

Open Source Data and Tools for Global Science Decision-Making

Katy Börner, Cyberinfrastructure for Network Science Center
School of Informatics and Computing
Indiana University, USA

PEGASCIS Scoping Meeting
Platform for Enhancing Global Academic Strategic Collaboration in Science
Department of State, Washington D.C.

July 21, 2014



Map of Scientific Collaborations from 2005-2009



Olivier H. Beauchesne, 2011.
Map of Scientific Collaborations from 2005-2009.

Computed Using Data from Elsevier's Scopus

Visit *Mapping Science* exhibit at <http://scimaps.org> to see 100 S&T maps.

LinkedIn: World's Largest Professional Network

<https://www.linkedin.com>

Launched in May 2003. More than 225 million users in June 2013.

The screenshot shows the LinkedIn profile of Katy Borner, a member since February 27, 2005. The profile includes options for changing email, password, and account type. A yellow banner at the bottom of the profile area reads "Exemplary Expert Networking Service". To the right, there are sections for "Invitations (368)" and "Messages (26)". The invitation list includes Eric Archambault (Oct 20), Jordan Lippman (Oct 17), and Julie Hewett (Oct 17). The message list includes an invitation from Marc Smith (Sep 8) and a notification from LinkedIn (Jul 9).

ResearchGate GmbH

<https://www.researchgate.net>

Launched in May 2008, has a user base of 2.3 million scientists worldwide in Aug .2013

The screenshot shows the ResearchGate website interface. The top navigation bar includes "ResearchGate", "Q&A", "Publications", "Projects", and a search bar. Below the navigation bar, there are buttons for "ASK A QUESTION" and "ADD YOUR PUBLICATIONS". A notification box asks "Is your email address up to date?" with an "Add email address" button. The main content area is divided into "Live Feed" and "YOUR NETWORK ACTIVITY". The "Live Feed" shows a post by Cassidy Sugimoto about a new article. The "YOUR NETWORK ACTIVITY" section lists recent actions by users like Stasa Milojevic, Mark Musen, and Cassidy Sugimoto.

Exemplary Expert Networking Service

Academia.edu—Share Research

<http://www.academia.edu>

Launched in Nov 2010.



Search People, Research Interests and Universities

Home Log In Sign Up



Academia.edu is a place to share and follow research



Share your papers



See analytics on your profile and papers



Follow other people in your field

Exemplary Expert Networking Service

Sign Up to Academia.edu



Connect with Facebook



Connect with Google

or

First Name

5

Google Scholar

<http://scholar.google.com>

Launched in Nov. 2011. Has “unknown” number of profiles.



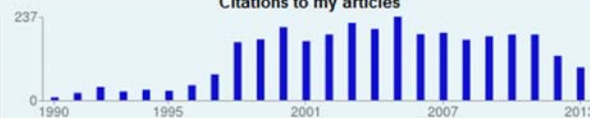
Anurag Acharya

Google Inc
scholarly communication - search engines
Verified email at google.com

Citation indices

	All	Since 2008
Citations	3209	946
h-index	28	15
i10-index	41	20

Citations to my articles



Show 20 1-20 Next >

Title / Author	Cited by	Year
Active disks: Programming model, algorithms and evaluation A Acharya, M Uysal, J Saltz ACM SIGPLAN Notices 33 (11), 81-91	361	1998
Sumatra: A language for resource-aware mobile programs A Acharya, M Ranganathan, J Saltz Mobile Object Systems Towards the Programmable Internet, 111-130	258	1997
History-based access control for mobile code G Edjlali, A Acharya, V Chaudhary Proceedings of the 5th ACM conference on Computer and communications ...	222	1998

Exemplary Expert Networking Service

Google scholar

Search Authors

My Citations - Help

Follow this author

5 Followers

Follow new articles
Follow new citations

Co-authors

Joel Saltz
Jeff Dean
Alan Sussman
Simon Tong
Steve Lawrence
Huican Zhu
Milind Tambe
Sanjeev Setia
Bongki Moon
C.J. Paul (CJ)
Sanjay Ghemawat
Jeffrey Hollingsworth
Maximilian Ibel
Tao Yang

6

Expert Networking Services—60 More

This table provides general information for each tool: name, developing institution, external links to information, whether the code is [Open Source](#) and known adopters of the software.

Research Networking Tool	Link to Product Page	Developer/Owner	Open Source	Adopters
Activity Insight	Activity Insight	Digital Measures	No	USC Marshall School of Business
C-IKNOW ^{[5][2]}	C-IKNOW	Science of Networks in Communities (SONIC) - Northwestern University	Yes	National Cancer Institute, National Science Foundation
Collaborative Partnership / Profile System	Collaborative Partnership and Research Expertise at UT Arlington	University of Texas at Arlington	Yes	UT Arlington, UT Pan American, University of North Texas Health Science Center, UT El Paso, UT San Antonio, UT Tyler, UT Health Science Center, University of North Texas, UT Dallas, UT Health Center at Tyler, Texas Christian University, (plans to add Gulf Coast Consortia: Rice University, Baylor College of Medicine)
Community Academic Profiles - CAP	Community Academic Profiles	Stanford University	No	Stanford University
Curvita™ Profile Manager	Curvita Profile Manager	SciMed Solutions	No	University of North Carolina
CUSP - Columbia University Scientific Profiles	CUSP	Columbia University	No	Columbia University
Digital Vita	DigitalVita	Center for Dental Informatics - University of Pittsburgh	Yes	University of Pittsburgh, Pitt Health Sciences Center
Elsevier's SciVal Experts (formerly Collexis Expert Profiling)	SciVal Experts	Elsevier	No	45+ implementations worldwide containing profiles for researchers at 65+ institutions. Customers include Johns Hopkins University, Memorial Sloan-Kettering, Northwestern University, REACH NC, University of Michigan, University of Texas MD Anderson Cancer Center, and several institutions in Asia-Pacific, Europe and Latin America. See SciVal

http://en.wikipedia.org/wiki/Comparison_of_Research_Networking_Tools_and_Research_Profiling_Systems

7

Expert Networking Services

What insights needs decision makers really have:

- **Foresight + Context:** What areas are emerging, merging, dead? Where will I achieve highest return on investment of time, money, compassion?
- **LOCAL Strategic Decision Making:** What is the unique value proposition of my institution/region? What strengths and gaps exist and how can we overcome challenges and embrace opportunities?
- **GLOBAL Networks and Insight:** Who are the leading experts, institutions, regions? How are they connected and what R&D do they perform?

Colglazier & Lyons (2014) The United States Looks to the Global Science, Technology and Innovation (STI) Horizon. Science & Diplomacy on-line journal of the American Association for the Advancement of Science (AAAS).

