## The Open Archives Initiative: Liberating the Research Literature

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#### Presentation structure

- The journals funding crisis, and history of self-archiving
- The Open Archives Initiative: history and technology
- The Budapest Open Access Initiative
- Institutional archives: what are they?
- Practical steps



10 April 02

## The journals funding crisis

'In the longer term, it is difficult to imagine how the current model of funding publishing companies through research libraries ... can possibly persist ... it is premised on a paper medium that was difficult to produce, difficult to distribute, difficult to archive, and difficult to duplicate – a medium that hence required numerous local redistribution points in the form of research libraries.'

Paul Ginsparg, Winners and losers in the global research village, UNESCO Conference, 1996



## The 'giveaway literature'

- Academic authors do not write research articles for profit
- Journal publishers take the profit
- Most of that profit comes from the libraries of the institutions in which the researchers work
- Thus, by giving away their intellectual property, researchers deprive themselves of access to the work of peer researchers
- Something is wrong ...



# 'Eprint' archives: the current situation

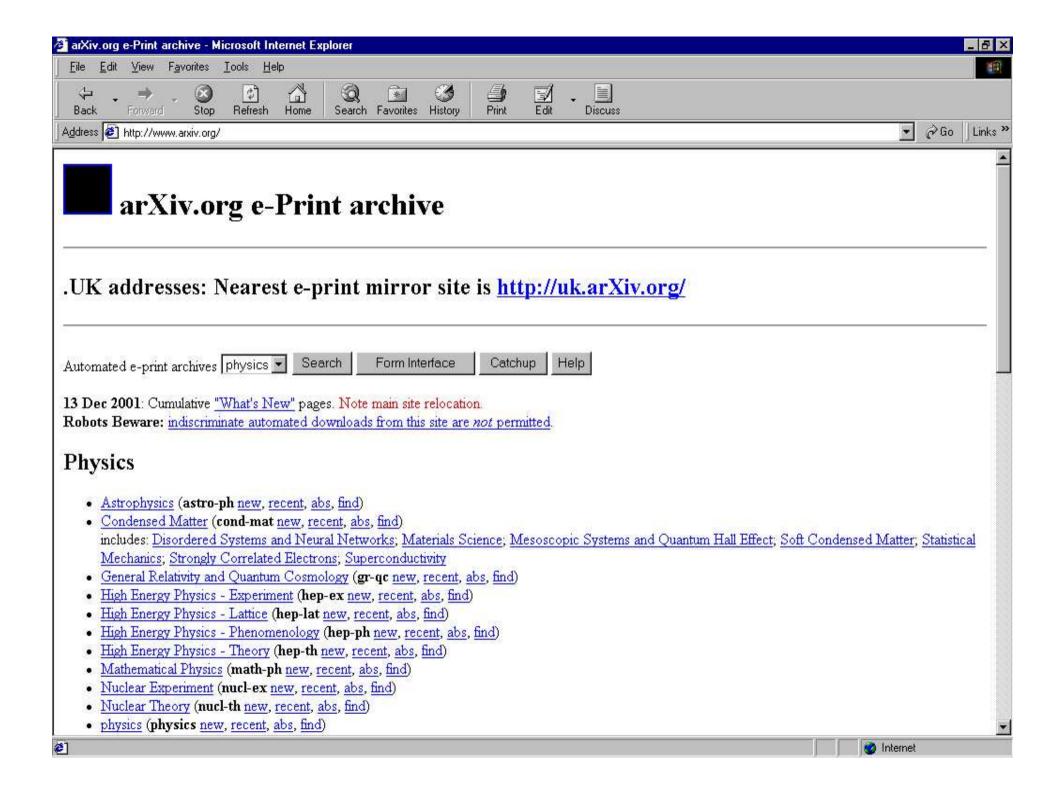
- Disciplinary archives
- Best-known and best-developed is arXiv.org (formerly known as xxx.lanl.gov)
- Current preprint communities: physicists (particularly high-energy physicists); computer scientists; mathematicians

