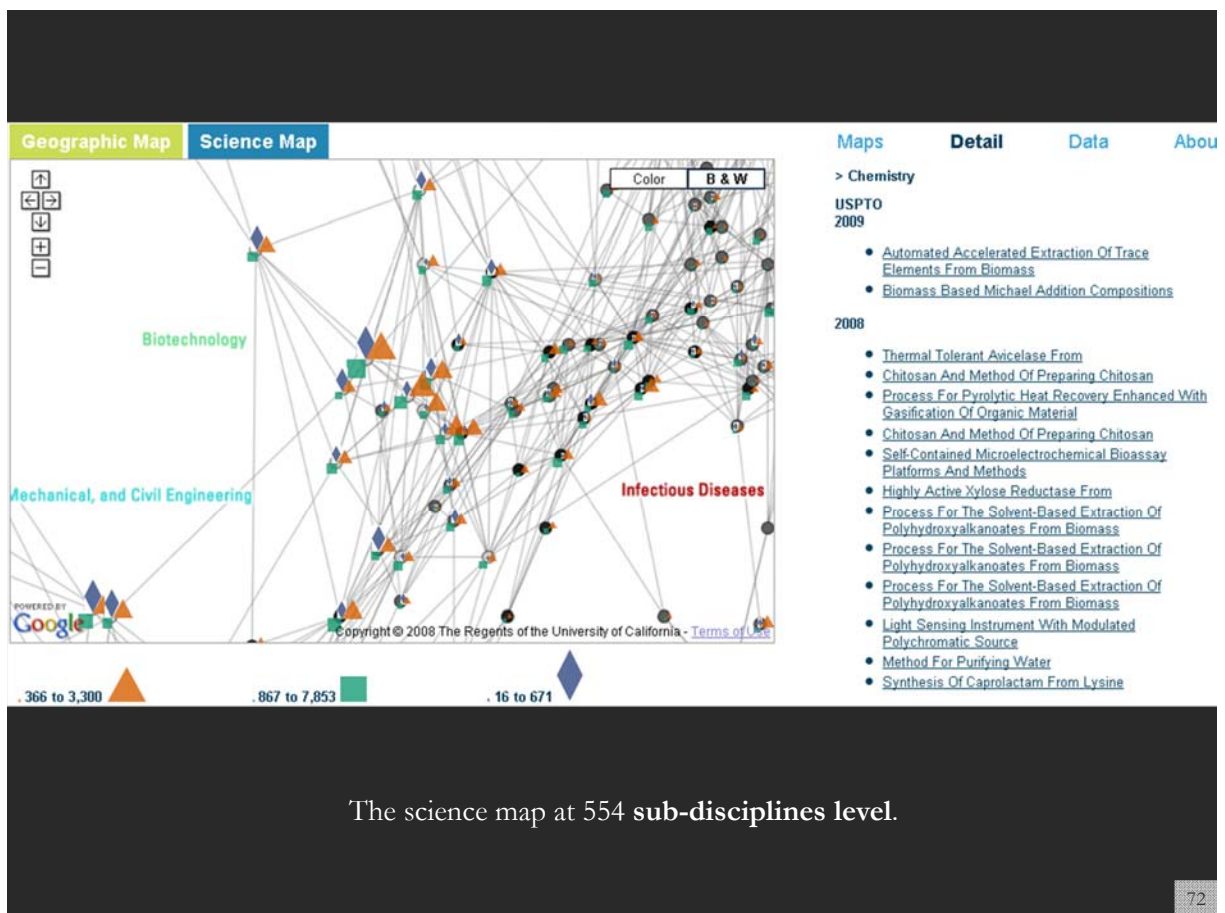
### > Chemistry

USPTO  
2009

- [Automated Accelerated Extraction Of Trace Elements From Biomass](#)
- [Biomass Based Michael Addition Compositions](#)

