

LAK2012

参加報告

安武公一
広島大学社会科学研究科

2012-10-24
SS研2012年度教育環境分科会@神戸

What's LAK ?

SoLAR

an inter-disciplinary network of leading international *researchers who are exploring the role and impact of analytics* on teaching, learning, training and development.



<http://www.solaresearch.org/>

- SoLAR (**S**ociety for **L**earning **A**alytics **R**esearch)
 - **L**earning **A**alytics and **K**nowledge - annual conference
 - FLARE - a series of regional practitioner-focused to facilitate of information, case studies, ideas, and early stage research.
 - STORM - a distributed research lab

PEOPLE

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出典: <http://www.solaresearch.org/people/>

LAK '11

1st International Conference on Learning Analytics and Knowledge 2011

ABOUT | CALL FOR PAPERS | PROGRAM | REGISTRATION | COMMITTEE | SPONSORS | OPEN COURSE | WORKSHOPS

About

The 2011 LAK Conference

Learning Analytics and Knowledge: February 27-March 1, 2011

in Saint-Alban

The conference will be attended by more than 100 researchers and practitioners.

The growth of data surpasses the ability of organizations to make sense of it. This concern is particularly pronounced in relation to how corporations make use of the data learners "leave off" in the process of acquiring learning materials, interacting with educators, educational institutions and under growing pressure to reduce costs and increase efficiency, analysis promises to be an important tool for change at course and institutional levels. Corporations have pressure for increased competitiveness and productivity, organizations rapidly building from work place and informal learning, learning analytics can play a role in highlighting the development in enterprise settings, information flow and social interactions can yield novel insights into organizational effectiveness and capacity to understand event data.

Finally, as we witness the separation of learning and knowledge work beyond formal institutional boundaries, myriad platforms in the e-learning/learning analytics.

Advances in knowledge modeling and representation, the semantic web, data mining, analytics, and open data form a foundation for a technical complexity of this recent field is paralleled by a transition within the full spectrum of learning, education, work, social search, technical, pedagogical, and social domains must be brought into dialogue with each other to ensure that innovation and exploration.

Learning Analytics 2011 will focus on integrating the technical and the social/pedagogical dimensions of learning analytics. Learning and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environment.

Please direct any questions to general@lak11.org



出典: <http://tekri.athabasca.ca/analytics/>

29 April - 2 May 2012

Learning Analytics and Knowledge

Co-located: Vancouver, British Columbia, Canada (29 April - 2 May 2012)



Home | Keynotes & Program | Video Streaming | Key Dates | Committees | Sponsors | Registration | Venue & Accommodations

Home

Breaking News!

Catch the breaking news on #lak12 on the [LAK12](#) twitter channel

LAK12 data visualisation now available:
http://visual.arts.ubc.ca/lak_visualdata/index.php (Developed by Sung Hwang, Arts ISIT, UBC)

Katy Borner Presentation slides are now at <http://ivl.ena.ia.edu/km/prog/ss12-borner-lak.pdf>. The code and documentation is located at <http://sd2.ena.ia.edu>.

LAK12 Streaming

Selected presentations in LAK12 will be accessible live from this site. Please check back shortly for the program information and access details!

LAK 2012 SOLD OUT!

Welcome to the website for the Second International Conference on Learning Analytics and Knowledge (LAK12). This year's conference will be located in Vancouver, Canada from 29th April to 2nd May 2012.

For the world of higher education, learning analytics is gaining

出典: <http://lak12.sites.olt.ubc.ca/>





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VIDEOS OF PRESENTATIONS

Please click on the presentation titles to view video.

April 30, 2012

▪ Keynote	<i>Barry Wellman</i> Networked Individualism: How the Personalized Internet, Ubiquitous Connectivity, and the Turn to Social Networks
▪ Full session 1A	<i>Dan Suthers Kar-Hai Chu</i> Multi-mediated Community Structure in a Socio-Technical Network
▪ Short session 1A	<i>De Laat Maarten Schreurs Bleke</i> Network Awareness Tool - Learning Analytics in the workplace: Detecting and Analyzing Informal Workplace Learning
▪ Short session 1A	<i>Leyla Zhuhadar Rong Yang</i> Cyberlearners and Learning Resources

