e-Journals and the Continuum of Content: Exponential Expansion is Near

Gordon C. Tibbitts
E-Journals and the Continuum of Content
Exponential Expansion Is Near

*Gordon Tibbitts, Bepress*

Fiesole Collection Development
Retreat
July 24, 2009
In 30 minutes or less

- e-journals: past and present
- What’s coming? Exponential expansion \( x^{a+b} \)
  - But not where you think
- What’s coming? A continuum of content
- Examples and best practices
- Rules in review
e-journals: past and present
1990-1999

Growth

• e-journals go from zero to nearly 10,000
  – Ann Okerson report

• Key infrastructure develops
e-journals: past and present
2000-2009

Major trends

• Interlinking & Search: CrossRef, OpenURL, Google Scholar
• Open Access: NIH, PMC and university mandates
• Archiving: CLOCKSS, Portico, BL, KB, etc.
• Commercial publishers M&A
• University as publisher
• Metrics (e.g. Google Analytics, citation analysis)
• Enhanced protocol and metadata standards/ Harvesting
• Social Networking?
What’s coming? Exponential expansion

*From the Information Science future*

Information science research from Kurzweil:

*We are going to see an expansion in scholarly content that exceeds human management.*

- Expansion of computing
- Interlinking
- Automation
- Confluences of information expansion and knowledge engineering

**Rule 1:** We will soon exceed our human ability to code metadata, vet, and organize content by hand.
What’s coming? Exponential expansion

*Not where you think*

e-journals remain important, but the focus is shifting to the growth in grey literature (e-content in general)

“In this long-term vision, grey literature will become indistinguishable from non-grey literature.” Marcus A. Banks: Towards a Continuum of Scholarship

**Rule 2:** Expect exponential growth in grey literature (data sets, blogs, videos, forums, conferences, interlinked services, chats, twitters and more…) *around e-journals.*
What’s coming? A continuum of content

Changing models

Make the leap from the stepped SC model to continuous SC model: a fractal model

Rule 3: Grey literature fills in the steps and builds a continuum of scholarly content in context.
What’s coming? Exponential expansion

_Hitting the limit_

- Managing the explosion of content will require journal-like discipline and automation!

Rule 4: We need to automate and apply the e-journal methods of registration, certification, awareness, archiving and reward for all scholarly content on the continuum.
What’s coming? A continuum of content

*The scholarly process*

The scholarly process is iterative, circular, and goes back and forth between content, discovery, and production.

“the future of scholarly communication system should closely resemble—and be intertwined with—the scholarly endeavor itself, rather than being its after-thought or annex.”
-- Sompel, Payette et al.

**Rule 5:** e-journals will have to accommodate this trend towards being a more immediate part of the scholarly endeavor.
What’s coming? A continuum of content

A Challenge and an Opportunity

E-journals will expand and evolve by incorporating grey literature, becoming embedded in the likes of institutional repositories and scholarly organizations electronic presence, and will expand their role in all scholarly endeavors.

Rule 6: Librarians’ expertise and automation are desperately needed to translate and organize the next generation of e-journals.
Examples and best practices
Showing results 1 through 25 (of 35 total) for abs:(cold AND fusion)

1. arXiv:0907.3347 [ps, pdf, other]
   Microscopic description of Cf-252 cold fission yields
   M. Mirea, D.S. Delion, A. Sandulescu
   Comments: 15 pages, 10 figures
   Subjects: Nuclear Theory (nucl.th)

2. arXiv:0906.5282 [ps, pdf, other]
   Stable transport in proton driven Fast Ignition
   A Bret
   Comments: Submitted to PoP
   Subjects: Plasma Physics (physics.plasm-ph)

   Fission Barriers of Compound Superheavy Nuclei
   J.C. Pei, W. Nazarewicz, J.A. Sheikh, A.K. Kerman
   Comments: 4 pages, 5 figures(revised according to referee's comments)
   Subjects: Nuclear Theory (nucl-th)
A Dynamic Pathway for Calcium-Independent Activation of CaMKII by Methionine Oxidation

