Online Interactive Maps

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With special thanks to the members at the Cyberinfrastructure for Network Science Center and the Mapping Science exhibit advisory board.

Statewide IT Conference at Indiana University
Bloomington, IN

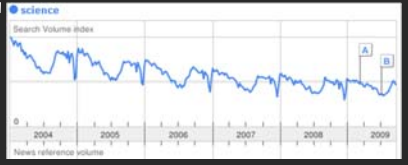
September 24, 2012

Take terra bytes of data

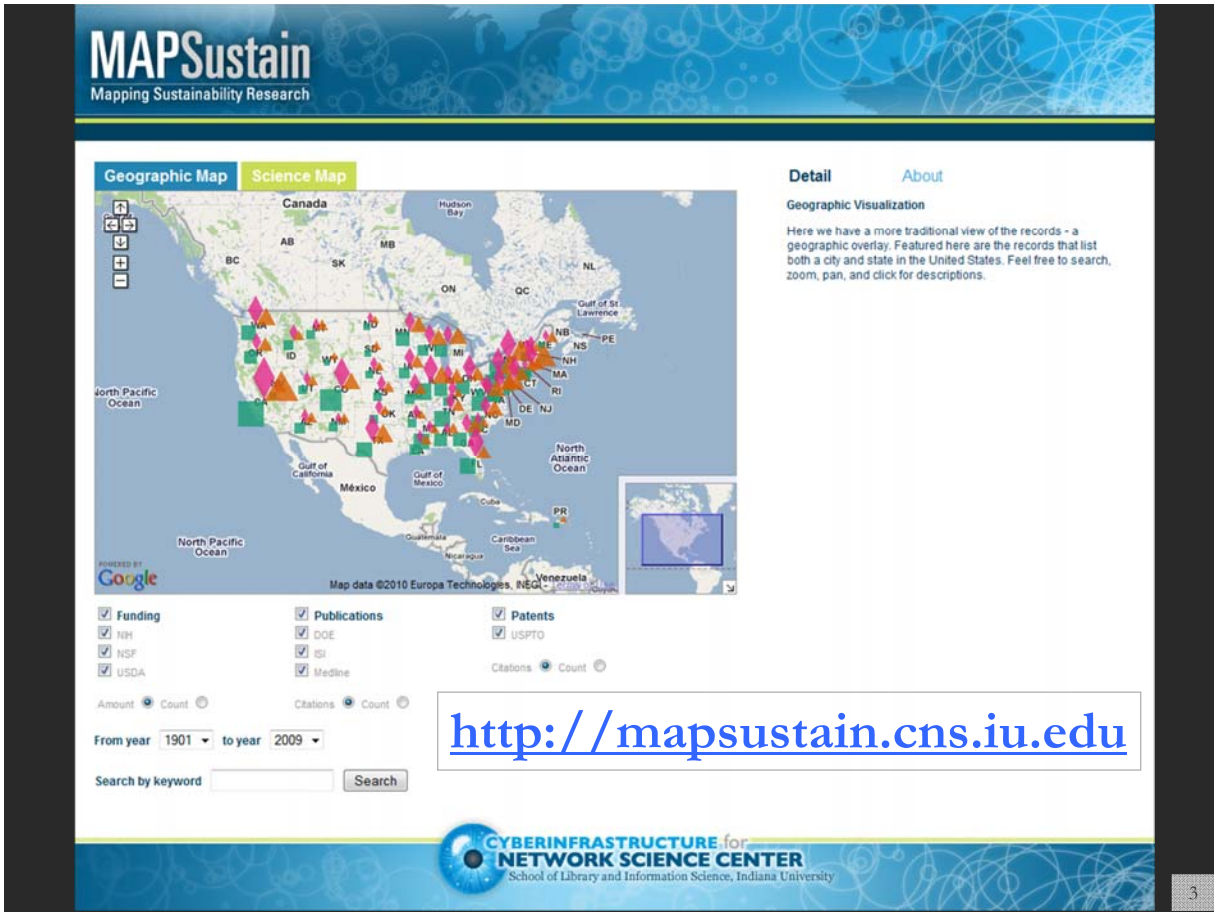
Black Box

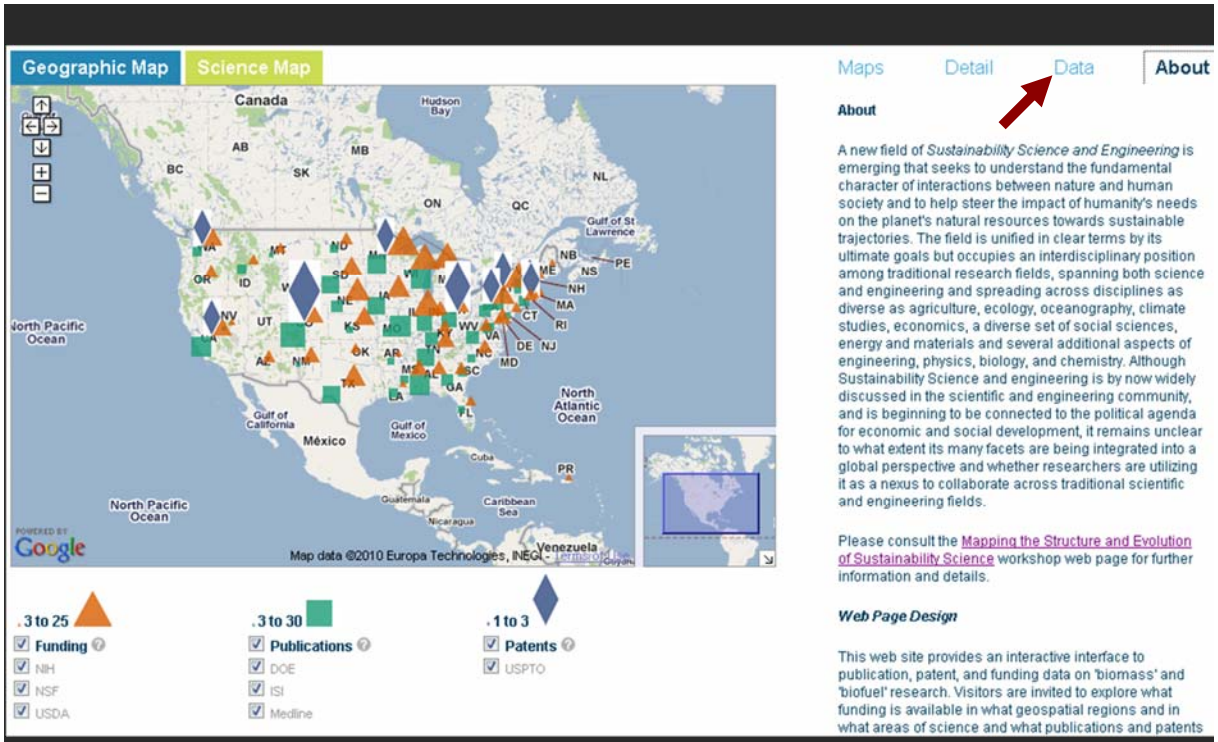
Find your way

Find collaborators, friends

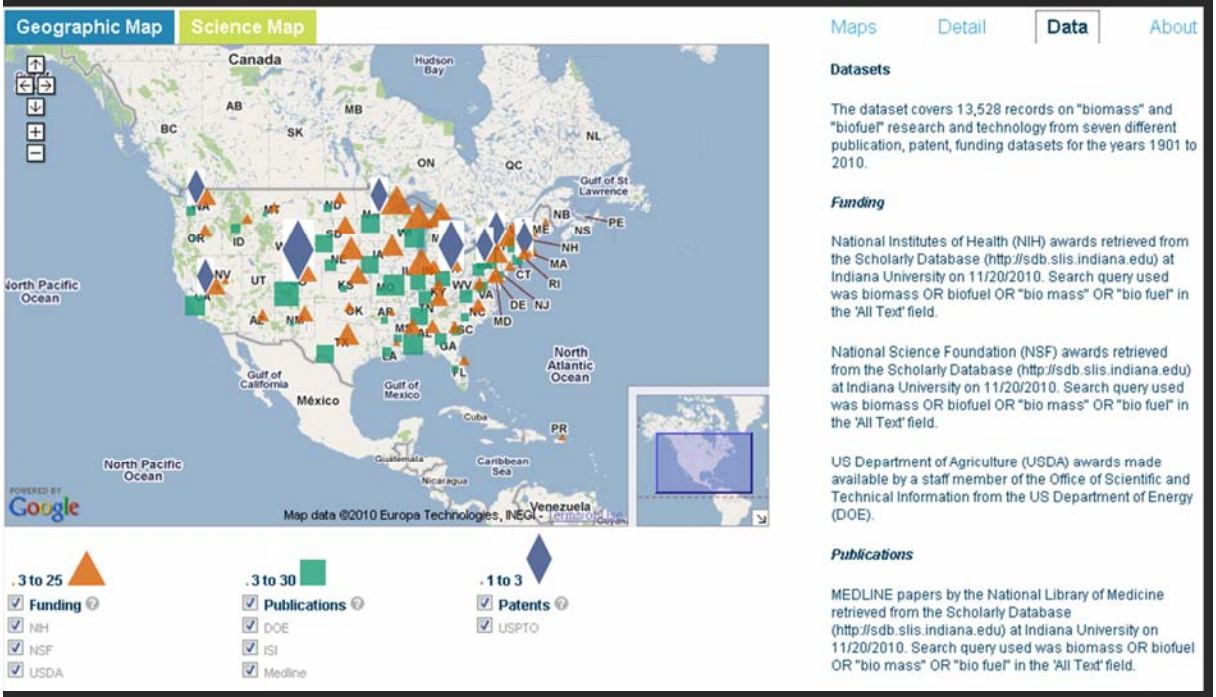


Identify trends