出典: <http://www.solaresearch.org/events/lak/2012videos/>

Networked Individualism Social Learning Analysis	
9:00 – 10:00am	Keynote Address: Barry Wellman <i>Networked Individualism: How the Personalized Internet, Ubiquitous Connectivity, and the Turn to Social Networks Can Affect Learning Analytics</i>
10:30 – 12:00pm	Session 1A Chair: Tobias Ley Social Learning Analytics (1)
	Session 1B Chair: Marie Bienkowski Adaptive/Recommender Systems
1:30 – 3:10pm	Session 2A Chair: Lori Lockyer Analytics for Reflective Learning
	Session 2B Chair: Tim McKay Institutional Perspectives
3:40 – 4:40pm	Session 3 Plenary Panel Presentation: Linda Baer and Donald Norris. <i>Building Organizational Capacity for Analytics</i>

出典: http://lak12.sites.olt.ubc.ca/files/2012/04/LAK2012_Schedule_Apr20.pdf

Visual Analytics in Support of Education Visual Analytics	
9:00 – 10:00am	Keynote Address: Katy Börner <i>Visual Analytics in Support of Education</i>
10:00 – 10:30am	Break
10:30 – 12:00pm	Session 4A Chair: Agathe Merceron Visual Analytics
	Session 4B Chair: Shane Dawson Educator Interventions
1:20 – 2:40pm	Session 5A Chair: Ulrich Hoppe Textual Analytics & Analytics Infrastructure
	Session 5B Chair: Stephanie Teasley Empirical Studies (1)
3:10 – 4:00pm	Session 6A Chair: Hanan Ayad Empirical Studies (2)
	Session 6B Chair: Abelardo Educational Data Mining
4:15 – 5:15pm	Session 7 Plenary George Siemens and Ryan S.J.D. Baker. <i>Learning Analytics and Educational Data Mining: Towards Communication and Collaboration</i>

LAK meets EDM

出典: http://lak12.sites.olt.ubc.ca/files/2012/04/LAK2012_Schedule_Apr20.pdf

Social Learning Analytics

9:00 – 10:00am **Keynote Address:** George Siemens Chair: Dragan Gasevic
Learning analytics: Envisioning a research discipline and a domain of practice

10:30 – 12:00pm **Session 8A** Chair: Johann Ari Larusson **Session 8B** Chair: Ryan
Social Learning Analytics (2) **Predictive Modeling**

12:15 – 1:15pm **Session 9 Plenary**
Panel Presentation: Chair: Cindy Ives.
Panelists: Sabine Graf, Lori Lockyer, Paul Hobson and Doug Clow.
Building a Data Governance Model for Learning Analytics

Building a data
governance model for
Learning Analytics

出典: http://lak12.sites.olt.ubc.ca/files/2012/04/LAK2012_Schedule_Apr20.pdf

April 30, 2012		
videostream	Keynote	Barry Wellman Networked Individualism: How the Personalized Internet, Ubiquitous Connectivity, and the Turn to Social Networks
session 1A videostream	Full	Dan Suthers, Kai-Hsiang Chu Multi-mediated Community Structure in a Socio-Technical Network
session 1A videostream	Short	<p>Digital environments for networked learning and professional networks may not comprise one "community;" identification of clusters of affiliated groups of participants that potentially constitute embedded communities is an empirical matter, and one of interest to managers of large learning and professional networks. Also, these socio-technical networks are typically multi-mediated, in that they offer multiple means of participation, each with their own interactional affordances. Different communities may be using the multiple media in different ways. We have developed an analytic framework for extracting events from log files and representing interaction and affiliations at different granularities as needed for analysis. In this paper we show how bimodal networks of actors and media artifacts can be constructed in which directed arcs relate actors to the artifacts they read, write or edit, and how the resulting graphs can be used to detect community structures that extend across different media. We illustrate these ideas with a study that characterizes community structure within the Tapped In network of educational professionals, and how the associations between members of this network are distributed across media (chat rooms, discussion forums and file sharing).</p>
session 1A videostream	Short	
session 1A videostream	DesignBriefs	
session 1B	Full	
session 1B	Demo	
session 1B	Short	<p>Multi-mediated Community Structure in a Socio-Technical Network</p> <p>Dr. Dave La Exploring reflection in online communities</p>
session 1B	DesignBriefs	
session 2A videostream	Full	Lars Müller, Simone Braun, Valentin Zacharias, Verónica Rivera-Pelayo Applying Quantified Self Approaches to Support Reflective Learning
session 2A videostream	Full	
session 2A videostream	Short	

出典: <http://lak12.sites.olt.ubc.ca/program/conference-program/>

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Visual Analytics in Support of Education

Katy Börner

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The Netherlands and
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With special thanks to the members at the Cyberinfrastructure for
Network Science Center and the Sci2, NWB, and EpiC teams

Learning Analytics and Knowledge
Vancouver, Canada
<http://projects.arts.uvic.ca/lak12/>