Jeffrey R. Erickson¹, Mei-Ling A. Joiner¹, Xiaojun Guan¹, William Kutschke¹, Jinying Yang¹, Carmine V. Oddis⁵, Ryan K. Bartlett⁶, John S. Lowe¹, Susan E. O'Donnel², Nukhiet Aykin-Burns³, Matthew C. Zimmerman³, Kathy Zimmerman⁴, Amy Joan L. Ham⁷,⁸, Robert M. Weiss³,⁹, Douglas R. Spitz³, Madeline A. Shea³, Roger J. Colbran⁷, Peter J. Mohler³,⁴, and Mark E. Anderson¹,⁴,*

Affiliations

Article Highlights

- Oxidation of methionine residues activates CaMKII
- Angiotensin II induces CaMKII oxidation leading to cardiomyocyte death
- CaMKII methionine oxidation is reversed by MsrA
- Elevated CaMKII oxidation impairs heart function and worsens ischemic injury

Author Interview

Abstract

Calcium/calmodulin (Ca²⁺/CaM)-dependent protein kinase II (CaMKII) couples increases in cellular Ca²⁺ to fundamental responses in excitable cells. CaMKII was identified over 20 years ago by activation dependence on Ca²⁺/CaM, but recent evidence shows that CaMKII activity is also enhanced by pro-oxidant conditions. Here we show that oxidation of paired regulatory domain methionine residues sustains CaMKII activity in the absence of Ca²⁺/CaM. CaMKII is activated by angiotensin II (AngII)-induced oxidation, leading to apoptosis in cardiomyocytes both in vitro and in vivo. CaMKII oxidation is reversed by methionine sulfoxide.
### 2009 Annual Meeting and Exhibition

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Are you planning to attend the 2009 APSA Annual Meeting in Toronto? Register now and make your travel plans early. Also be sure to take a moment to review the resources APSA has provided for attendees to locate information and travel documentation requirements to and from Canada.

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The APSA Fund for Latino Scholarship

The APSA Fund for Latino scholarship invites applications from individuals, institutions, and projects whose purposes most clearly match the goals of the Fund, and whose proposals most persuasively demonstrate capacity for successful completion. The Fund's primary goal is to encourage and support the recruitment, retention, and promotion of Latino/o political scientists. Our secondary goal is to support research on Latino politics in the United States. Grants will be made to individuals, institutions, and projects whose purposes most clearly match the goals of the Fund, and whose proposals most persuasively demonstrate capacity for successful completion.

**Scholarship Information**

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News

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The Society for Neuroscience invites you to join the official SfN Facebook Fan Page. Connect with neuroscientists from around the globe, view the latest SfN posts, and find up-to-date information about Neuroscience 2009. Sign up today.

SfN Consolidates with ANDP, Launches New Higher Education and Training Strategy
The Association of Neuroscience Departments and Programs (ANDP) has consolidated with and become a part of SfN, effective July 1, 2009. As part of SfN’s enhanced higher education and training strategy, ANDP programs and services will continue under a new SfN committee and with a new category of SfN membership. Learn more.

Imaging Study Shows Decrease in Empathic Responses to Outsiders
An observer feels more empathy for someone in pain when that person is in the same social group, according to new research in the July 1 issue of The Journal of Neuroscience. The study shows that perceiving others in pain activates a part of the brain associated with empathy and emotion more if the observer and the observed are the same race. The findings may show that unconscious prejudices against outside groups exist at a basic level. View
Recently added Publications

Model selection for simplicial approximation (2009)
Gallez, Claire, Michel, Bertrand
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Trading Quantization Precision for Sampling Rates in Systems with Limited Communication in the Uplink Channel (2009)
Cela, Arben
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Strichartz estimates without loss on manifolds with hyperbolic trapped geodesics (2009)
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CERTAINTES PROBLEMES SPECTRAUX POUR DES OPERATEURS DESCHRODINGER (2009)
Jia, Xiaoyao
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Moustafa, Tarak
Cette thèse propose d'étudier les mécanismes de stratification et des inégalités dans les performances. L'objectif principal est de savoir si la 'compréhensivisation' des systèmes éducatifs...

A symposium to mark the retirement of Alan Macfarlane (2009)
Macfarlane, Alan, Thomas, Keith, Humphrey, Caroline, Burke, Peter, Goody, Jack, Laidlaw, James, ...
Talks by Caroline Humphrey, Keith Thomas, Peter Burke and Jack Goody (read by James Laidlaw), with reply by Alan Macfarlane. Filmed on 4th July 2009 in King's College, Cambridge by Zilan Wang and...