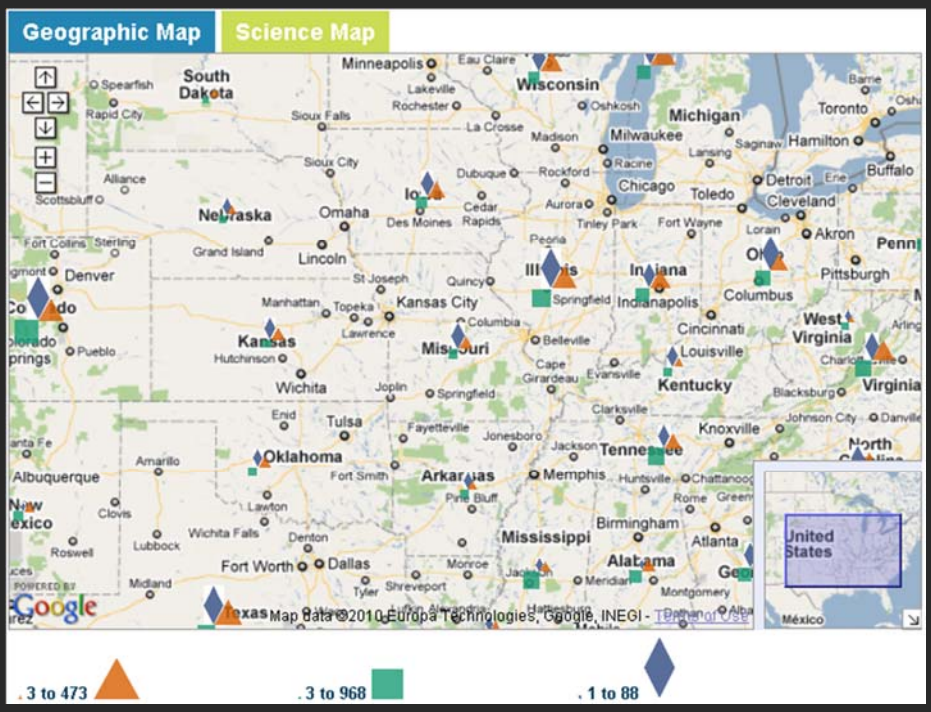




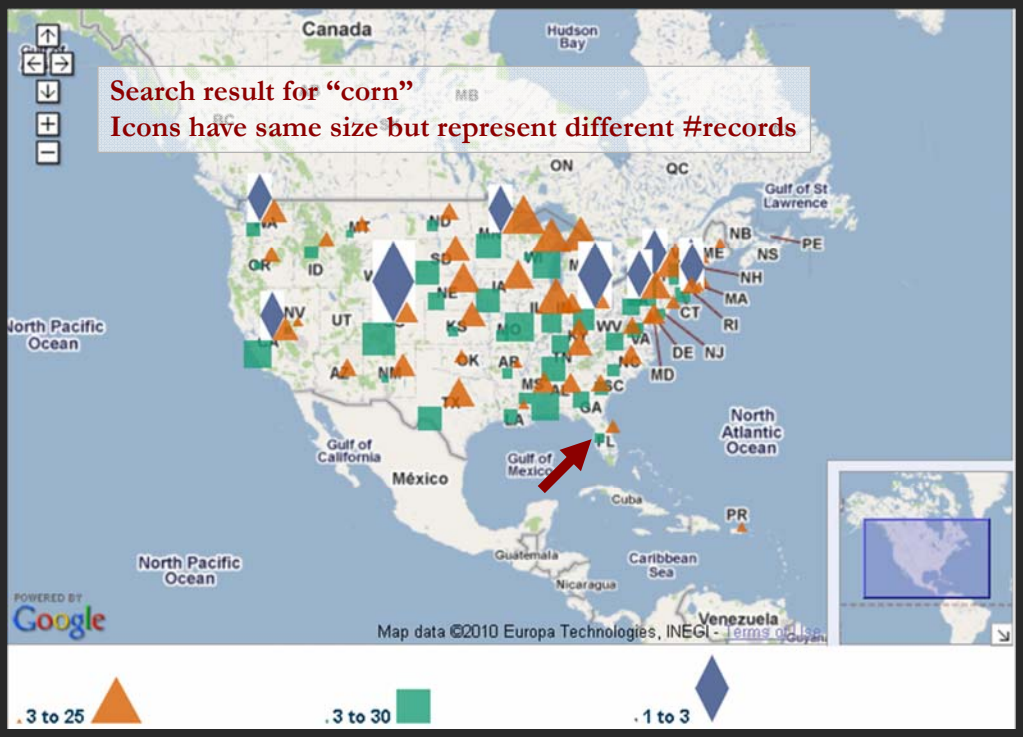
Google Map JavaScript API was used to implement both maps with two aggregation layers for each. The geographic map aggregates to the **state level** and the **city level**. The science map has a high level of aggregation of 13 top-level scientific **disciplines** and a low level of 554 **sub-disciplines**.

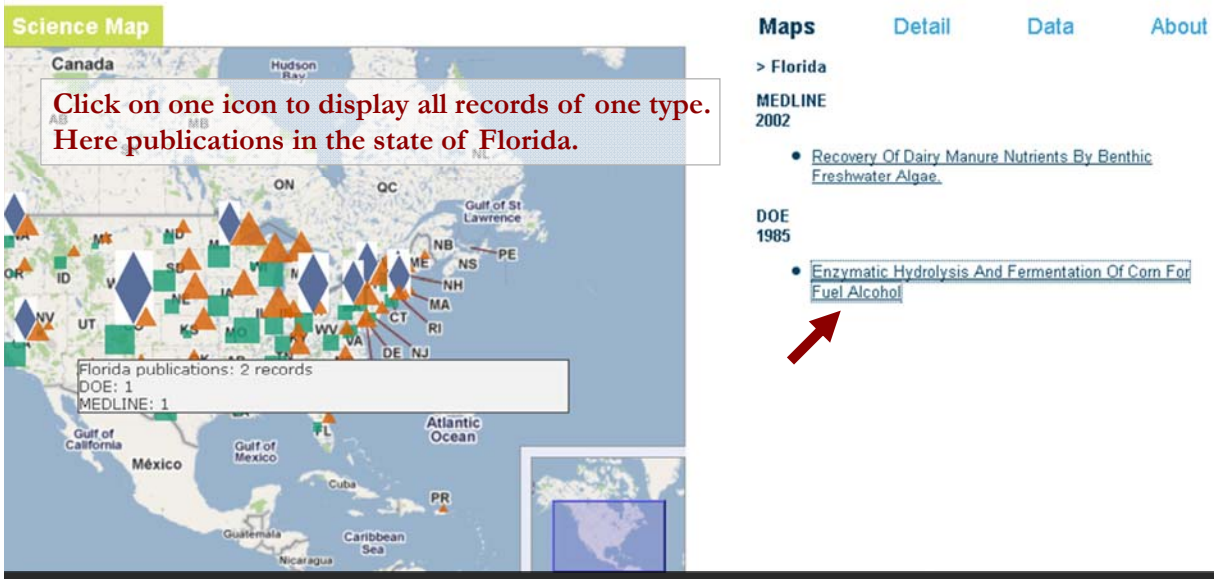


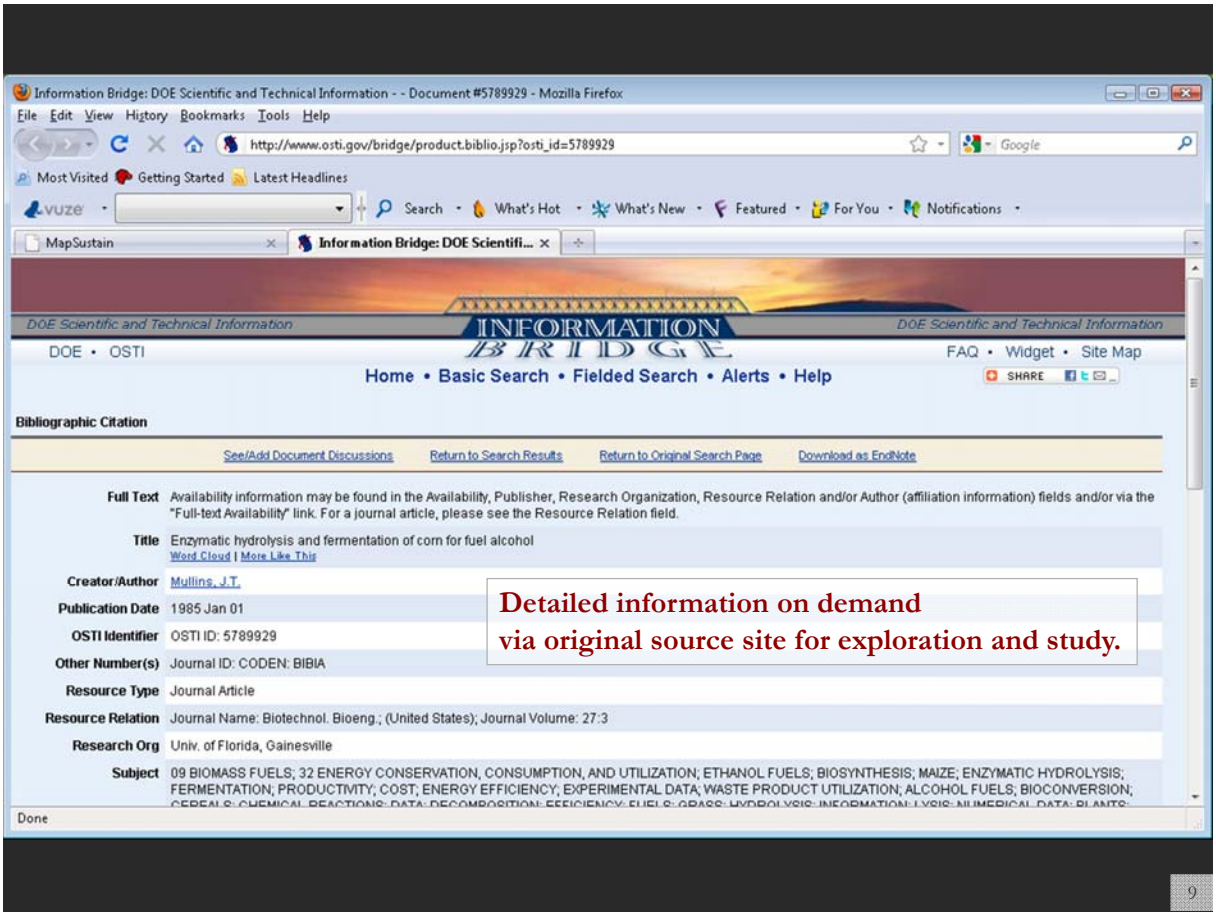
The geographic map at **state level**.



The geographic map at **city level**.