8

Expert Networking Services

What insights needs decision makers really have:

- **Foresight + Context:** What areas are emerging, merging, dead? Where will I achieve highest return on investment of time, money, compassion?
- **LOCAL Strategic Decision Making:** What proposition of my institution/region? What exist and how can we overcome challenges and opportunities?
- **GLOBAL Networks and Insight:** Who are the leading experts, institutions, regions? How are they connected and what R&D do they perform?

Not addressed by
Match.com or
Kickstarter

Colglazier & Lyons (2014) The United States Looks to the Global Science, Technology and Innovation (STI) Horizon. Science & Diplomacy on-line journal of the American Association for the Advancement of Science (AAAS).

9

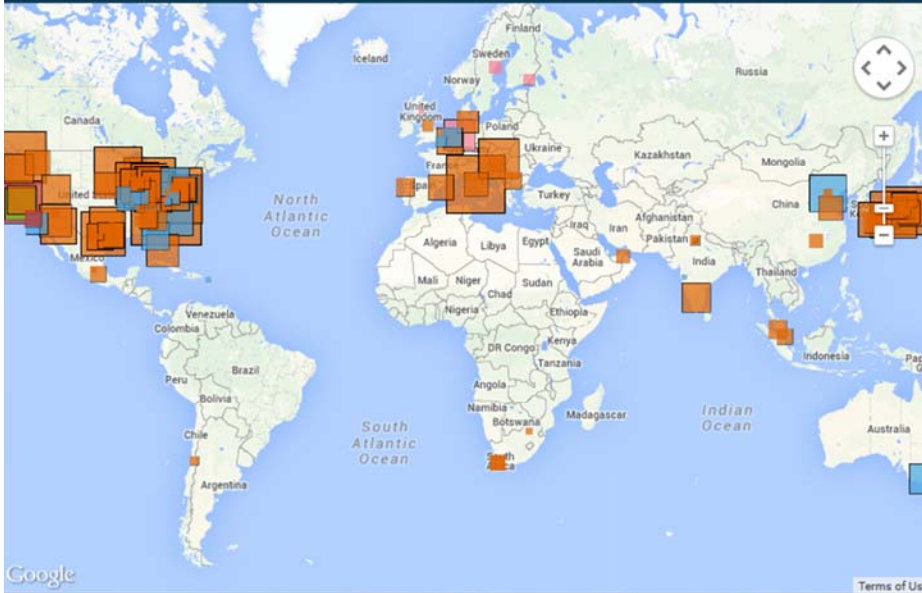
Expert Networking Services

Desirable Properties

- Open data
- Open code
- Easy harvesting and ingest of major publication datasets, e.g., MEDLINE, Elsevier, Reuters, SciELO, others.
- Inter-platform compatibility—VIVO, Profiles, SciVal Experts, Loki, etc.
- Part of federated search tools, Direct2Experts, CTSAconnect, and SciVal Community, etc.
- Supports/uses DOIs, author identifiers, e.g., ORCID, SciENCv
- Sustainable

10

International Researcher Network Visualization 1.0



Data Types

Check in the boxes next to the data types you'd like to see displayed on the map.

- People
- Publications
- Patents
- Funding
- Courses

System Types

- Converts
- Elsevier SciVal Experts
- Harvard Catalyst Profiles
- Stanford CAP
- VIVO

Timeline

Jul, 2014

Jul, 2014 Jul, 2014



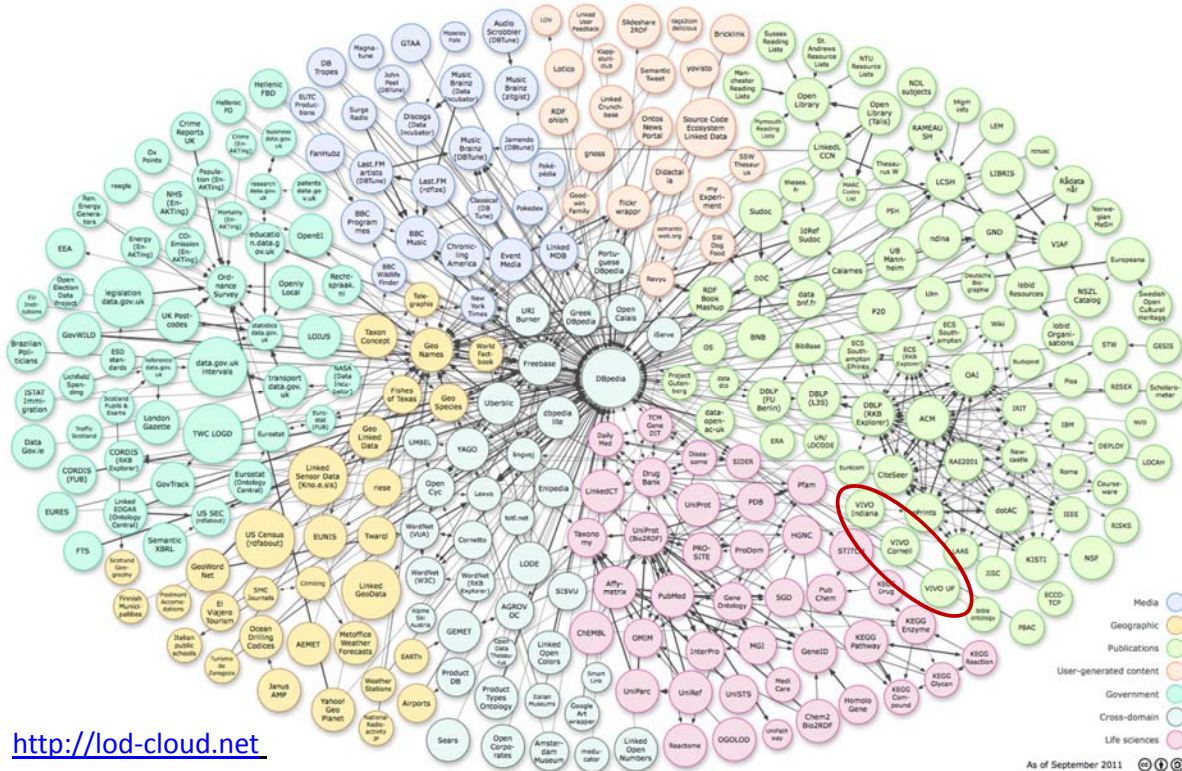
Play Pause Stop

Hide Map ▲ Data Register About

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

Light, Robert, Chin Hua Kong, and Katy Börner. 2013. *"An Automated System for Tracking the Growth of Expert Profiling Systems"*. Joint Conference on Digital Libraries (JCDL).