May 1, 2012

LAK2012



Visual Analytics in Support of Education

Katy Börner

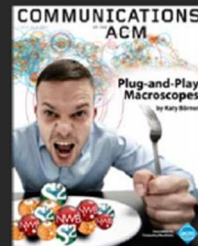
Royal Netherlands Academy of Arts and Sciences (KNAW),
The Netherlands and
Cyberinfrastructure for Network Science Center, Director
Information Visualization Laboratory, Director
School of Library and Information Science
Indiana University, Bloomington, IN
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Vancouver, Canada
<http://projects.arts.uvic.ca/lak12/>

May 1, 2012

LAK2012



Type of Analysis vs. Level of Analysis

	<i>Micro/Individual</i> (1-100 records)	<i>Meso/Local</i> (101-10,000 records)	<i>Macro/Global</i> (10,000 < records)
Statistical Analysis/Profiling	Individual person and their expertise profiles	Larger labs, centers, universities, research domains, or states	All of NSI, SA, all of sci
Temporal Analysis (When)	Funding portfolio of one individual	Topic bursts of PNAS	113 Years of P Research
Geospatial Analysis (Where)	Career trajectory of one individual	Wrapping a intellectual l	PNAS
Topical Analysis (What)		research	VxOrd/Topic NIH funding
Network Analysis (With Whom?)	NSI one	work of	NIH's cy



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<http://ivl.cns.iu.edu/km/pres/2012-borner-lak.pdf>



Designing "Dream Tools"

Many of the best micro-, tele-, and macroscopes are designed by **scientists keen to observe and comprehend what no one has seen or understood before**. Galileo Galilei (1564-1642) recognized the potential of a spyglass for the study of the heavens, ground and polished his own lenses, and used the improved optical instruments to make discoveries like the moons of Jupiter, providing quantitative evidence for the Copernican theory.

Today, scientists **repurpose, extend, and invent new hardware and software to create "macroscopes"** that may solve both local and global challenges.

Plug-and-play macroscopes **empower** me, my students, colleagues, and 100,000 others that downloaded them.

<http://ivl.cns.iu.edu/km/pres/2012-borner-lak.pdf>



Macroscopes

Decision making in science, industry, and politics, as well as in daily life, requires that we make sense of data sets representing the structure and dynamics of complex systems. Analysis, navigation, and management of these continuously evolving data sets require a new kind of data-analysis and visualization tool we call a macroscope (from the Greek macros, or "great," and skopein, or "to observe") inspired by de Rosnay's futurist science writings.

Macroscopes provide a "vision of the whole," helping us "synthesize" the related elements and enabling us to detect patterns, trends, and outliers while granting access to myriad details. Rather than make things larger or smaller, **macroscopes let us observe what is at once too great, slow, or complex for the human eye and mind to notice and comprehend.**



Microscopes



Telescopes



Macroscopes

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<http://ivl.cns.iu.edu/km/pres/2012-borner-lak.pdf>



CIShell Developer Guide

(<http://cishell.wiki.cns.iu.edu>)



Edit Add

1 Added by [Micah Linnemeier](#), last edited by [Micah Linnemeier](#) on Mar 16, 2011 ([view change](#))

About the Cyberinfrastructure Shell

The Cyberinfrastructure Shell (CIShell) is an open source, community-driven platform for the integration and utilization of datasets, algorithms, tools, and computing resources. Algorithm integration support is built in for Java and most other programming languages. Being Java based, it will run on almost all platforms. The software and specification is released under an Apache 2.0 License.

CIShell is the basis of [Network Workbench](#), [TexTrend](#), [Sci²](#) and the upcoming [EpiC](#) tool.

CIShell supports remote execution of algorithms. A standard web service definition is in development that will allow pools of algorithms to transparently be used in a peer-to-peer, client-server, or web front-end fashion.

CIShell Features

A framework for easy integration of new and existing algorithms written in any programming language

Using CIShell, an algorithm writer can fully concentrate on creating their own algorithm in whatever language they are comfortable with. Simple tools are provided to then take their algorithm and

Learn More...

- [CIShell Papers](#)
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- [Plugins \(coming soon\)](#)
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- [CIShell Web Services \(coming soon\)](#)
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Getting Started...

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CIShell Powered
Tools Portal

Cyberinfrastructure Shell (CIShell)
CIShell supports the plug-and-play of datasets and algorithms and their bundling into custom tools that serve the specific needs of a user group or research community. It has been applied to develop diverse custom tools; see below. Feel free to take plugins from any of these tools to design your personal dream tool.

Visit the **CIShell wiki** to learn more about using CIShell as a platform for your tool!