Search result for "corn"
Icons have same size but represent different #records
Canada
Hudson Bay
North Pacific Ocean
North Atlantic Ocean
Gulf of California
Gulf of Mexico
México
Cuba
PR
Guatemala
Caribbean Sea
Nicaragua
Venezuela
Map data ©2010 Europa Technologies, INEGI
.3 to 25
.3 to 30
.1 to 3


Science Map
Maps
Detail
Data
About
> Florida
MEDLINE
2002
Recovery Of Dairy Manure Nutrients By Benthic Freshwater Algae.
DOE
1985
Enzymatic Hydrolysis And Fermentation Of Corn For Fuel Alcohol
Click on one icon to display all records of one type.
Here publications in the state of Florida.
Florida publications: 2 records
DOE: 1
MEDLINE: 1


Information Bridge: DOE Scientific and Technical Information - - Document #5789929 - Mozilla Firefox
http://www.osti.gov/bridge/product.biblio.jsp?osti_id=5789929
DOE Scientific and Technical Information
INFORMATION BRIDGE
DOE • OSTI
FAQ • Widget • Site Map
Home • Basic Search • Fielded Search • Alerts • Help
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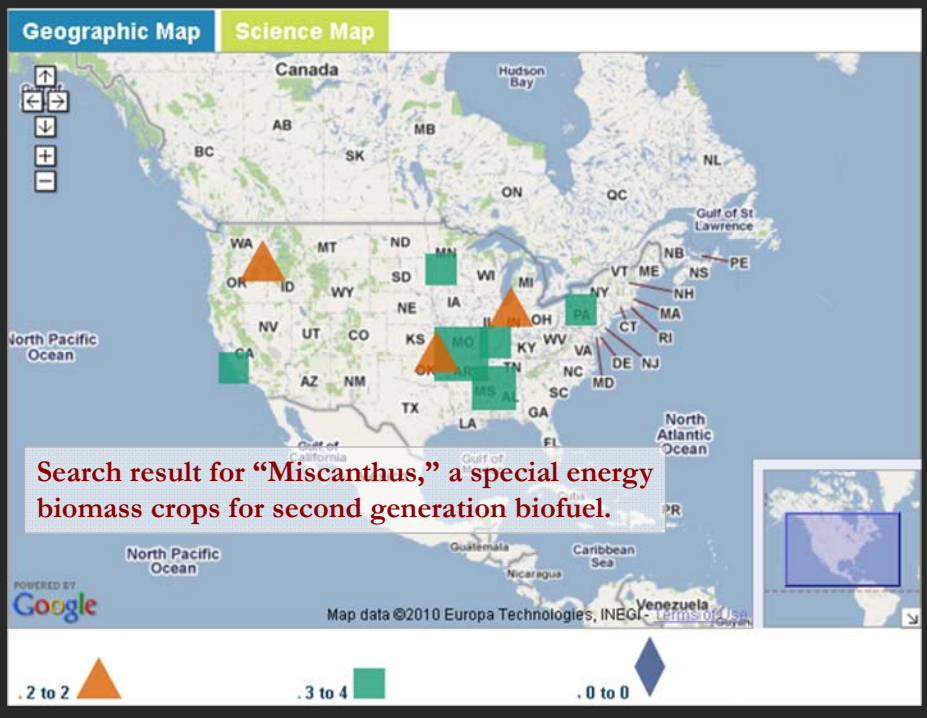
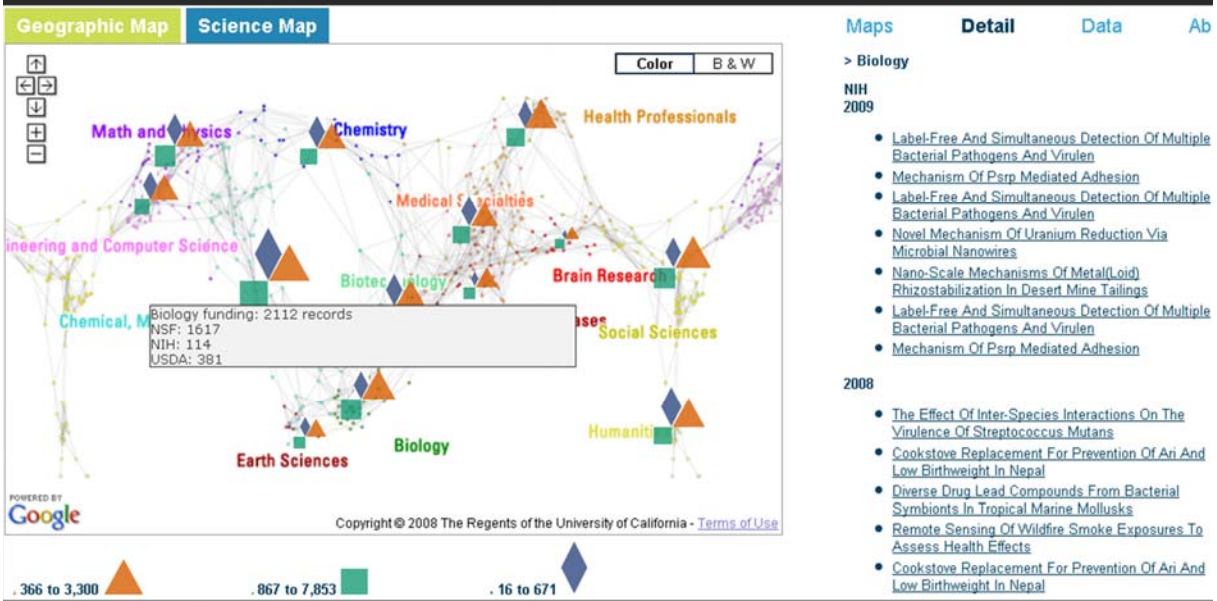
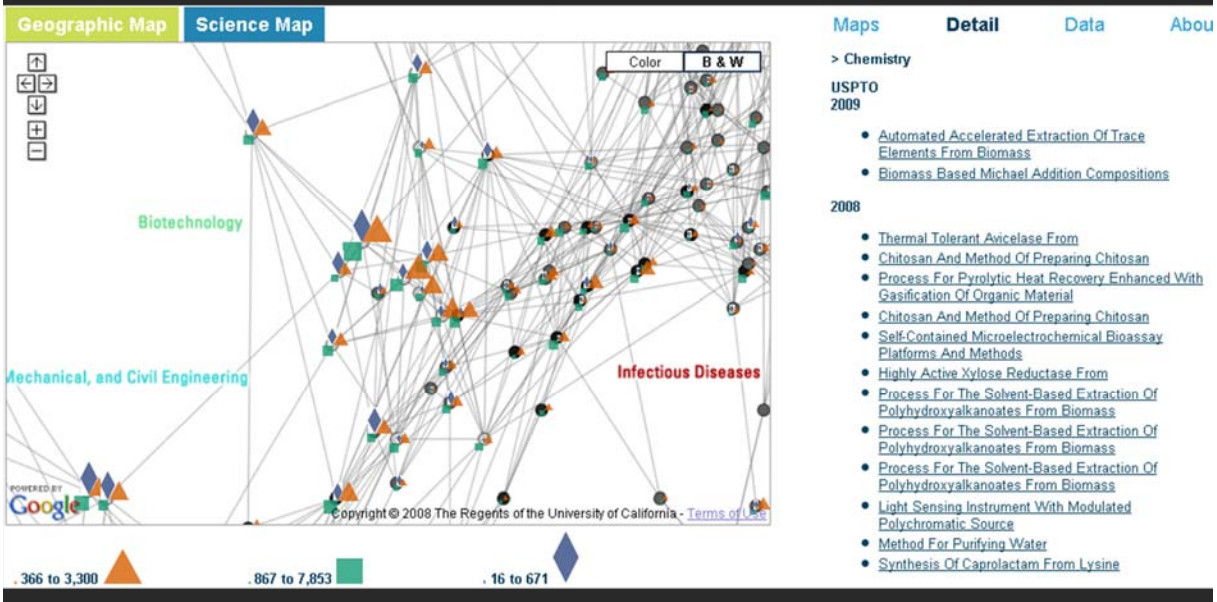
Full Text Availability information may be found in the Availability, Publisher, Research Organization, Resource Relation and/or Author (affiliation information) fields and/or via the "Full-text Availability" link. For a journal article, please see the Resource Relation field.
Title Enzymatic hydrolysis and fermentation of corn for fuel alcohol
Word Cloud | More Like This
Creator/Author Mullins, J.T.
Publication Date 1985 Jan 01
OSTI Identifier OSTI ID: 5789929
Other Number(s) Journal ID: CODEN: BIBIA
Resource Type Journal Article
Resource Relation Journal Name: Biotechnol. Bioeng.; (United States); Journal Volume: 27:3
Research Org Univ. of Florida, Gainesville
Subject 09 BIOMASS FUELS; 32 ENERGY CONSERVATION, CONSUMPTION, AND UTILIZATION; ETHANOL FUELS; BIOSYNTHESIS; MAIZE; ENZYMATIC HYDROLYSIS; FERMENTATION; PRODUCTIVITY; COST; ENERGY EFFICIENCY; EXPERIMENTAL DATA; WASTE PRODUCT UTILIZATION; ALCOHOL FUELS; BIOCONVERSION;
Done
Detailed information on demand
via original source site for exploration and study.