Open Data: Linked Data, 2011



<http://lod-cloud.net>

Expert Networking Services— Example

Using existing systems to identify expertise on ‘Microbiome’

- CTSA DIRECT2Experts a pilot national network to demonstrate interoperability among research-networking platforms: <http://direct2experts.org>
- NSF Award Search: <http://www.nsf.gov/awardsearch>
- NIH Reporter: <http://projectreporter.nih.gov>
- European Commission CORDIS FP7 data: http://cordis.europa.eu/fp7/projects_en.html



http://academy.asm.org/images/stories/documents/FAQ_Human_Microbiome.pdf

13

DIRECT2Experts

Distributed Interoperable Research Experts Collaboration Tool

A Federated Network of Biomedical Research
DIRECT-ly Supported by Research

Home | About | Phase 1 - Aggregate Search | Phase 2 - Linked Open Data | **New!** - Integrated Search | Participants | JAMIA

Phase 1 - Aggregate Search

Enter a search phrase, such as "informatics" in the form below to search for experts.

Find Experts:

Below are the number of matching people at participating institutions. Click an institution name to view the list of people. As you move your mouse over the different institution names, you will see important notes about that institution's data and a site preview on the right.

Institution	Matches
Albert Einstein College of Medicine	13
Arizona State University	4
Arthritis Foundation	8
Baylor College of Medicine	X
Boston University	X
Case Western Reserve University	19
Cornell University	34
CTSI at Children's National	7
David Geffen School of Medicine at UCLA	0
Educatio Társadalmi Szolgáltató Nonprofit Kft.	2
Georgia Regents University	4
Harvard University	187
Indiana CTSI	0
Indiana University School of Medicine	6
Instituto Politécnico Nacional	0
John Hopkins University	24

Data Comments

Harvard University

Site Preview

Institution	Matches
Harvard University	187
University of Colorado Profiles	66
University of Florida	64
University of Michigan	44
Cornell University	34
University of Minnesota - Twin Cities Campus	33
University of Washington	27
John Hopkins University	24
UC Davis Health System	22
Case Western Reserve University	19
The University of Arizona	19
University of Maryland	17
University of Miami	17

808 experts found

14



Phase 1

Enter search

Find people

Below to view

see in

Institution

Albert

Arizona

Arthritis

Baylor

Boston

Case

Cornell

CTSI

David

Educ

Geord

Harva

Indian

Institu

John

HARVARD CATALYST

THE HARVARD CLINICAL AND TRANSLATIONAL SCIENCE CENTER

- About Harvard Catalyst
- National CTSA Consortium
- Contact Us
- News
- Events
- Spotlights

Search Harvard Catalyst

FAQ

People & Collaboration | Consulting & Advice | Education & Training | Funding | Research Resources | Programs

Harvard Catalyst Profiles

Contact, publication, and social network information about Harvard faculty and fellows.

Keywords

Last Name

Institution

[More Search Options](#)

Menu

- [Find People](#)
- [Find Everything](#)
- [About This Site](#)
- [Edit My Profile](#)
- [Login to Profiles](#)

Search Results (8) [More Search Options](#)

Click the **Why** column to see why an item matched the search.

Match	Type	Why?
Microbiome, disease, and immune cell regulation in humans	Mentoring - Current Student Opportunity	Why?
Searching for Rare Bacterial Phyla in the Human Oral Microbiome	Mentoring - Completed Student Project	Why?
Identification of phenotypic subtypes of hidradenitis suppurativa through investigation of re-epithelialization and skin microbiota	Mentoring - Completed Student Project	Why?
Is Food Allergy an Infectious Disease? Surveying the Microbiome in Food Allergy	Mentoring - Completed Student Project	Why?
Composition of the Supra and Sub Gingival Microbiota in Adult Periodontitis in Subjects who are Current Smokers or who Have Never Smoked	Mentoring - Completed Student Project	Why?
Composition of the Supra and Subgingival Microbiota in Adult Periodontitis Subjects Who are current Smokers or Who Have Never Smoken	Mentoring - Completed Student Project	Why?
ENDOBIONT T. VAGINALIS VIRUSES WITH IMPACT ON WOMEN'S HEALTH	Mentoring - Current Student Opportunity	Why?

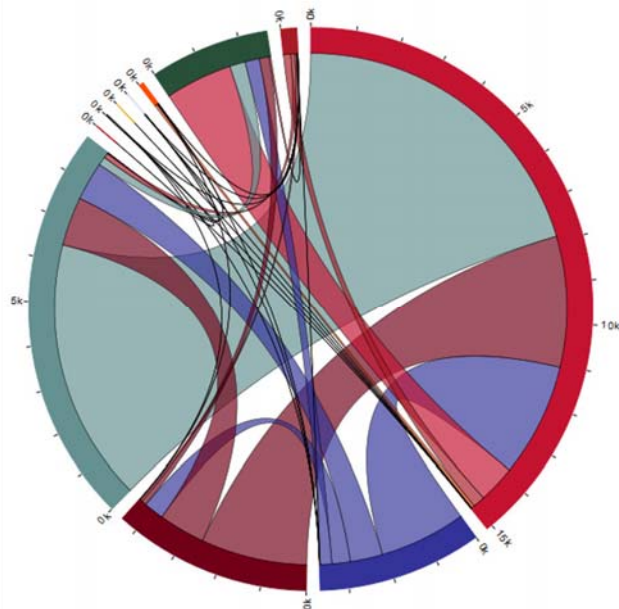
Search Criteria
microbiome

Search Options
[Modify Search](#)
[Search Other Institutions](#)

Filter by Type

- All (499)
- People (187)
- Research (303)
- Concepts (1)
- Mentoring (8)**

Institutions		
<input checked="" type="checkbox"/>	Harvard Med School	(15124)
<input checked="" type="checkbox"/>	Northwestern Med School	(3630)
<input checked="" type="checkbox"/>	U. of Minnesota	(4388)
<input checked="" type="checkbox"/>	U. California at San Fran	(8874)
<input checked="" type="checkbox"/>	Cornell	(1)
<input checked="" type="checkbox"/>	Cornell Medical	(32)
<input checked="" type="checkbox"/>	Ponce School of Med	(3)
<input checked="" type="checkbox"/>	Scripps Research Institute	(22)
<input checked="" type="checkbox"/>	Univ. of Florida	(100)
<input checked="" type="checkbox"/>	Washington U at St. Louis	(2635)
<input checked="" type="checkbox"/>	Mendeley	(352)