2008

- [Thermal Tolerant Avicelase From](#)
- [Chitosan And Method Of Preparing Chitosan](#)
- [Process For Pyrolytic Heat Recovery Enhanced With Gasification Of Organic Material](#)
- [Chitosan And Method Of Preparing Chitosan](#)
- [Self-Contained Microelectrochemical Bioassay Platforms And Methods](#)
- [Highly Active Xylose Reductase From](#)
- [Process For The Solvent-Based Extraction Of Polyhydroxyalkanoates From Biomass](#)
- [Process For The Solvent-Based Extraction Of Polyhydroxyalkanoates From Biomass](#)
- [Process For The Solvent-Based Extraction Of Polyhydroxyalkanoates From Biomass](#)
- [Light Sensing Instrument With Modulated Polychromatic Source](#)
- [Method For Purifying Water](#)
- [Synthesis Of Caprolactam From Lysine](#)



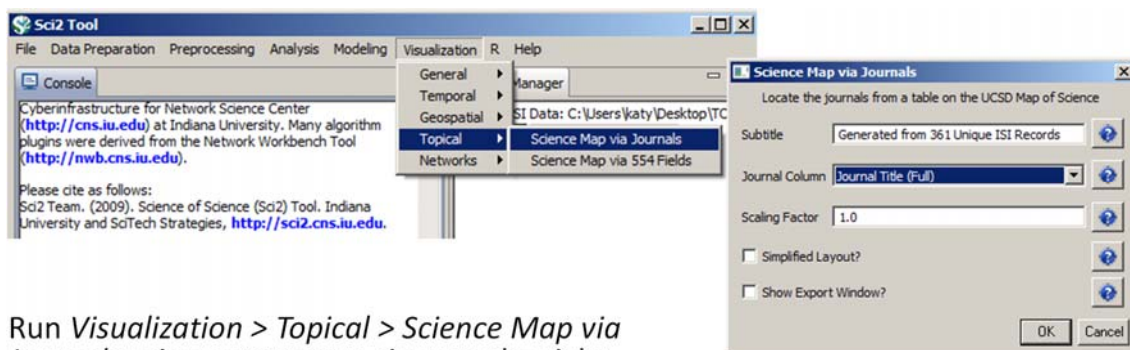
## Science of Science (Sci2) Tool

Download Sci2 Tool v1.0 Alpha (June 13, 2012) from <http://sci2.cns.iu.edu>

Unpack into a /sci2 directory. Run /sci2/sci2.exe

Sci2 Manual is at <http://sci2.wiki.cns.iu.edu>

Load an ISI (\*.isi), Bibtex (\*.bib), Endnote Export Format (\*.enw), Scopus csv (\*.scopus) file such as /sci2/sampledata/scientometrics/isi/FourNetSciResearchers.isi



Run *Visualization > Topical > Science Map via Journals* using parameters given to the right.

Postscript file will appear in *Data Manager*. Save and open with a Postscript Viewer.

## Topical Visualization

Generated from 361 Unique ISI Records  
90 out of 112 publications were mapped to 182 subdisciplines and 13 disciplines.  
June 24, 2012 | 04:04 PM EDT



2008 The Regents of the University of California and SciTech Strategies.  
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CNS (cns.iu.edu)

## Topical Visualization

Generated from 361 Unique ISI Records  
90 out of 112 publications were mapped to 182 subdisciplines and 13 disciplines.  
June 24, 2012 | 04:04 PM EDT

### Biology

- 1 BMC EVOLUTIONARY BIOLOGY
- 1 NATURWISSENSCHAFTEN

### Biotechnology

- 1 BMC BIOINFORMATICS
- 2 FEBS JOURNAL
- 1 GENOME RESEARCH
- 1 INTERNATIONAL MICROBIOLOGY
- 1 NATURE BIOTECHNOLOGY
- 3 NATURE GENETICS
- 1 NATURE REVIEWS GENETICS
- 1 NUCLEIC ACIDS RESEARCH
- 2 PROTEOMICS