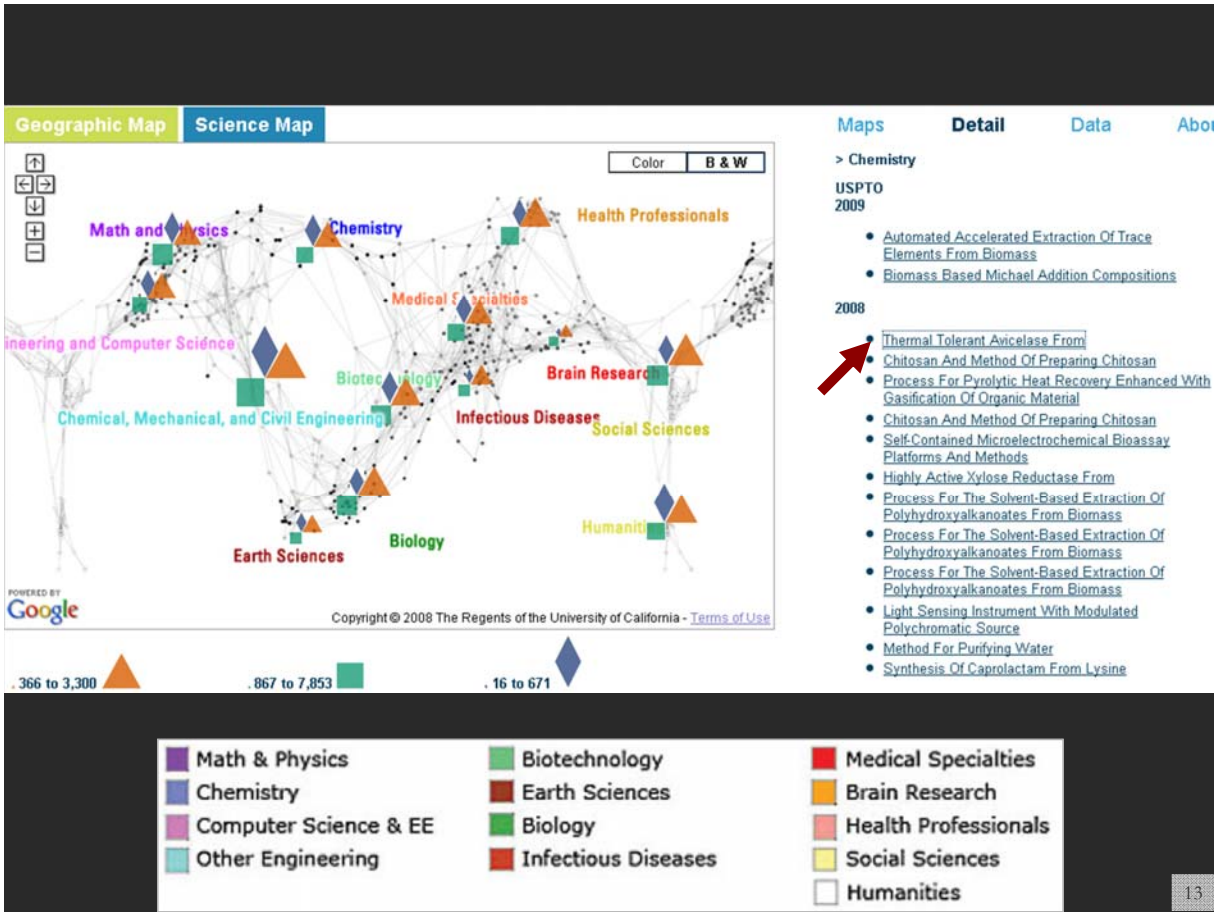

Geographic Map
Science Map
Canada
Hudson Bay
Gulf of St Lawrence
North Pacific Ocean
North Atlantic Ocean
Caribbean Sea
Guatemala
Nicaragua
Venezuela
Map data ©2010 Europa Technologies, INEGI
Search result for "Miscanthus," a special energy biomass crops for second generation biofuel.
.2 to 2
.3 to 4
.0 to 0

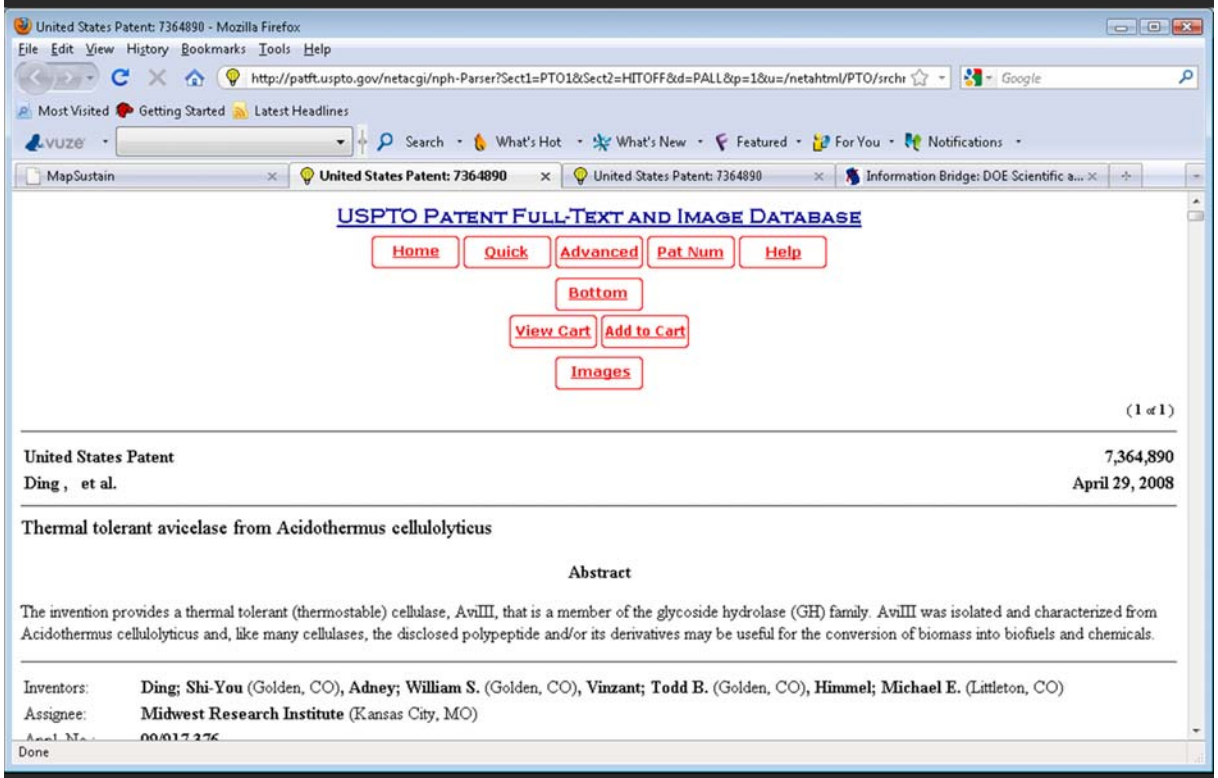


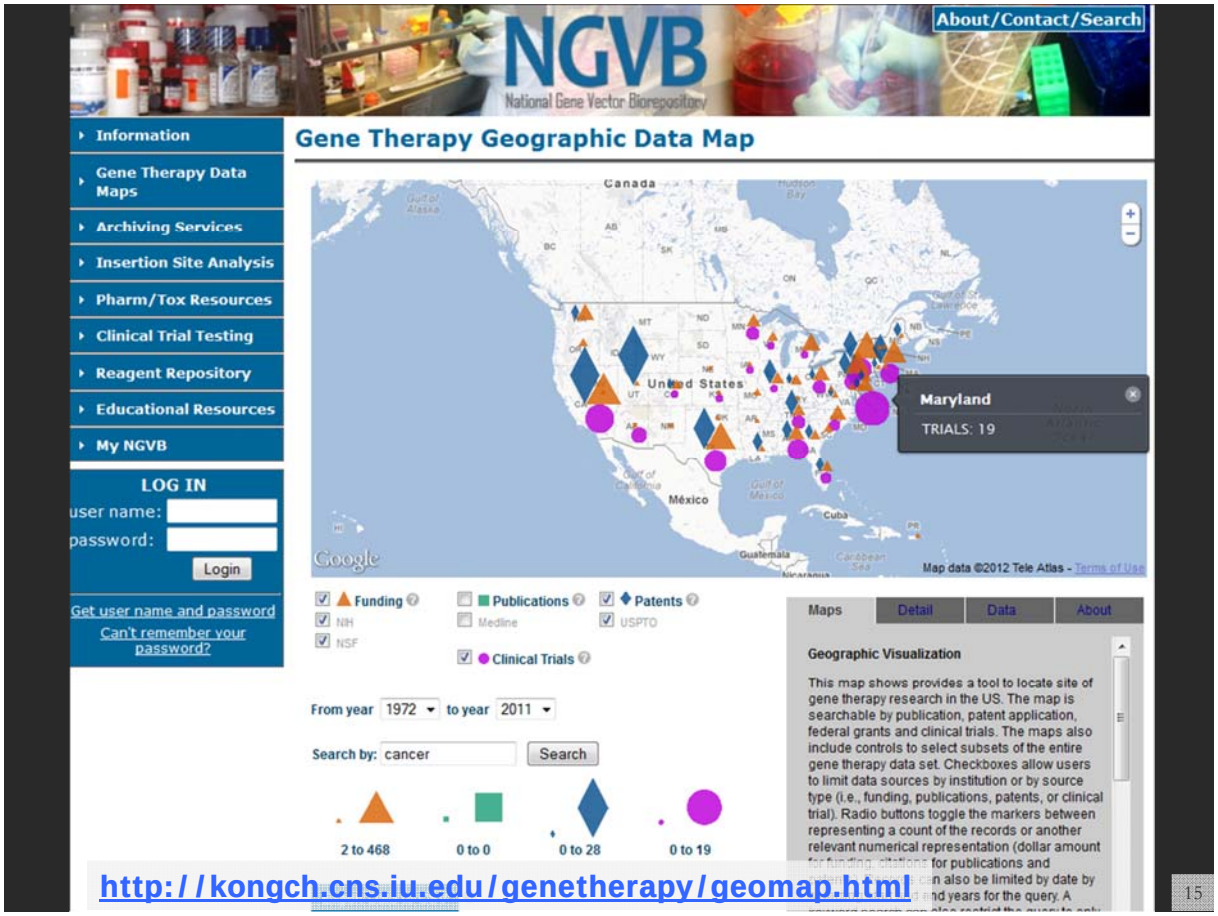
The science map at 13 top-level scientific **disciplines level**.