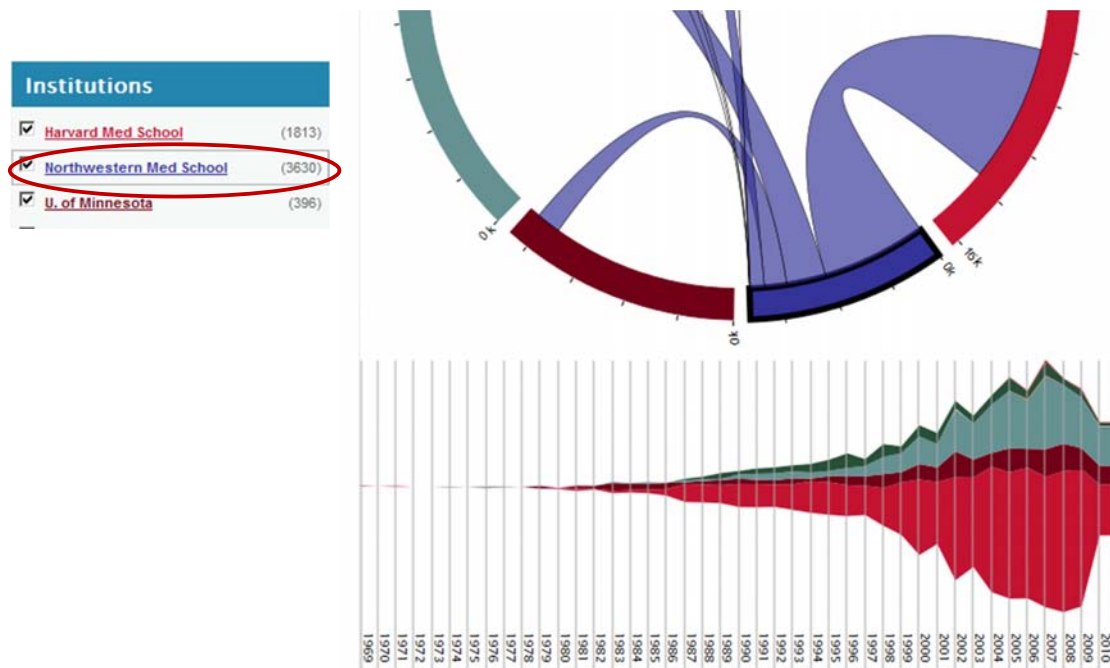
Inter-Institutional Collaboration Explorer

This visualization shows information about “collaborative publications” found at 2 or more Researcher Networking websites.

The idea that institutions don't work together and that biomedical research is conducted in silos is not true. Researchers, even when separated by great distances, are in fact willing to work together, and this visualization demonstrates that they often do.

Contact: Nick Benik (nbenik@gmail.com), Harvard Medical School, Boston, MA.

URL: <http://xcite.hackerceo.org/VIVOviz>



Inter-Institutional Collaboration Explorer

The outer solid colored arcs represent the 11 institutions. The size of the arc is proportional to the number of collaborative publications found on the site. The inner colored bands represent the number of collaborative publications found between the two institutions that each band connects. Clicking an institution's arc will hide any bands not connected to that institution and will display a timeline of when that institution's collaborative publications were written.

National Science Foundation
WHERE DISCOVERIES BEGIN

QUICK LINKS

SEARCH

FUNDING AWARDS DISCOVERIES NEWS PUBLICATIONS STATISTICS ABOUT NSF FASTLANE

Simple Search | Advanced Search | Popular Searches | Download Awards | Send Comments | Award Search Help

Simple Search Results

Search award for: Search

Export up to 3,000 Awards | CSV | XML | Excel | Text | Email this Link | Export All Results

Sort By: Relevance | Results size: 30 per page | Table | List | Page 1 of 2 | Displaying 1 - 30 of 54

You Searched For: microbiome

Active Awards: true

Refined by:

State

- Alabama(1)
- California(2)
- Connecticut(1)
- District of Columbia(1)
- Delaware(2)
- Show More ...

NSF Organization

- OFFICE OF THE DIRECTOR(1)
- Directorate for Mathematical & Physical Sciences (7)
- Directorate for Social, Behavioral & Economic Sciences (4)
- Directorate for Computer & Information Science & Engineering (2)
- Directorate for Geosciences(5)
- Directorate for Engineering(7)
- Directorate for Biological Sciences(22)
- Directorate for Education & Human Resources (6)

Award Amount

- Less than or equal \$50,000(7)
- Between \$50,001 - \$100,000(2)
- Between \$100,001 - \$500,000(21)
- Between \$500,001 - \$1,000,000(16)
- More than \$1,000,000(8)

Award Instrument

- Standard Grant(37)
- Continuing Grant(15)
- Fellowship(2)

Search Results:

- Exploring the Niche Space of Human Microbiome Functions through Convex Geometry and Evolutionary Genomics**
Award Number:1069303; Principal Investigator:Katherine Pollard; Co-Principal Investigator:; Organization:The J. David Gladstone Institutes;NSF Organization:DMS Award Date:08/15/2011; Award Amount:\$1,308,535.00; Relevance:43.04;
- DISSERTATION RESEARCH: Is richer always better? Testing the biotic resistance hypothesis in ornamental fish microbiomes**
Award Number:1402051; Principal Investigator:Linda Amaral Zettler; Co-Principal Investigator:Katherine Smith, Victor Schmidt; Organization:Marine Biological Laboratory;NSF Organization:DEB Award Date:07/01/2014; Award Amount:\$20,865.00; Relevance:43.04;
- ATD: Algorithms for the analysis of microbiomes**
Award Number:1043089; Principal Investigator:Khalid Sayood; Co-Principal Investigator:Steven Hinrichs; Organization:University of Nebraska-Lincoln;NSF Organization:DMS Award Date:09/15/2011; Award Amount:\$246,367.00; Relevance:43.04;
- DIMENSIONS: Collaborative Research - Uncovering the novel diversity of the copepod microbiome and its effect on habitat invasions by the copepod host**
Award Number:1046371; Principal Investigator:Joana Carneiro da Silva; Co-Principal Investigator:; Organization:University of Maryland at Baltimore;NSF Organization:OCE Award Date:11/01/2010; Award Amount:\$1,640,357.00; Relevance:43.04;
- SusCHEM: Converting Urban Wastes into Longer Chain Chemicals**
Award Number:1336186; Principal Investigator:Largus Angenent; Co-Principal Investigator:; Organization:Cornell University;NSF Organization:CBET Award Date:09/01/2013; Award Amount:\$391,302.00; Relevance:43.04;
- Adaptation to diet and its impact on the gut microbiome and genomic variation**
Award Number:1317217; Principal Investigator:Sarah Tishkoff; Co-Principal Investigator:; Organization:University of Pennsylvania;NSF Organization:BCS Award Date:08/15/2013; Award Amount:\$306,600.00; Relevance:43.04;
- DIMENSIONS: Collaborative Research - Uncovering the novel diversity of the copepod microbiome and its effect on habitat invasions by the copepod host**
Award Number:1046372; Principal Investigator:Carol Lee; Co-Principal Investigator:; Organization:University of Wisconsin-Madison;NSF Organization:OCE Award Date:11/01/2010; Award Amount:\$726,561.00; Relevance:43.04;
- EFRI-MIKS: Control of Signaling and Function by Design with Spatially Pre-Structured Microbial Communities**
Award Number:1137089; Principal Investigator:Rustem Ismagilov; Co-Principal Investigator:Sarkis Mazmanian, Alexander Chervonsky, Folker Meyer, Christopher Henry; Organization:California Institute of Technology;NSF Organization:EFRI Award Date:09/01/2011; Award Amount:\$1,998,143.00; Relevance:41.65;
- CAREER: Annotating the Microbiome using Machine Learning Methods**
Award Number:1252318; Principal Investigator:Huzefa Rangwala; Co-Principal Investigator:; Organization:George Mason University;NSF Organization:IIS Award Date:03/01/2013; Award Amount:\$550,000.00; Relevance:41.65;
- The Effect of the Microbiome on the Rice Transcriptome**
Award Number:0923806; Principal Investigator:Harsh Bais; Co-Principal Investigator:Julin Maloof, Jonathan Eisen, Venkatesan Sundaresan;



69 NSF projects found.

They were awarded to 53 unique institutions.