Provided by the **Cyberinfrastructure for Network Science Center** at Indiana University.

Learn more about existing CIShell-powered tools below.

Network Workbench Tool (NWB)
The NWB Tool supports researchers, educators, and practitioners interested in the study of biomedical, social and behavioral science, physics, and other networks. It comes with a 77-page [user manual](#).

Gallery

Science of Science Tool (Sci²)
The Sci² Tool was specifically developed for science policy makers and researchers that study science by scientific means. It supports the temporal, geospatial, topical, and network analysis and visualization of scholarly datasets at the micro (individual), meso (local), and macro (global) levels. There exists a [132-page user manual](#) and 24 hours of [KIM tutorials](#) in this tool.

出典: <http://vl.cns.iu.edu/km/pres/2012-borner-lak.pdf>



Network Workbench Tool

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

The Network Workbench (NWB) tool supports researchers, educators, and practitioners interested in the study of biomedical, social and behavioral science, physics, and other networks.

In February 2009, the tool provides more 169 plugins that support the preprocessing, analysis, modeling, and visualization of networks.

It has been downloaded more than 110,000 times since December 2006.



NetworkWorkbench
A Workbench for Network Scientists

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Summary
Network Workbench: A Large-Scale Network Analysis, Modeling and Visualization Toolkit for Biomedical, Social Science and Physics Research. This project will design, evaluate, and operate a unique distributed, shared resources environment for large-scale network analysis, modeling, and visualization, named Network Workbench (NWB). The envisioned data-code-computing resources environment will provide:

[more](#)
[How to use this project](#)

News & Updates

- 5.1.09 Karelle, Steve 2008 [Mapping the Future of Knowledge: Research & Creative Activity](#), 31, 2: 13-15. [Online accessed 5/10/09](#)
- 3.23.09 [1.0.0 beta 5 Released](#)
- 1.23.09 Ann Winfree's [tutorial abstract](#) for Sunbelt 2009
- 11.4.08 Two NWB files featured in "Connected—the Power of Networks" 2008. Anna Maria Taler, Director, Austin-based Broadening Corporation, Ltd. [YouTube Full Video](#) (2008/09)

Download 1.0.0 beta 5 Release
Note: save the download as .jar

Select Your Operating System:
Windows (XP & Vista) **DOWNLOAD**

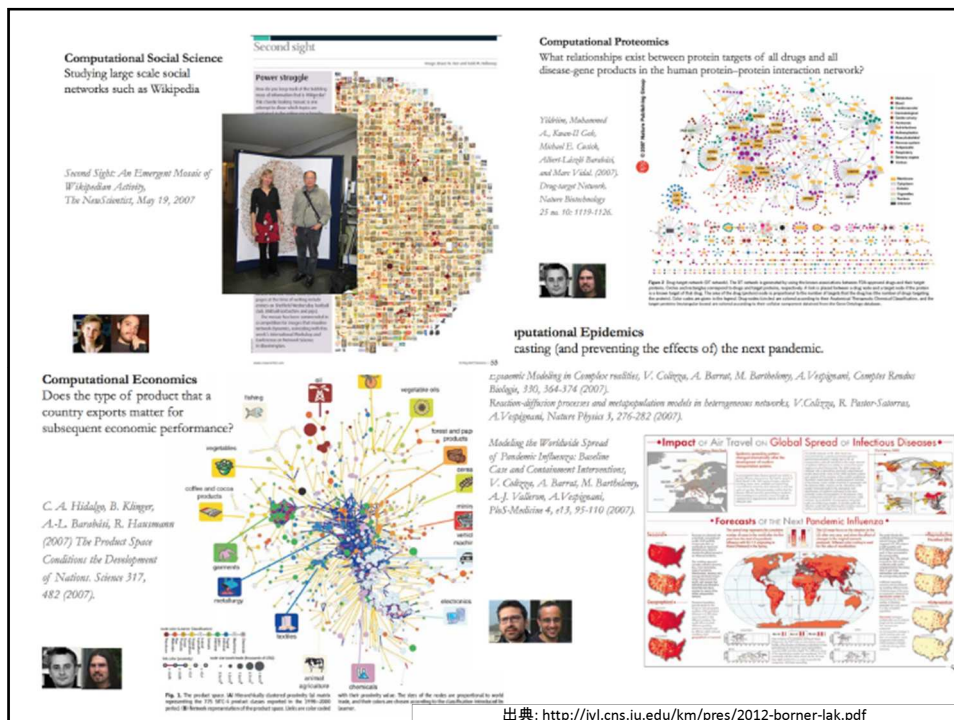
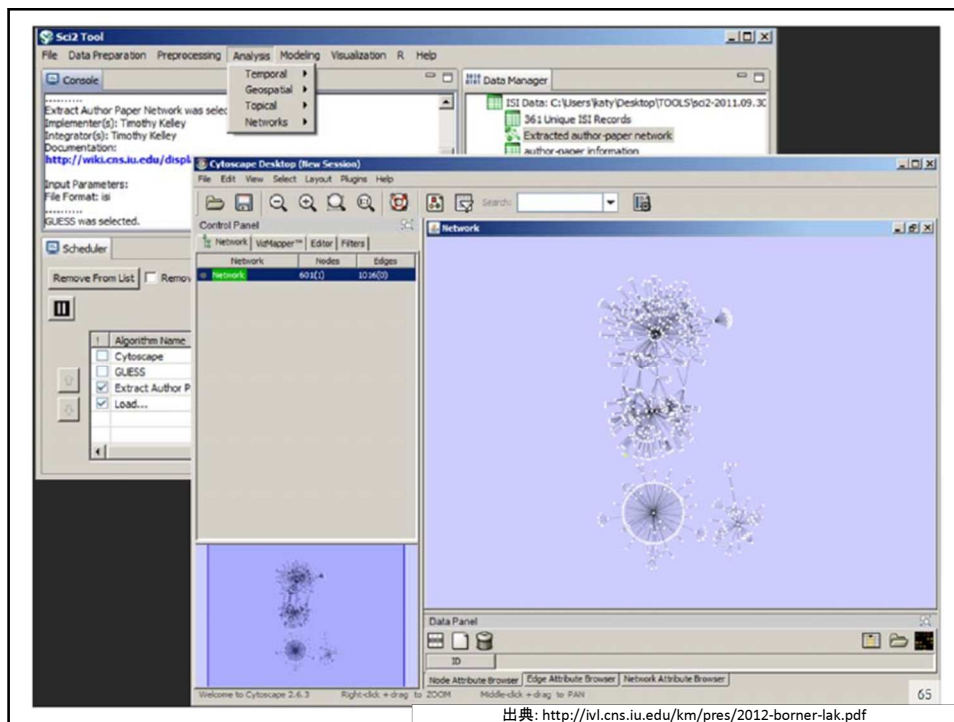
[Getting Started](#)
See more [documentation](#)