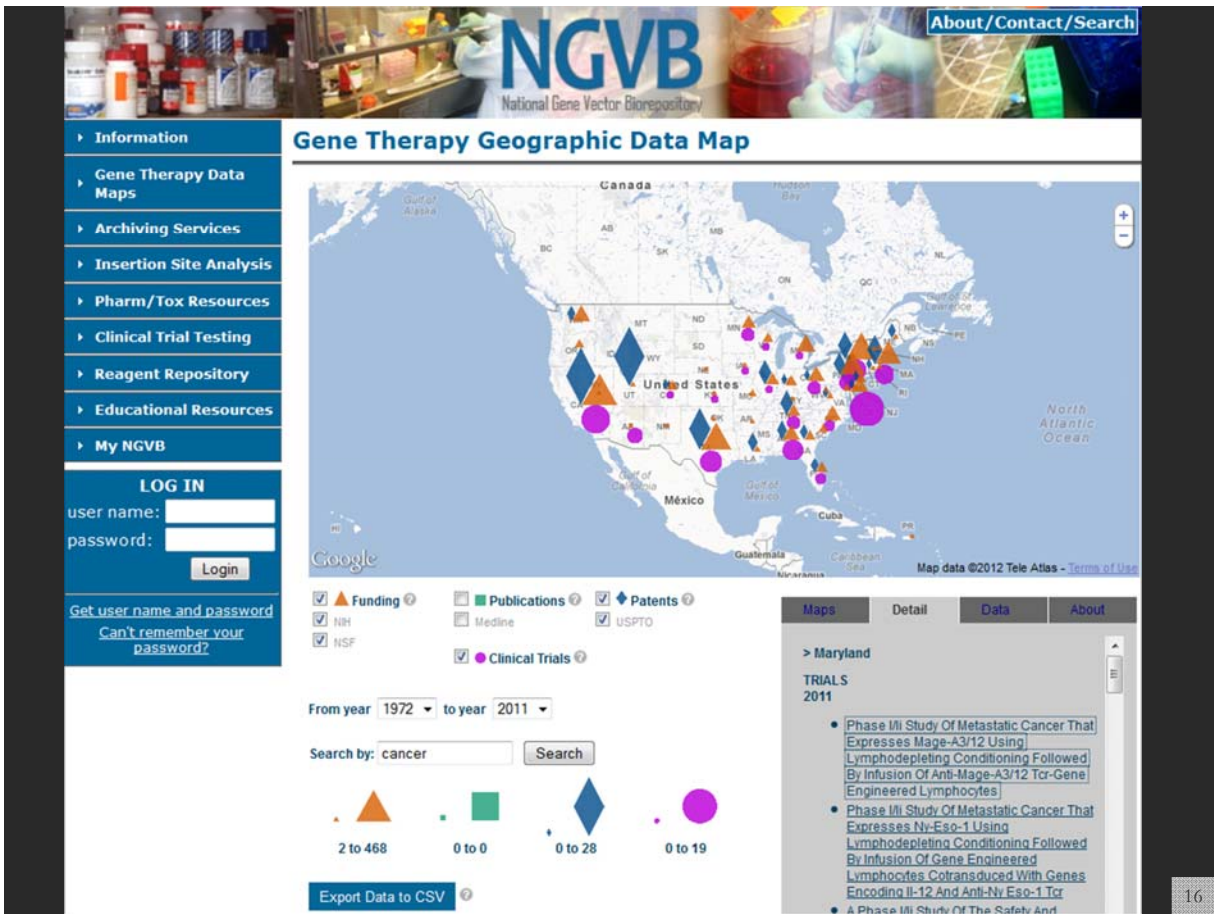
The science map at 554 **sub-disciplines level**.


Geographic Map
Science Map
Color
B & W
Math and Physics
Chemistry
Health Professionals
Medical Specialties
Engineering and Computer Science
Biotechnology
Brain Research
Chemical, Mechanical, and Civil Engineering
Infectious Diseases
Social Sciences
Earth Sciences
Biology
Humanities
Google
Copyright © 2008 The Regents of the University of California - Terms of Use
.366 to 3,300
.867 to 7,853
.16 to 671
Maps
Detail
Data
> 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
Math & Physics
Chemistry
Computer Science & EE
Other Engineering
Biotechnology
Earth Sciences
Biology
Infectious Diseases
Medical Specialties
Brain Research
Health Professionals
Social Sciences
Humanities


United States Patent: 7364890 - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=/netahtml/PTO/srchr
Most Visited Getting Started Latest Headlines
Search What's Hot What's New Featured For You Notifications
MapSustain
United States Patent: 7364890
United States Patent: 7364890
Information Bridge: DOE Scientific a...
USPTO PATENT FULL-TEXT AND IMAGE DATABASE
Home Quick Advanced Pat Num Help
Bottom
View Cart Add to Cart
Images
(1 of 1)
United States Patent
Ding , et al.
7,364,890
April 29, 2008
Thermal tolerant avicelase from Acidothermus cellulolyticus
Abstract
The invention provides a thermal tolerant (thermostable) cellulase, AviIII, that is a member of the glycoside hydrolase (GH) family. AviIII was isolated and characterized from Acidothermus cellulolyticus and, like many cellulases, the disclosed polypeptide and/or its derivatives may be useful for the conversion of biomass into biofuels and chemicals.
Inventors: Ding; Shi-You (Golden, CO), Adney; William S. (Golden, CO), Vinzant; Todd B. (Golden, CO), Himmel; Michael E. (Littleton, CO)
Assignee: Midwest Research Institute (Kansas City, MO)
Done



http://kongch.cns.iu.edu/genetherapy/geomap.html



ClinicalTrials.gov
A service of the U.S. National Institutes of Health

Home Search Study Topics Glossary
Search

Full Text View | Tabular View | No Study Results Posted | Related Studies

MAGE-A3/12 Metastatic Cancer Treatment With Anti-MAGE-A3/12 TCR-Gene Engineered Lymphocytes

This study has been suspended.

First Received on January 7, 2011. Last Updated on March 14, 2012 History of Changes

Sponsor:	National Cancer Institute (NCI)
Information provided by:	National Institutes of Health Clinical Center (CC)
ClinicalTrials.gov Identifier:	NCT01273181

Purpose

Background:

- MAGE-A3/12 is a type of protein commonly found on certain types of cancer cells, particularly in metastatic cancer. Researchers have developed a process to take lymphocytes (white blood cells) from cancer patients, modify them in the laboratory to target cancer cells that contain MAGE-A3/12, and return them to the patient to help attack and kill the cancer cells. These modified white blood cells are an experimental treatment, but researchers are interested in determining their safety and effectiveness as a possible treatment for cancers that involve MAGE-A3/12.

Objectives:

- To evaluate the safety and effectiveness of anti-MAGE-A3/12 lymphocytes as a treatment for metastatic cancers that have not responded to standard treatment.

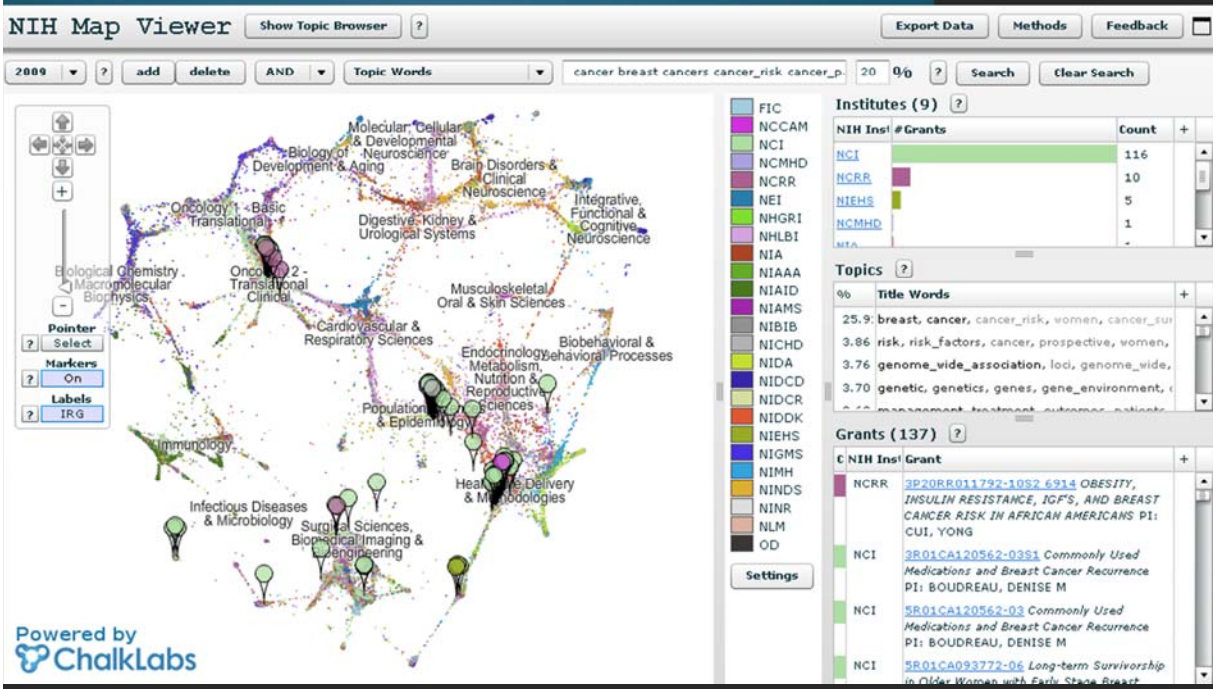
Eligibility:

- Individuals at least 18 years of age who have been diagnosed with metastatic melanoma, renal cell cancer, or another type of metastatic cancer that has not responded to standard treatment.