Institution	#Awards	Institution	Sum of Awarded AmountToDate
University of Illinois at Urbana-Champaign	3	University of Illinois at Urbana-Champaign	3,263,277
University of Texas at Austin	3	University of North Carolina at Chapel Hill	2,496,169
University of Wisconsin-Madison	3	University of Delaware	2,143,438
Cornell University	2	University of Connecticut	2,000,000
Duke University	2	California Institute of Technology	1,998,143
Gordon Research Conferences	2	University of Wisconsin-Madison	1,758,524
Marine Biological Laboratory	2	University of Maryland at Baltimore	1,734,624
Michigan State University	2	University of Utah	1,700,000
SUNY at Stony Brook	2	The J. David Gladstone Institutes	1,508,535
University of Delaware	2	Cornell University	1,342,609
University of Maryland at Baltimore	2	University of Washington	1,019,366
University of Nebraska-Lincoln	2	Florida Agricultural and Mechanical University	997,214
University of Washington	2	Washington State University	950,000
		Bigelow Laboratory for Ocean Sciences	900,000
		University of Hawaii	842,000
		TERC Inc	822,919
		Michigan State University	779,220
		University of Nebraska-Lincoln	741,685
		University of Texas at Austin	726,806
		Marine Biological Laboratory	723,528
		University of Miami School of Medicine	708,360

19



69 NSF projects found.

They were awarded to 53 unique institutions.





Search Results

Back to Query Form Save Query Share Query

Export All Projects GO

T	Act	Project	Year	Sub #	Project Title	Contact PI/ Project Leader	Organization	FY	Admin IC	Funding IC	FY Total Cost by IC	Similar Projects
<input type="checkbox"/>	5	R01	NR014792	02	A MULTIOMICS APPROACH TOWARDS DECIPHERING THE INFLUENCE OF THE MICROBIOME ON PRE	AAGAARD-TILLERY, KJERSTI MARE	BAYLOR COLLEGE OF MEDICINE	2014	NINR	NINR	\$539,616	
<input type="checkbox"/>	4	UH2	HG007008	02	HVI H3 AFRICA BIODEPOSITORY INITIATIVE	ARIMKU, ALASHLE G.	INSTITUTE OF HUMAN VIROLOGY	2013	NHGRI	NICHD OD	\$19,400 \$97,000	
<input type="checkbox"/>	1	U19	AI110819	01	6908 GENOMICS OF ANTIBIOTIC RESISTANCE IN BACTERIAL PATHOGENS	ADAMS, MARK D.	J. CRAIG VENTER INSTITUTE, INC.	2014	NIAD		\$310,095	
<input type="checkbox"/>	1	U19	AI110819	01	6912 TECHNOLOGY CORE	ADAMS, MARK D.	J. CRAIG VENTER INSTITUTE, INC.	2014	NIAD		\$1,239,523	

537 NIH awards found on 7/19/2014.

544 NIH awards found on 7/20/2014. Omitted 34 records with missing values.

21



Institution	#Awards	Year	#Awards
NEW YORK UNIVERSITY SCHOOL OF MEDICINE	24	2009	1
UNIVERSITY OF MARYLAND BALTIMORE	19	2010	3
WASHINGTON UNIVERSITY	18	2011	7
UNIVERSITY OF PENNSYLVANIA	17	2012	36
UNIVERSITY OF WASHINGTON	17	2013	166
UNIVERSITY OF ALABAMA AT BIRMINGHAM	14	2014	324
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO	14		
UNIVERSITY OF MICHIGAN	12		
BAYLOR COLLEGE OF MEDICINE	11	Country	#Awards
J. CRAIG VENTER INSTITUTE, INC.	11	UNITED STATES	503
YALE UNIVERSITY	11	CANADA	2
UNIV OF NORTH CAROLINA CHAPEL HILL	10	NIGERIA	2
CALIFORNIA INSTITUTE OF TECHNOLOGY	9	ETHIOPIA	1
UNIVERSITY OF PITTSBURGH	9	SOUTH AFRICA	1
BROAD INSTITUTE, INC.	8	UNITED KINGDOM	1
STANFORD UNIVERSITY	8		
VIRGINIA COMMONWEALTH UNIVERSITY	8		
DARTMOUTH COLLEGE	7		
UNIVERSITY OF CHICAGO	7		

22



U.S map and world map of #projects per geolocation.

The screenshot shows the CORDIS (Community Research and Development Information Service) website. At the top, it features the European Commission logo and the text 'CORDIS Community Research and Development Information Service'. Below this is a navigation bar with links for 'News and Events', 'Funding Programmes', 'Projects and Results', 'Top Stories', 'research*eu magazines', 'Research Partners', and 'National and Regional'. A search bar is located on the right side of the navigation bar. The main content area is titled 'Seventh Framework Programme (FP7)' and includes a search bar with the text 'Search all CORDIS'. Below the search bar, there is a section for 'Find a project' with a dropdown menu. The search results show a list of project details, including a search term of 'microbiome' and a project acronym. A note at the bottom states: '* You can search by individual terms or project acronyms from this page. Other search options are available on the advanced search page.'