### Brain Research

- 5 JOURNAL OF MATHEMATICAL PSYCHOLOGY

### Chemical, Mechanical, & Civil Engineering

- 1 JOURNAL OF CERAMIC PROCESSING RESEARCH
- 2 MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIA...
- 1 PHYSICS WORLD
- 1 SCIENTIFIC AMERICAN

### Chemistry

- 1 COMPUTER PHYSICS COMMUNICATIONS
- 2 JOURNAL OF CHEMICAL INFORMATION AND COMPUTER SCIENCES
- 1 JOURNAL OF THE INDIAN INSTITUTE OF SCIENCE
- 1 PURE AND APPLIED CHEMISTRY

### Earth Sciences

- 1 CURRENT SCIENCE

### Electrical Engineering & Computer Science

- 1 ASIST 2003: PROCEEDINGS OF THE 66TH ASIST ANNUAL MEETING...
- 1 CANADIAN JOURNAL OF INFORMATION AND LIBRARY SCIENCE-REV...
- 5 IEEE TRANSACTIONS ON PROFESSIONAL COMMUNICATION
- 1 INFORMATION TECHNOLOGY AND LIBRARIES
- 5 JOURNAL OF INFORMATION SCIENCE
- 3 JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE
- 5 JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENC...
- 2 LIBRARY QUARTERLY
- 1 LIBRI
- 1 PROCEEDINGS OF THE AMERICAN SOCIETY FOR INFORMATION SC...

### Health Professionals

- 1 ANNALS OF BIOMEDICAL ENGINEERING
- 1 BULLETIN OF THE MEDICAL LIBRARY ASSOCIATION
- 1 CROATIAN MEDICAL JOURNAL
- 2 JOURNAL OF APPLIED PHYSIOLOGY
- 1 JOURNAL OF PUBLIC HEALTH DENTISTRY
- 1 METHODS OF INFORMATION IN MEDICINE
- 1 PLASTIC AND RECONSTRUCTIVE SURGERY
- 1 TEXAS MEDICINE
- 1 UNFALLCHIRURG
- 1 WIENER KLINISCHE WOCHENSCHRIFT

### Humanities

- 1 BULLETIN OF THE ATOMIC SCIENTISTS

### Infectious Diseases

- 1 FEMS MICROBIOLOGY LETTERS
- 1 JOURNAL OF BACTERIOLOGY

### Math & Physics

- 1 ADVANCES IN APPLIED PROBABILITY

CNS (cns.iu.edu)



## Topical Visualization

Generated from 361 Unique ISI Records  
90 out of 112 publications were mapped to 182 subdisciplines and 13 disciplines.  
June 24, 2012 | 04:04 PM EDT

### Math & Physics

10 APPLIED PHYSICS LETTERS  
1 BRAZILIAN JOURNAL OF PHYSICS  
3 CHAOS SOLITONS & FRACTALS  
1 COMPLEXITY  
1 COMPUTATIONAL MATERIALS SCIENCE  
11 EUROPEAN PHYSICAL JOURNAL B  
12 EUROPHYSICS LETTERS  
2 INTERNATIONAL JOURNAL OF MODERN PHYSICS B  
6 JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL  
1 JOURNAL OF STATISTICAL MECHANICS-THEORY AND EXPERIMENT  
1 JOURNAL OF STATISTICAL PHYSICS  
1 JOURNAL OF THE KOREAN PHYSICAL SOCIETY  
1 MATERIALS SCIENCE AND ENGINEERING B-SOLID STATE MATERIAL...  
3 NATURE PHYSICS  
3 NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SEC...  
12 PHYSICA A  
5 PHYSICAL REVIEW A  
2 PHYSICAL REVIEW B  
45 PHYSICAL REVIEW LETTERS  
2 REVIEWS OF MODERN PHYSICS