Design:

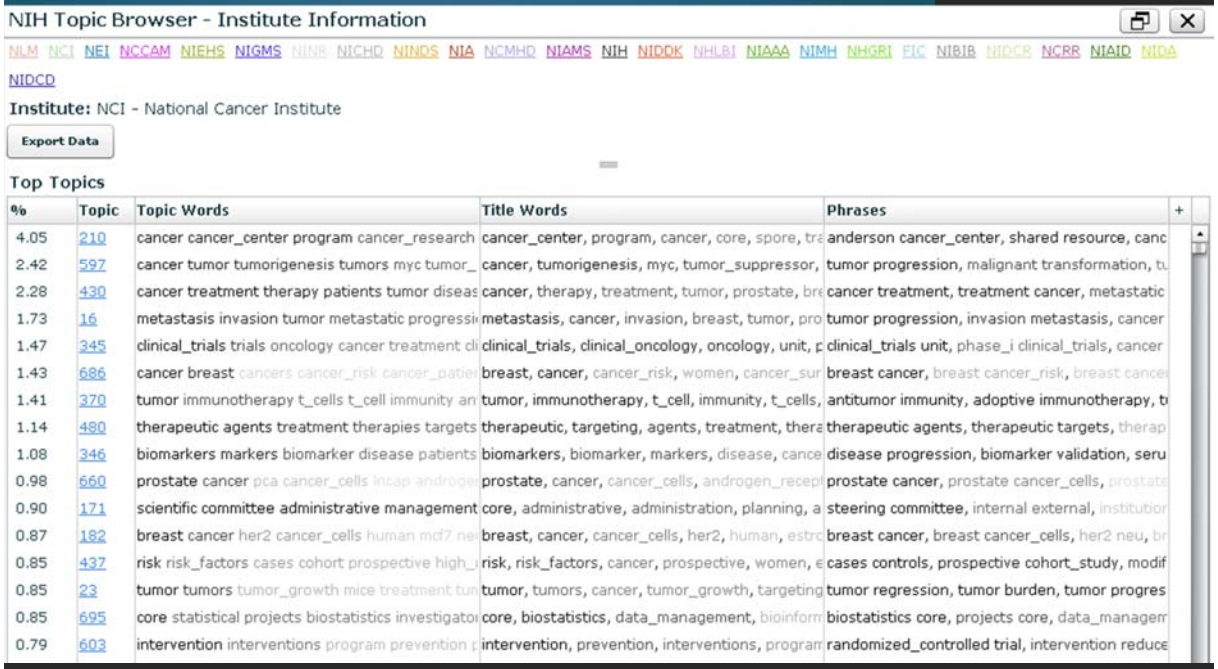
- Participants will be screened with a full medical history and physical examination, as well as blood and urine tests, tumor samples, and imaging studies.
- Participants will have leukapheresis to collect enough white blood cells for modification in the laboratory.
- Seven days before the start of anti-MAGE-A3/12 treatment, participants will have chemotherapy with cyclophosphamide and fludarabine to suppress the immune system in preparation for the treatment.

A Topic Database of NIH-Funded Grants



https://app.nihmaps.org

A Topic Database of NIH-Funded Grants



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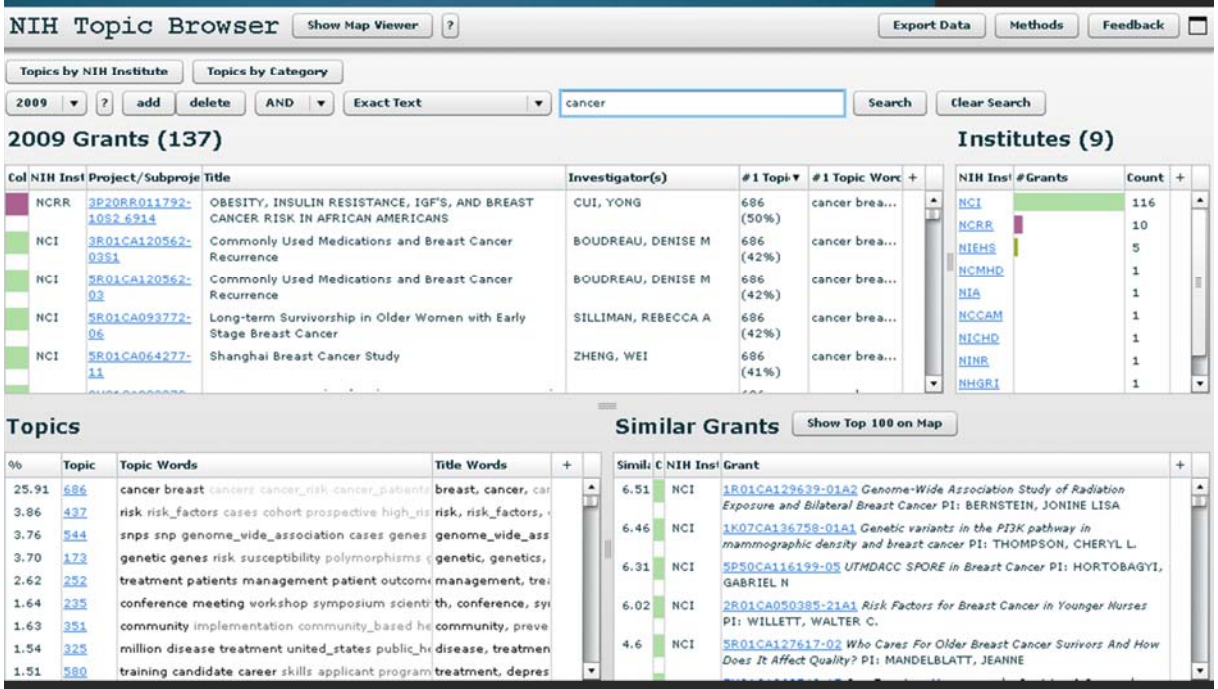
A Topic Database of NIH-Funded Grants

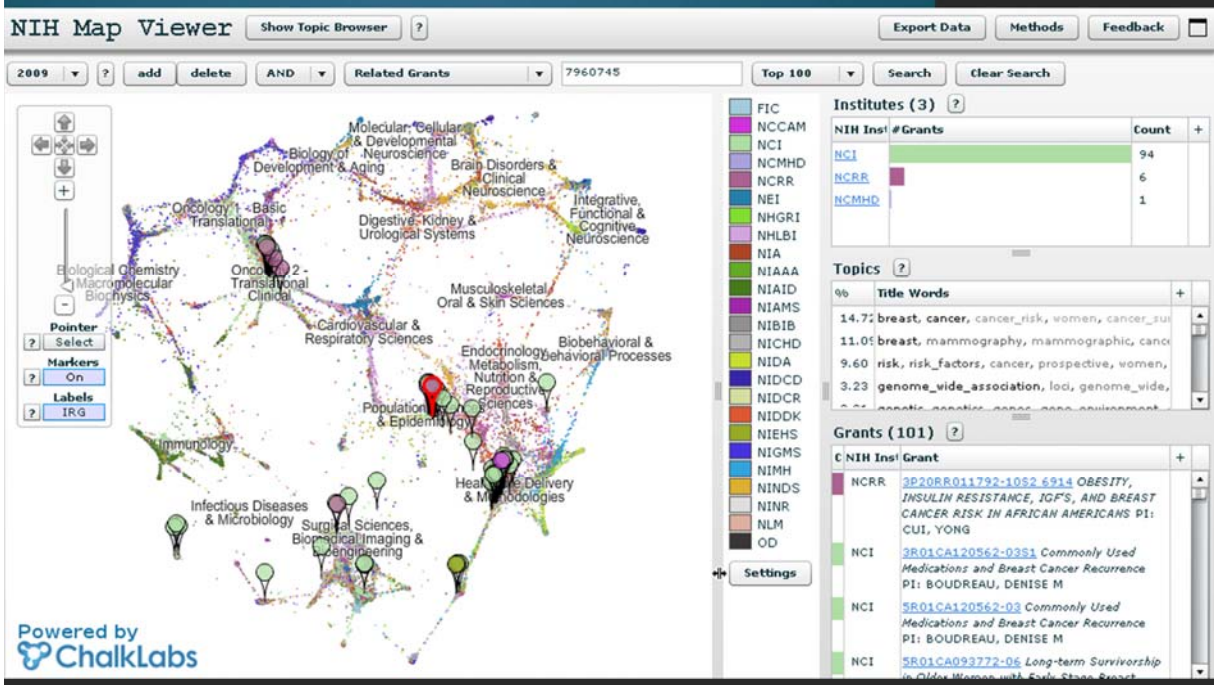


https://app.nihmaps.org

A Topic Database of NIH-Funded Grants

https://app.nihmaps.org

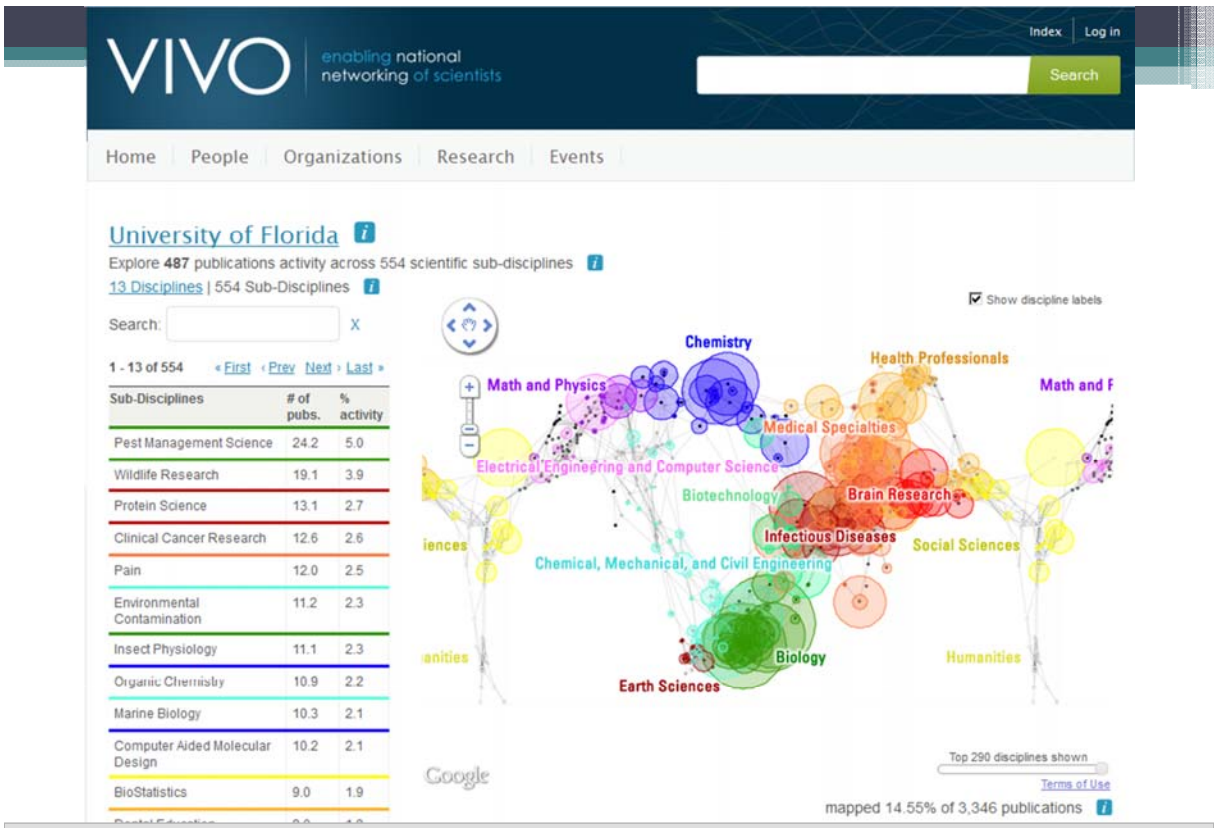
A Topic Database of NIH-Funded Grants



https://app.nihmaps.org

http://nrn.cns.iu.edu

Geospatial Analysis (Where) A geospatial map of the US is used to show where what science is performed by whom.