1,406 projects with 4,326 participating countries (96 unique) found



CORDIS

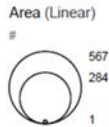
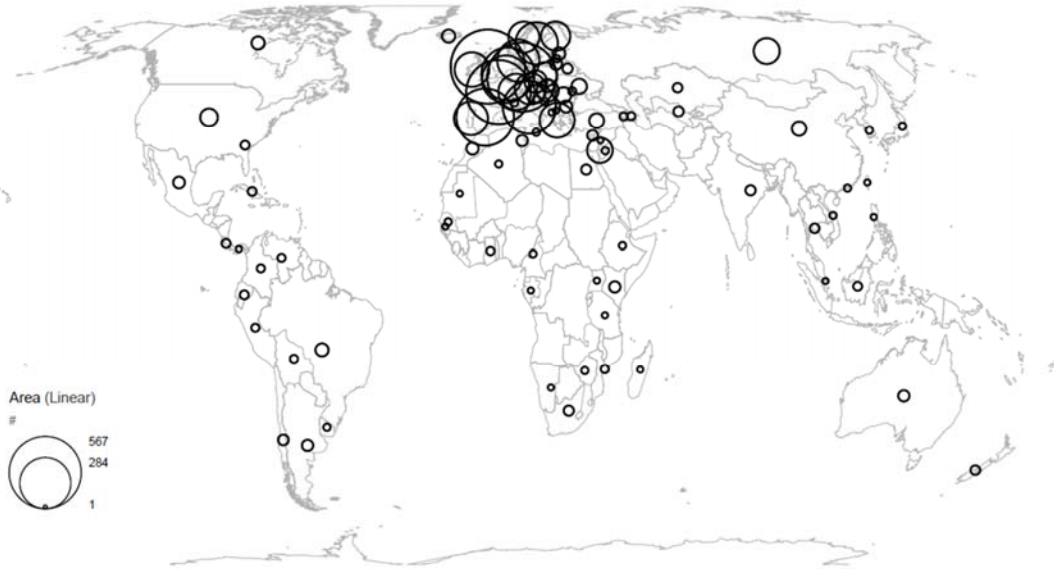


Geospatial Visualization (Proportional Symbol Map)

Generated from With Latitude & Longitude from 'Country-corrected'
Jul 18, 2014 | 01:33:07 PM EDT

How to Read this Map

This *proportional symbol map* shows 209 countries of the world using the equal-area Eckert IV projection. Each dataset record is represented by a circle centered at its geolocation. The area, interior color, and exterior color of each circle may represent numeric attribute values. Minimum and maximum data values are given in the legend.



CNS (cns.iu.edu)

25

International Researcher Network Visualization 1.0

CNS Cyberinfrastructure for Network Science Center
cns.iu.edu

Data Types

- People
- Publications
- Patents
- Funding
- Courses

System Types

- Conervis
- Elsevier SciVal Experts
- Profile RNS
- Lattice Grid
- Loki
- Stanford CAP
- VIVO

Timeline

Jul, 2014

Jul, 2014 Jul, 2014

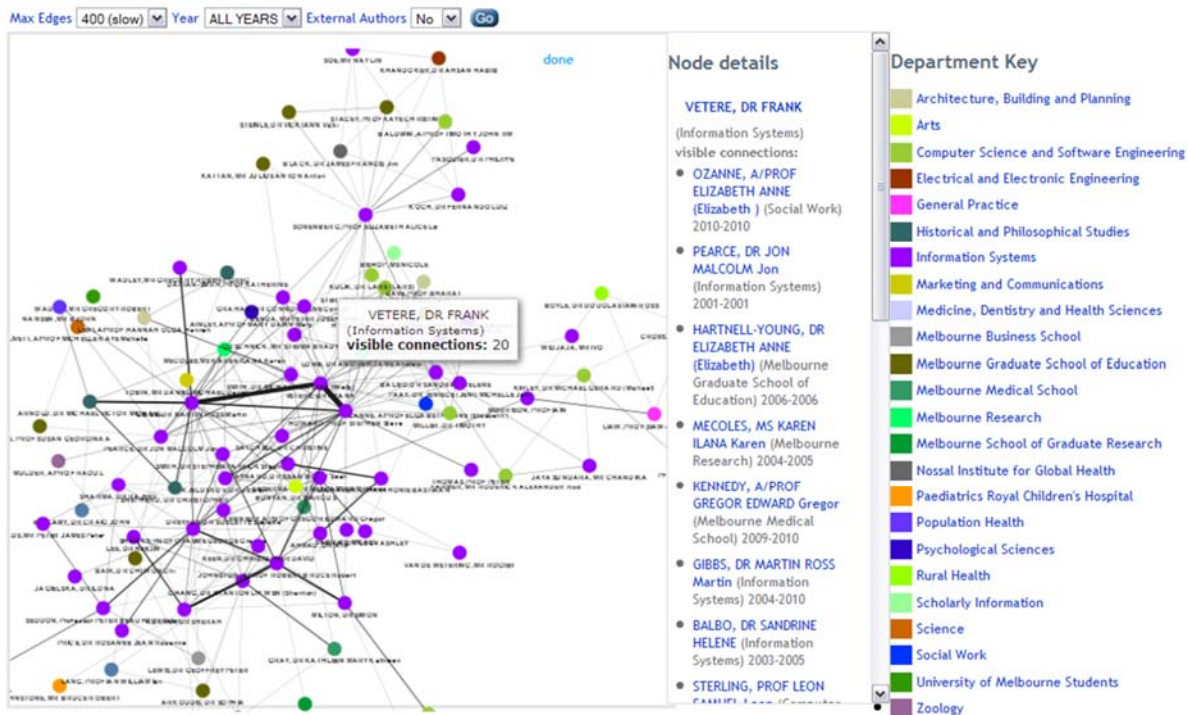
Play Pause Stop

Hide Map Data Register About

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

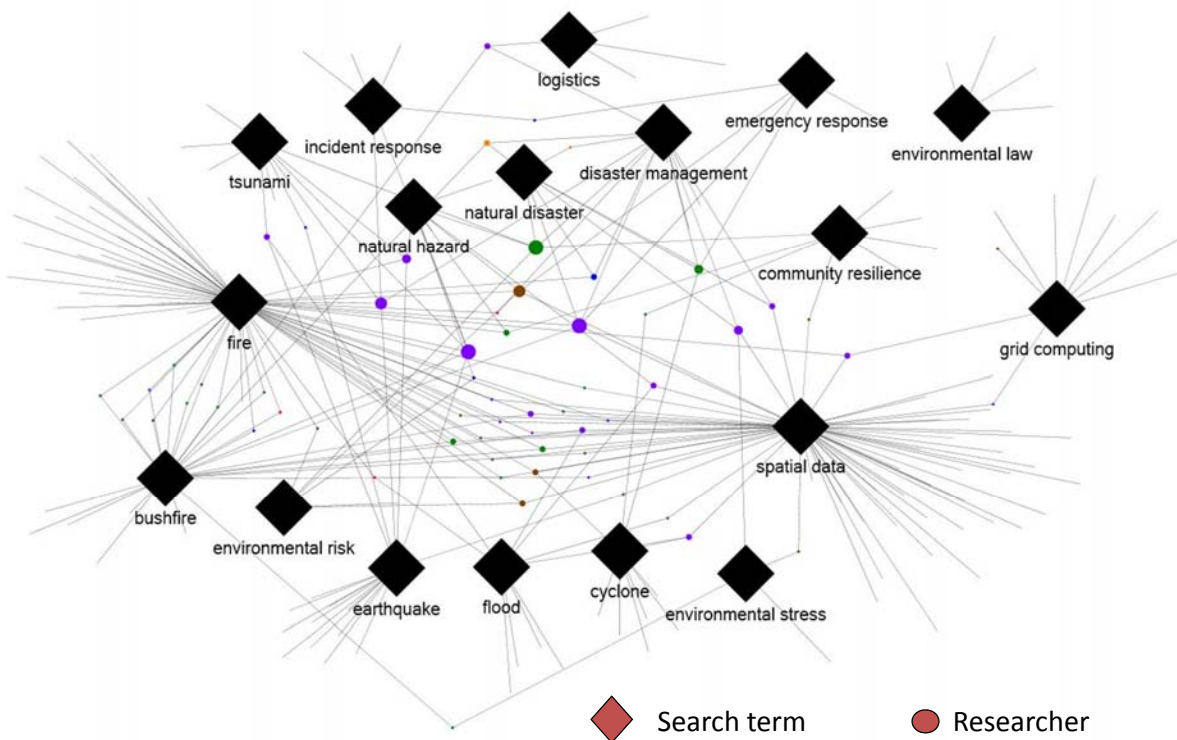
Light, Robert, Chin Hua Kong, and Katy Börner. 2013. "An Automated System for Tracking the Growth of Expert Profiling Systems". *Joint Conference on Digital Libraries (JCDL)*.