[Get Involved](#)

Herr II, Bruce W., Huang, Weisia (Bonnie), Penemarth, Sharikant & Börner, Katy. (2007). *Designing Highly Flexible and Usable Cyberinfrastructures for Convergence*. In Bainbridge, William S. & Roco, Mihail C. (Eds.), *Progress in Convergence - Technologies for Human Wellbeing* (Vol. 1093, pp. 161-179), *Annals of the New York Academy of Sciences*, Boston, MA.

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出典: <http://vl.cns.iu.edu/km/pres/2012-borner-lak.pdf>





Network Workbench Tool

User Manual 1.0.0

Getting Started
General Tutorial
Domain Specific: Information Science Tutorial
Domain Specific: Social Science Tutorial
Domain Specific: Scientometrics Tutorial

Updated 09.16.2009

出典: <http://nwb.cns.iu.edu/Docs/NWBTool-Manual.pdf>

Learning Analytics: Envisioning a Research Discipline and a Domain of Practice

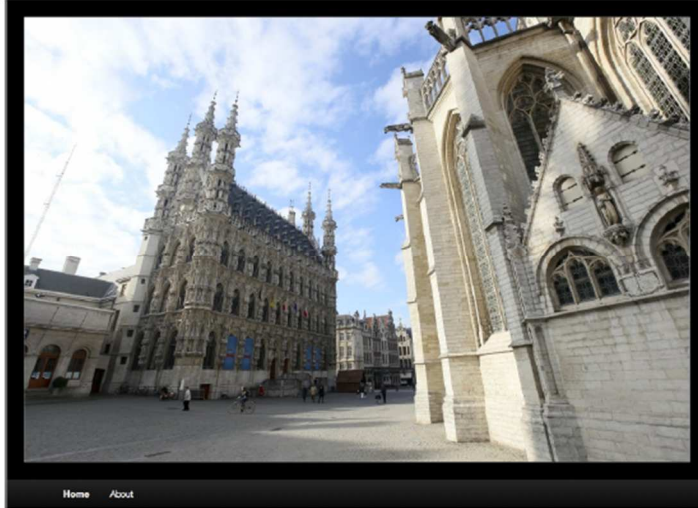
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- Researcher
- Practitioner
- Vendor

LAK 2013

Site for the Learning Analytics conference series

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Posted on April 30, 2012



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