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

Related Talks

Monday

3:30pm — Online Interactive Map: Say goodbye to tabular representation
Chin Hua Kong and Katy Börner
The Research Superhighway | Oak room | Monday 3:30 – 4pm

5pm — Places & Spaces: Mapping Science
Katy Börner, Michael Stamper, and Samantha Hale
The Human Element | Oak room | Monday 5 – 5:30pm

Tuesday

9:30am — Plug-and-play visualization with the Science of Science Tool
David Polley, Chin Hua Kong, and Katy Börner
The Research Superhighway | Walnut room | Tuesday 9:30 – 10am

11:30am — VIVO@IU: An overview
Robert Light, Chin Hua Kong, and Katy Börner
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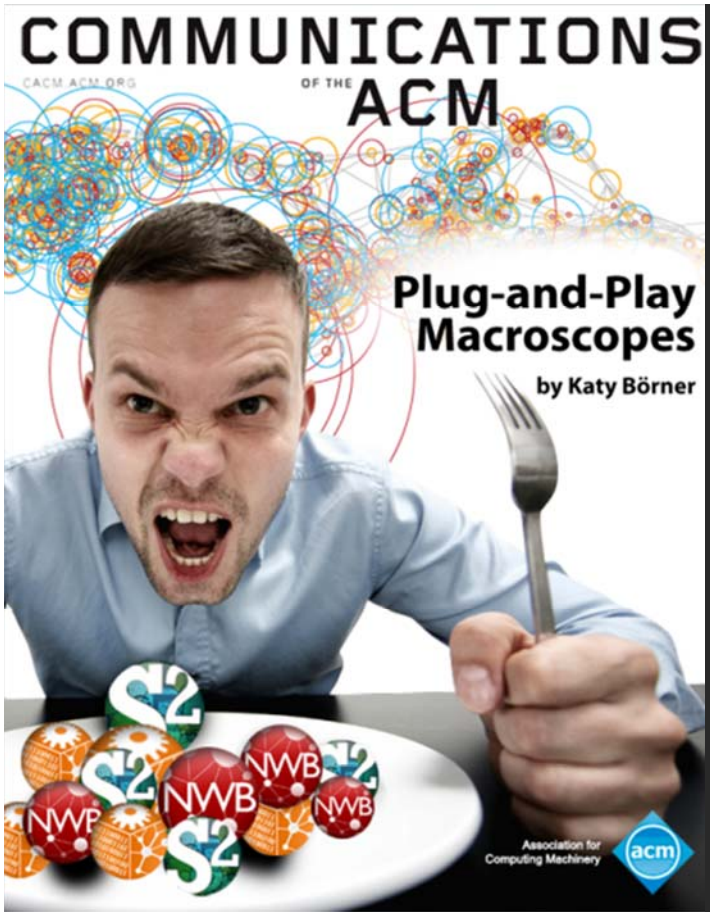


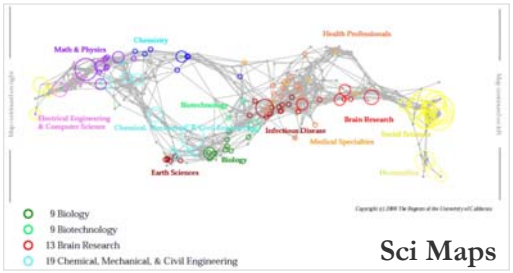
Börner, Katy. (March 2011). Plug-and-Play Macroscopes. *Communications of the ACM, 54(3), 60-69.*

Video and paper are at
http://www.scivee.tv/node/27704

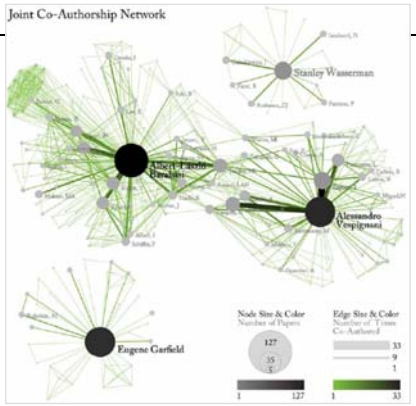
Sci² Tool – "Open Code for S&T Assessment"

http://sci2.cns.iu.edu

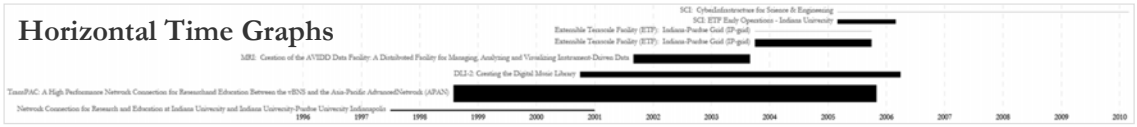
OSGi/CIShell powered tool with NWB plugins and many new scientometrics and visualizations plugins.



Sci Maps

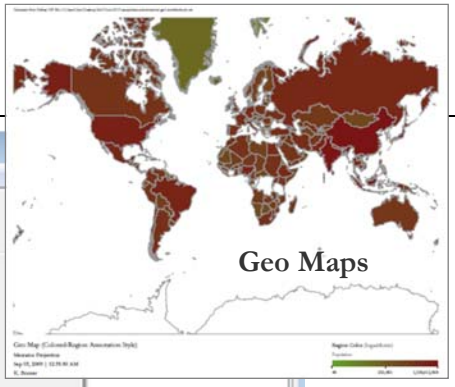


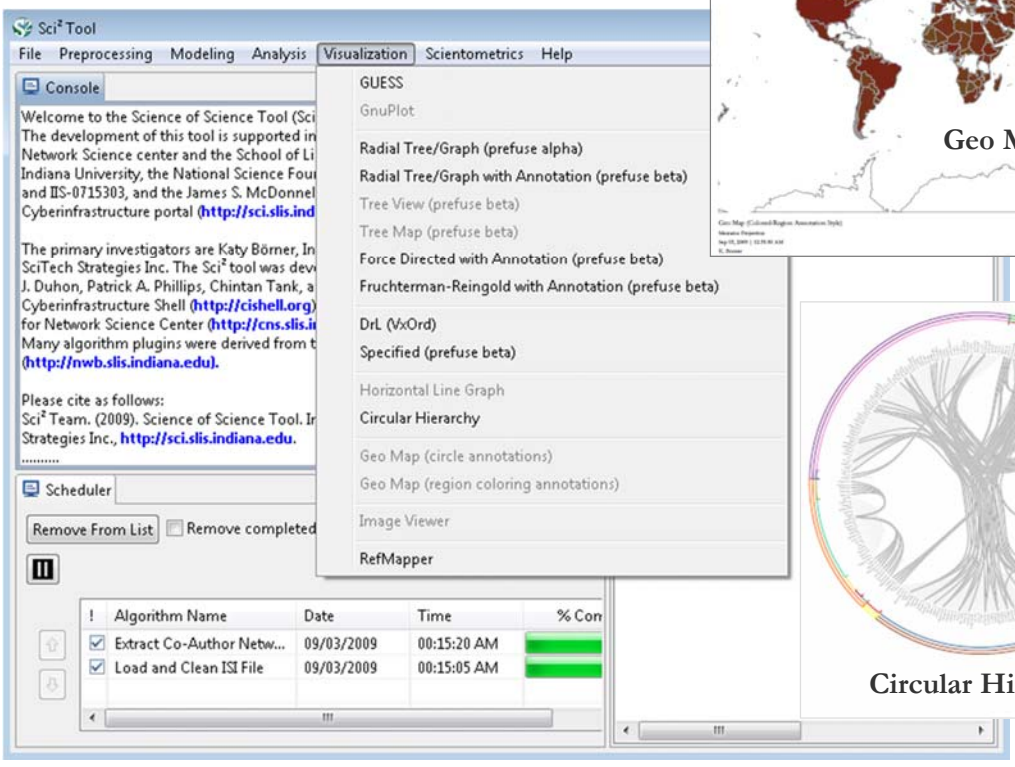
GUESS Network Vis

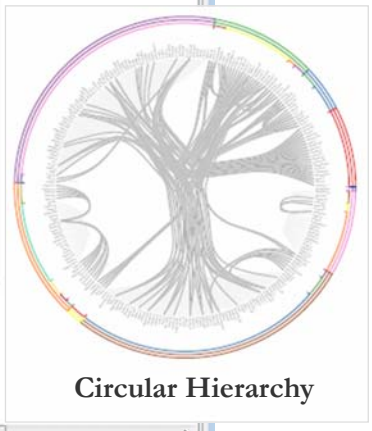


Börner, Katy, Huang, Weixia (Bonnie), Linnemeier, Micah, Duhon, Russell Jackson, Phillips, Patrick, Ma, Nianli, Zoss, Angela, Guo, Hanning & Price, Mark. (2009). Rete-Netzwerk-Red: Analyzing and Visualizing Scholarly Networks Using the Scholarly Database and the Network Workbench Tool. Proceedings of ISSI 2009: 12th International Conference on Scientometrics and Informetrics, Rio de Janeiro, Brazil, July 14-17 . Vol. 2, pp. 619-630.

Sci² Tool







Sci² 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.