26

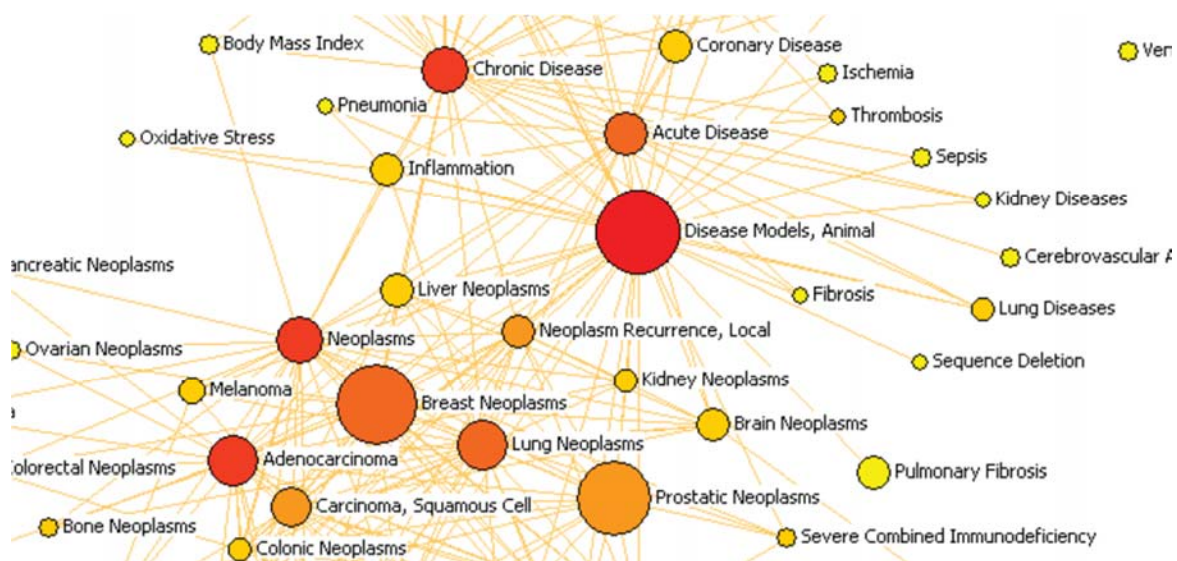


Co-authorship network for the department of Information Systems

Source: Melbourne Research Windows. Contact Simon Porter simon.porter@unimelb.edu.au



Bimodal network of search terms and researchers extracted from research profile search results to show the **University's capability in Disaster Management** to the Government
 Contact: simon.porter@unimelb.edu.au

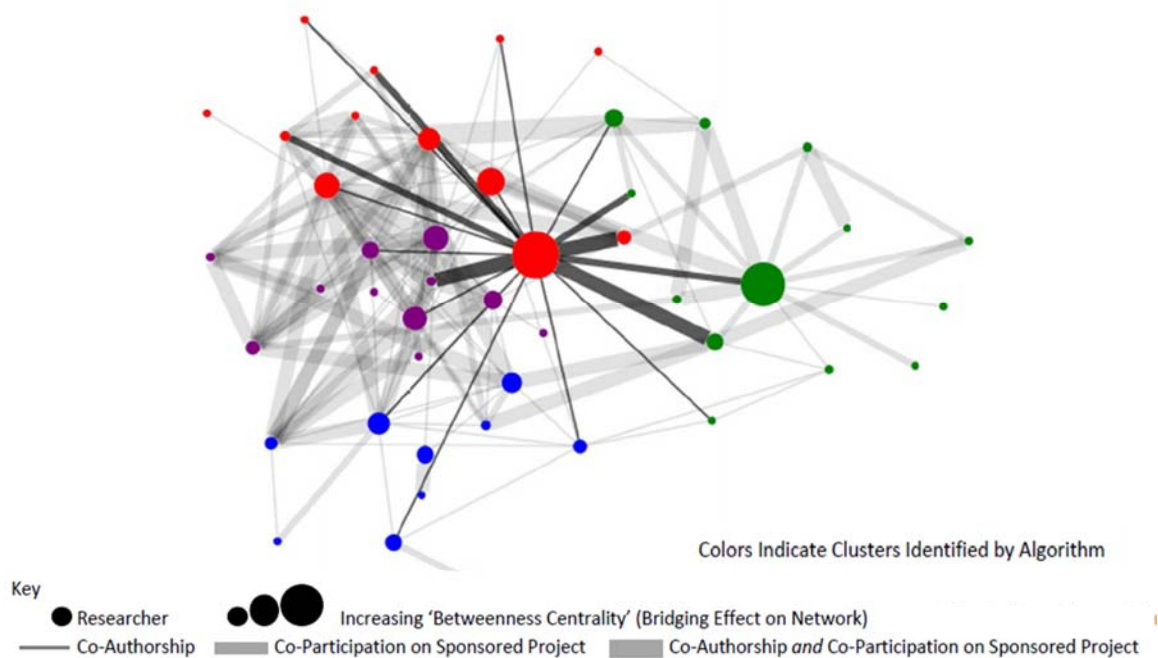


Top MeSH Disease Concepts Appearing in PubMed Publications by the University of Michigan Medical School. Links connect concepts where 100+ authors published about both concepts within the span of their careers.

This visualization revealed that **animal disease models** were central to disease research at U-M which encouraged additional thought and attention to animal husbandry, animal expenses, and core/shared services overall.