### Medical Specialties

1 ANNALS OF INTERNAL MEDICINE  
1 REVISTA DE INVESTIGACION CLINICA

### Social Sciences

1 ADMINISTRATIVE SCIENCE QUARTERLY  
1 AMERICAN BEHAVIORAL SCIENTIST  
1 AMERICAN SOCIOLOGICAL REVIEW  
1 ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL S...  
1 ARBOR-CIENCIA PENSAMIENTO Y CULTURA  
3 BRITISH JOURNAL OF MATHEMATICAL & STATISTICAL PSYCHOLOGY  
1 JOURNAL OF CLASSIFICATION

### Social Sciences

2 JOURNAL OF MATHEMATICAL SOCIOLOGY  
3 JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION  
2 PSYCHOLOGICAL BULLETIN  
5 PSYCHOMETRIKA  
1 RECHERCHE  
5 SCIENTOMETRICS  
1 SOCIAL FORCES  
6 SOCIAL NETWORKS  
3 SOCIOLOGICAL METHODS & RESEARCH

### Multiple Categories

1 BRITISH MEDICAL JOURNAL  
2 JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION  
1 JOURNAL OF THEORETICAL BIOLOGY  
18 NATURE  
44 PHYSICAL REVIEW E  
5 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE ...  
6 SCIENCE

### Unclassified

1 ALGORITHMS AND MODELS FOR THE WEB-GRAPHS, PROCEEDINGS  
2 AMERICAN DOCUMENTATION  
2 ASIST 2002: PROCEEDINGS OF THE 65TH ASIST ANNUAL MEETING, ...  
1 BIOLOGIYA MORYA-MARINE BIOLOGY  
1 BULLETIN OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE  
1 CHEMIKER-ZEITUNG  
3 CHEMTECH  
1 COMBINATORIAL AND ALGORITHMIC ASPECTS OF NETWORKING  
7 CURRENT COMMENTS  
3 CURRENT CONTENTS/LIFE SCIENCES  
1 FEDERATION PROCEEDINGS  
5 FRACTALS-AN INTERDISCIPLINARY JOURNAL ON THE COMPLEX GE...  
1 FRONTIERS OF LIBRARIANSHIP-SYRACUSE UNIVERSITY

CNS (cns.iu.edu)



## Research Profiles—Existing Classifications

In addition to using **journal names** to

- map career trajectories
- identify evolving expertise areas, and
- compare expertise profiles,

**existing classifications** can be aligned and used to generate science map overlays.

B	C	D	E	F	G
KNOWLEDGE AREA	NO. Projects	USDA Staff Years	STATE APPR	TOTAL FUNDS	UCSD Map Field Name
101 Appraisal of Soil Resources					315
102 Soil, Plant, Water, Nutrient Relationships					227
103 Management of Saline and Sodic Soils and Salinity					158
104 Protect Soil from Harmful Effects of Natural Elements					120
111 Conservation and Efficient Use of Water					245
112 Watershed Protection and Management					245
121 Management of Range Resources					520
122 Management and Control of Forest and Range Fires					520
123 Management and Sustainability of Forest Resources					231
124 Urban Forestry					231
125 Agroforestry					231

**Science Map via 554 Fields (Circle Annotations)**

Locate UCSD area tagged records on the UCSD Map of Science

Subtitle: ...Preprocessed-USDA-Funds-FY2008.csv

UCSD Area: UCSD Map Field Name

Label: KNOWLEDGE AREA

Value: NO. Projects

Scaling Factor: 1.0

☐ Simplified Layout?

☐ Show Export Window?

Run *Visualization > Topical > Science Map via 554 Fields*  
using parameters given to the right.  
Postscript file will appear in *Data Manager*.  
Save and open with a Postscript Viewer.



## Sci<sup>2</sup> Tool Usage at National Institutes of Health

Sci2 Tool now supports Web services and serves as a visual interface to publically available NIH RePORT Expenditure and Results (RePORTER)/ RePORTER data provided by NIH.