Sci² Tool Usage at National Institutes of Health

NETE A|V - Temporal Analysis

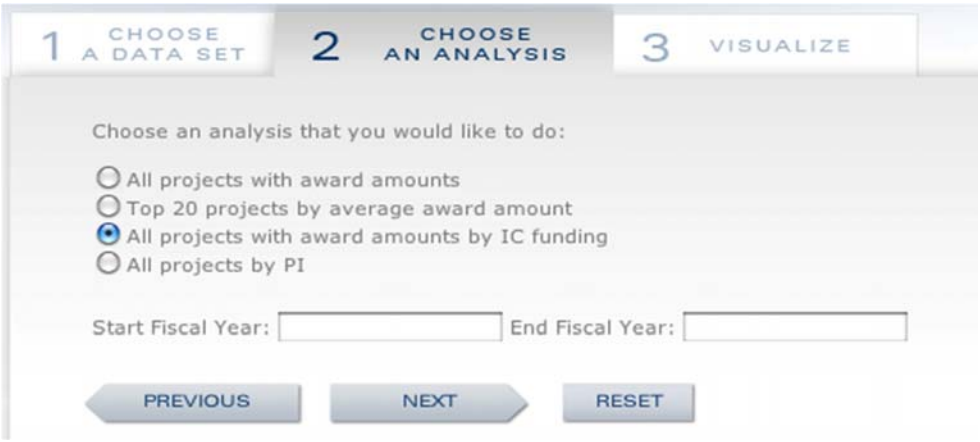
Find and select one or multiple PIs

Select (Select All / Deselect All)	Name	Organization	Total Projects	Projects with Award Amounts	Profile Id
☐	CEDAR, HOWARD	HEBREW UNIVERSITY OF JERUSALEM	6	6	1858057
☐	YANAI, JOSEPH	HEBREW UNIVERSITY OF JERUSALEM	3	3	1869372
☐	OLSON, SARA H	HEBREW UNIVERSITY OF JERUSALEM	6	6	1872521
☐	MINKE, BARUCH	HEBREW UNIVERSITY OF JERUSALEM	1	1	1876962
☐	SCHULDINER, SHIMON	HEBREW UNIVERSITY OF JERUSALEM	3	3	1901430

NETE A|V - Temporal Analysis

Visualize portfolio of projects on the timescale

- Projects with award amounts
- Projects by IC funding
- Projects by PIs



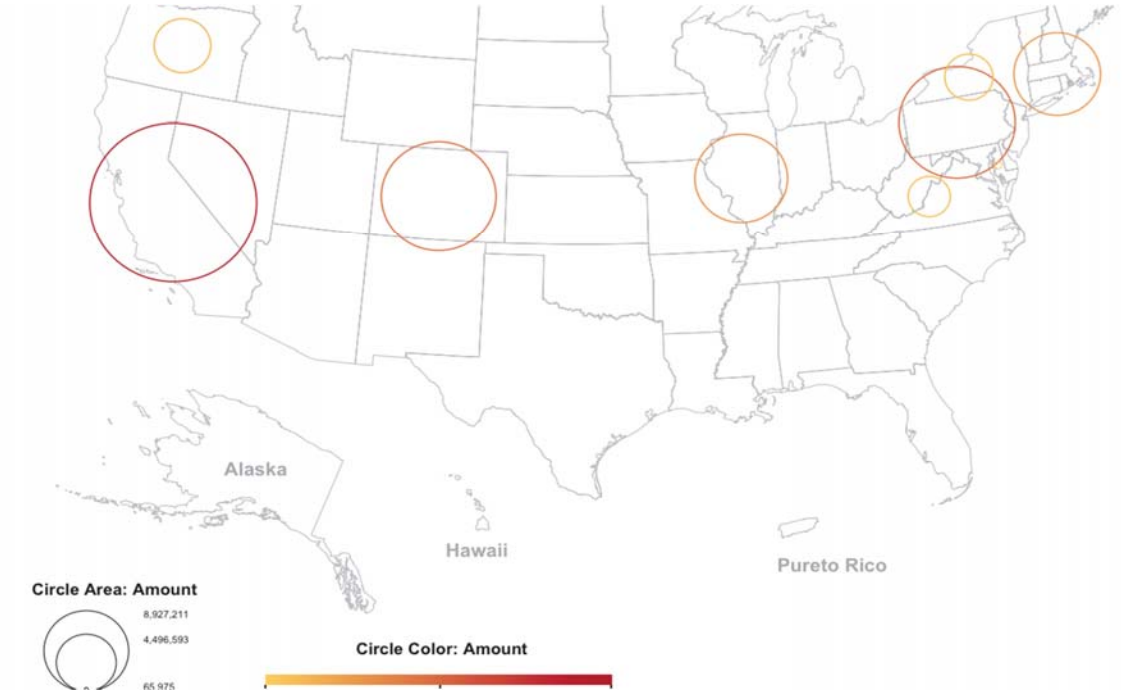
Sci² Tool Usage at National Institutes of Health

NETE A|V - Temporal Analysis – Projects with Award Amounts

Four-variable visualizations, e.g. time, amounts, PIs and projects

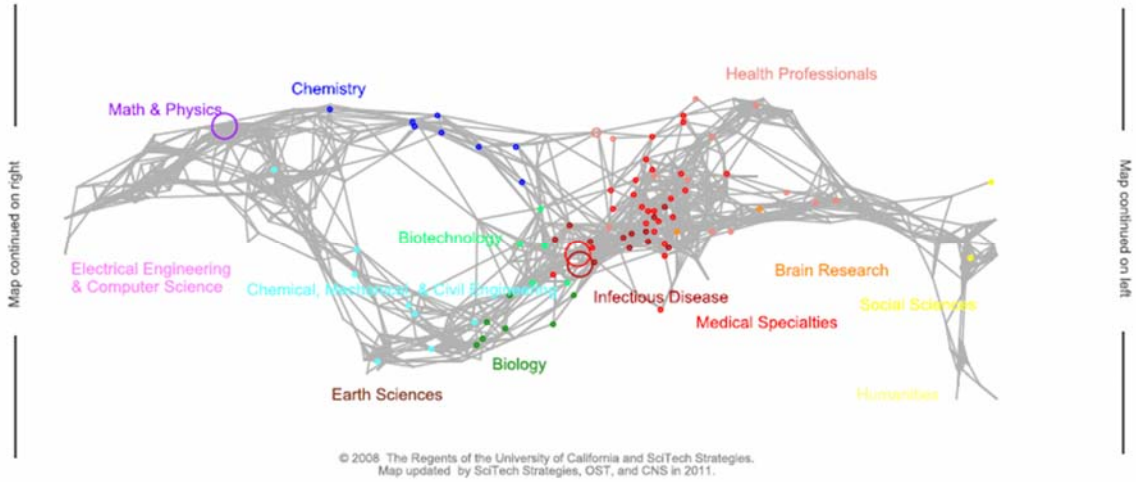
Sci² Tool Usage at National Institutes of Health

NETE A|V – Geospatial Analysis – Projects by External Organization



Sci² Tool Usage at National Institutes of Health

NETE A|V – Topical Analysis – Publications in a Project Portfolio



NETE A|V – Network Analysis – (Co-) PIs to Projects

Related Talks

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3:30pm — Online Interactive Map: Say goodbye to tabular representation
Chin Hua Kong and Katy Börner
The Research Superhighway | Oak room | Monday 3:30 – 4pm

5pm — Places & Spaces: Mapping Science
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The Human Element | Oak room | Monday 5 – 5:30pm

Tuesday

9:30am — Plug-and-play visualization with the Science of Science Tool
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11:30am — VIVO@IU: An overview
Robert Light, Chin Hua Kong, and Katy Börner
The Research Superhighway | Oak room | Tuesday 11:30 – 12pm

References

Börner, Katy, Chen, Chaomei, and Boyack, Kevin. (2003). **Visualizing Knowledge Domains.** In Blaise Cronin (Ed.), *ARIST*, Medford, NJ: Information Today, Volume 37, Chapter 5, pp. 179-255.
http://ivl.slis.indiana.edu/km/pub/2003-borner-arist.pdf

Shiffrin, Richard M. and Börner, Katy (Eds.) (2004). **Mapping Knowledge Domains**. *Proceedings of the National Academy of Sciences of the United States of America*, 101(Suppl_1).
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Börner, Katy, Sanyal, Soma and Vespignani, Alessandro (2007). **Network Science.** In Blaise Cronin (Ed.), *ARIST*, Information Today, Inc., Volume 41, Chapter 12, pp. 537-607.
http://ivl.slis.indiana.edu/km/pub/2007-borner-arist.pdf

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http://scimaps.org/atlas

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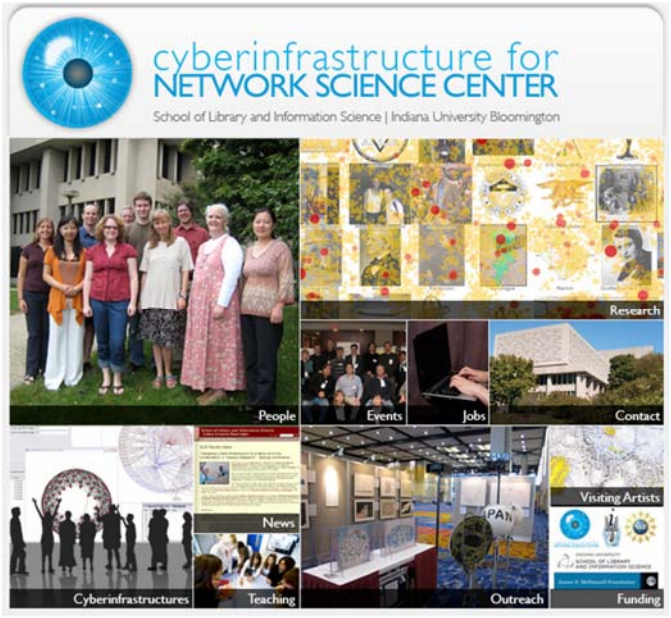
We are Hiring!

Senior Software Engineer/Research Analyst (3IT) **IU Job #6839**

As Senior Software Engineer, you will perform research and programming for current and future externally funded research projects at the CNS Center. These projects include tools powered by the Cyberinfrastructure Shell (CIShell, http://cishell.org), an open-source software platform that supports the interchange of datasets and algorithms; MapIN, a map of Indiana's expertise and resources; and other online interactive maps and web sites. You will participate in the entire software development process, from the collection of user stories through planning, implementation, testing, deployment, and documentation. You will also be expected to participate in the training new developers, and the creation of educational material for workshops. As Senior Software Engineer, you will have a chance to help set the standards of our team in many areas, including code, teamwork, product direction, and process.

Software Developer (2IT) **IU Job #6862**

As a Software Developer, you will work in a team of four to perform research and programming for current and future externally funded research projects at the CNS Center. The main focus will be on tools powered by the Cyberinfrastructure Shell (CIShell, http://cishell.org). CIShell is an open-source software platform, built on Java and OSGi that allows developers and scientists to easily exchange datasets and algorithms, and bundle them into custom tools that serve the particular needs of research communities. You will participate in the entire software development process, from the collection of user stories through planning, implementation, testing, deployment, and documentation.



All papers, maps, tools, talks, press are linked from http://cns.iu.edu

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