Interview of Gillian Beer (2009)
Beer, Gillian
**Scholarly Skywriting**

From Wikipedia, the free encyclopedia

Scholarly Skywriting is a term coined by cognitive scientist Stevan Harnad describing the combination of multiple email and a topic threaded web archive such as a newsgroup, electronic mailing list, hypermail, netnews or Internet forum, linked and sortable by date, author, or subject-heading threads. The name derives from the idea that texts can be written in the "sky" (via multiple email and a web archive) for all to see ("skyreading") and all to add their own comments to ("skywriting").

After the property of being online and readable by all, the most important property of Scholarly Skywriting is "quote/commentary": cut and pasting the target passages of a text followed by a commentary focussed specifically on the excerpt. The quote/commentary can be multiply embedded, providing a new dimension to hyperlinking.

Harnad suggests that scholarly skywriting with quote/commentary has revived the oral tradition in the online age, making it possible to have a conversation-like dialogue with a text (even a text with a deceased author) that fully utilizes the interactive cognitive capacities of the brain that evolved with language. In his view, writing systems provided permanent records missing from oral exchanges at the price of slowing the cognitive interaction to a tempo that is out of phase with the potential speed and power of interdigitating thought to which the brain is specifically adapted. Harnad claims scholarly skywriting is significant because it combines the advantages of oral and written communication, restoring the synchronous, bilateral and interactive nature of the oral tradition with the permanence of the written tradition.

Student Skywriting is Scholarly Skywriting done in a teaching/learning context.
COLLECTIVE BARGAINING AGREEMENTS

This digital collection is provided by the Martin P. Catherwood Library, ILR School, Cornell University.

A collective bargaining agreement is a labor contract between an employer and one or more unions. As such, they provide a lasting record of important workplace issues including pay, benefits, and conditions of work. Until recently, researchers needing agreements could only access individual print copies by onsite visits to libraries with print collections, contacting the U.S. Bureau of Labor Statistics, or by contracting with a private research service.

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- Government IT Expo to Highlight Cloud Computing and SOA
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- Cloud Computing Conference & Expo Europe Photo Album
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Top Stories

The Complete A to Z List of Networking and Social Bookmarking Sites

This is the complete list of Networking and Social bookmarking sites that was a study I had broken up into

Virtualization PRESENTATION

Why VDI?
Discoveries

Video Game Technology and Science?

Chemists use the computer technology behind today's video games to rapidly calculate the structure of molecules.

Structures of molecules calculated by an algorithm rewritten to run on a graphical processing unit.

Credit and Larger Version
Overview

Start posting and voting, and see what physicians from around the country are thinking. The postings, created by your colleagues in more than 68 specialties, represent the frontlines of medicine. When you want to share an observation, simply create a posting. If you want to provide feedback on someone else's posting, you vote. And if you want to add your voice to the discussion, you can do so in the comments section.

(Click here to read selected clinical discussions)
Pipes is a powerful composition tool to aggregate, manipulate, and mashup content from around the web.

Like Unix pipes, simple commands can be combined together to create output that meets your needs.

Learn How to Build a Pipe in Just a Few Minutes
Pipes only sounds hard. Watch our intro and see how you can quickly turn your idea into a usable, working feed.

Also available: How to Translate Your Feed
Rules in Review

Rule 1: We will soon exceed our human ability to code metadata, vet, and organize content by hand.

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Rule 5: e-journals will have to accommodate this trend towards being a more immediate part of the scholarly endeavor.

Rule 6: Librarians’ expertise and automation are desperately needed to translate and organize the next generation of e-journals.
Questions
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- Connecting through e-journals: Bridges between discourse and communities: [http://www.allacademic.com/meta/p_mla_apa_research_citation/1/1/7/6/5/p117659_index.html](http://www.allacademic.com/meta/p_mla_apa_research_citation/1/1/7/6/5/p117659_index.html)
- **A registry of innovative e-journal features:** [http://www.public.iastate.edu/~CYBERSTACKS/EJI.htm](http://www.public.iastate.edu/~CYBERSTACKS/EJI.htm)
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