Contact: Jeffrey Horon, J.Horon@elsevier.com

31



P30 Member Collaborations – Sponsored Project Co-Participation and Co-Authorship Network. Used in **successful!** P30 funding application. Shows the PI's relationships with various P30 members, conveying that the PI was not only the formal center of the group but also the informal center and the person who exhibited the highest betweenness centrality. Contact: Jeffrey Horon, J.Horon@elsevier.com

32

International Researcher Network Visualization 1.0

CNS CyberInfrastructure for Network Science Center
cns.iu.edu

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

Light, Robert, Chin Hua Kong, and Katy Börner. 2013. "An Automated System for Tracking the Growth of Expert Profiling Systems". Joint Conference on Digital Libraries (JCDL).

VIVO enabling national networking of scientists

Index | Log in

Home | People | Organizations | Research | Events

University of Florida

Explore 487 publications activity across 554 scientific sub-disciplines

13 Disciplines | 554 Sub-Disciplines

Search: X

1 - 13 of 554 [First](#) [Prev](#) [Next](#) [Last](#)

Sub-Disciplines	# of pubs.	% activity
Pest Management Science	24.2	5.0
Wildlife Research	19.1	3.9
Protein Science	13.1	2.7
Clinical Cancer Research	12.6	2.6
Pain	12.0	2.5
Environmental Contamination	11.2	2.3
Insect Physiology	11.1	2.3
Organic Chemistry	10.9	2.2
Marine Biology	10.3	2.1
Computer Aided Molecular Design	10.2	2.1
BioStatistics	9.0	1.9
Dental Education	9.0	1.8
Hormone Research	9.0	1.9

[Export Complete Table](#)

Top 290 disciplines shown

mapped 14.55% of 3,346 publications

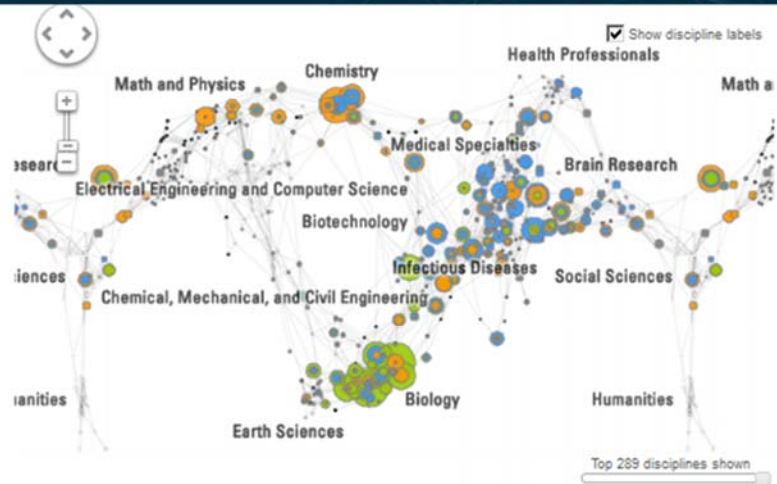
Compare organizations

Organizations

Search: X

1 - 10 of 12 [First](#) [Prev](#) [Next](#) [Last](#)

Organization	# of pubs.
<input checked="" type="checkbox"/> Office of the Senior Vice President for Health Affairs	2940
<input checked="" type="checkbox"/> Office of the Provost and Senior Vice President for Academic Affairs	1419
<input checked="" type="checkbox"/> Institute of Food and Agricultural Sciences	848
<input type="checkbox"/> Office of the Vice President for Research	393
<input type="checkbox"/> Office of the Senior Vice President for Administration & Business Ventures	149
<input type="checkbox"/> Division of Student Affairs	1
<input type="checkbox"/> Office of Development and Alumni Affairs	1
<input type="checkbox"/> General Counsel	0



Google

© 2008 The Regents of the University of California and SoTech Strategies. Map updated by [SciTech Strategies](#), [QST](#), and [CNS](#) in 2011.

[Terms of Use](#)

[Office of the Senior ...](#)

[Office of the Provost ...](#)

[Institute of Food and ...](#)

[First](#) [Prev](#) [Next](#) [Last](#)

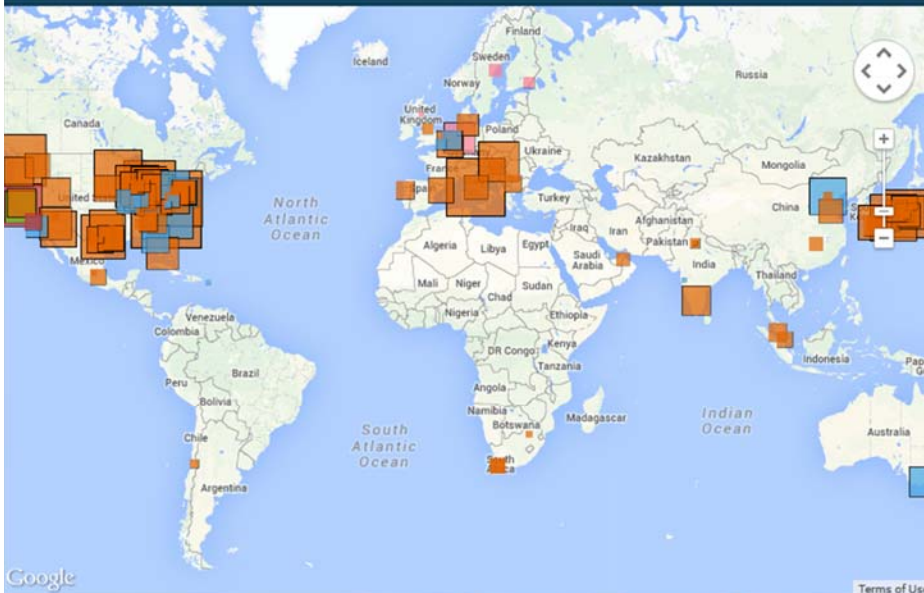
[First](#) [Prev](#) [Next](#) [Last](#)

[First](#) [Prev](#) [Next](#) [Last](#)

Subdisciplines	# of pubs.	Subdisciplines	# of pubs.	Subdisciplines	# of pubs.
Neuroscience; ...	20.3	Organic Chemistry	19.8	Pest Management ...	24.3
Pain	19.0	BioStatistics	11.0	Wildlife Research	24.1
Clinical Cancer	14.5	Computer Aided	10.0	Insect Physiology	12.1

35

International Researcher Network Visualization 1.0



Data Types

Check in the boxes next to the data types you'd like to see displayed on the map.

- People
- Publications
- Patents
- Funding
- Courses

System Types

- Convertis
- Elsevier SciVal Experts
- Harvard Catalyst Profiles
- Stanford CAP
- VIVO

Timeline

Jul, 2014

Jul, 2014 Jul, 2014



Play Pause Stop

Hide Map

Data

Register

About

Please register your institution's researcher networking system at <http://nrn.cns.iu.edu>

36

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

These slides will soon be at <http://cns.iu.edu/docs/presentations>

CNS Facebook: <http://www.facebook.com/cnscenter>

Mapping Science Exhibit Facebook: <http://www.facebook.com/mappingscience>