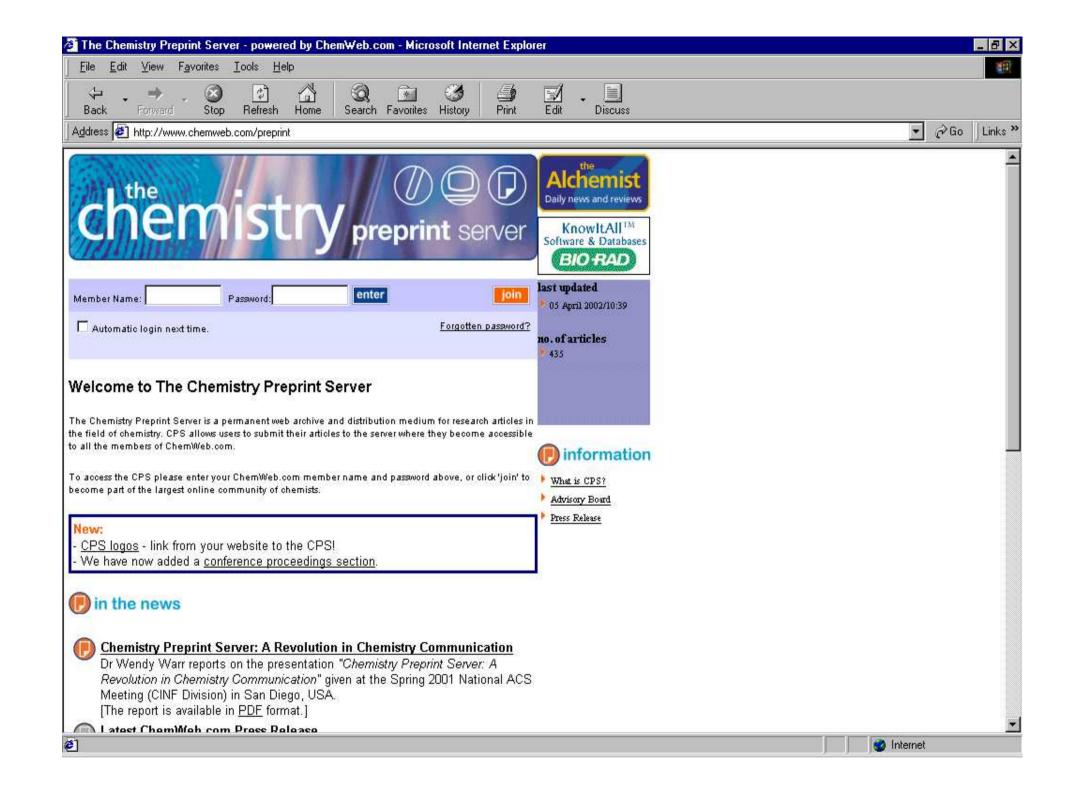
## Self-archiving

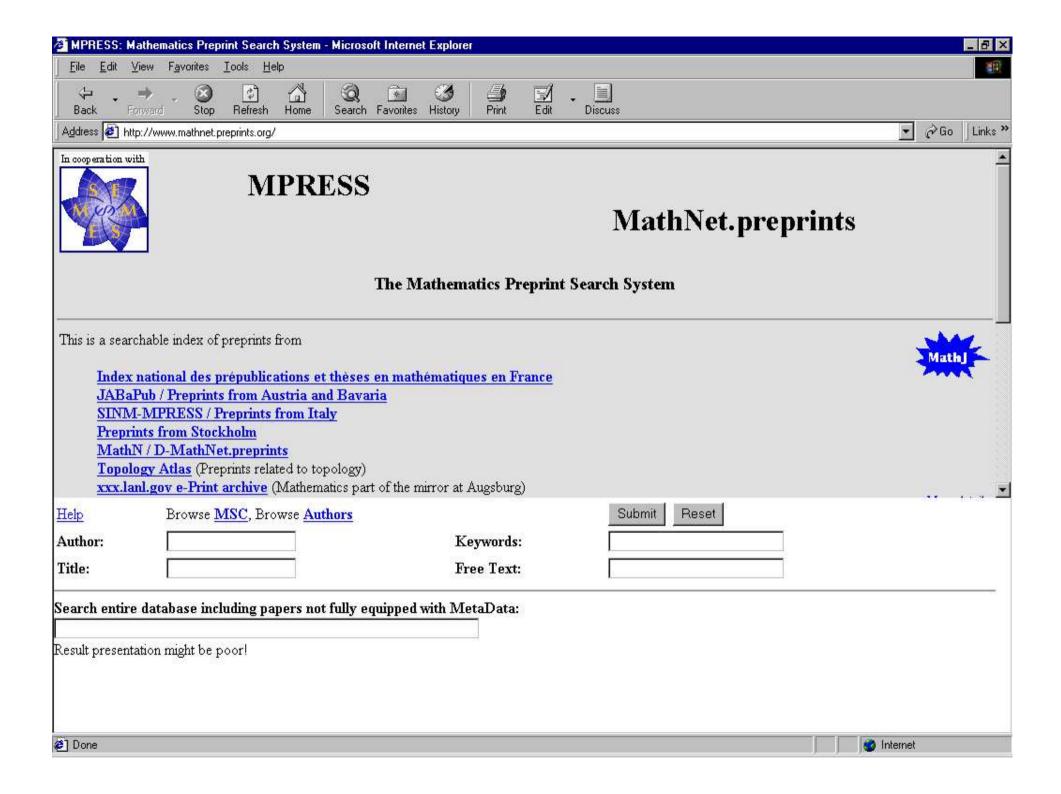
## Changing the behaviour of researchers through encouraging self-archiving

- Will eventually 'liberate the literature'
- Leaves commercial publishers intact, though with a tougher commercial environment
- Is legal





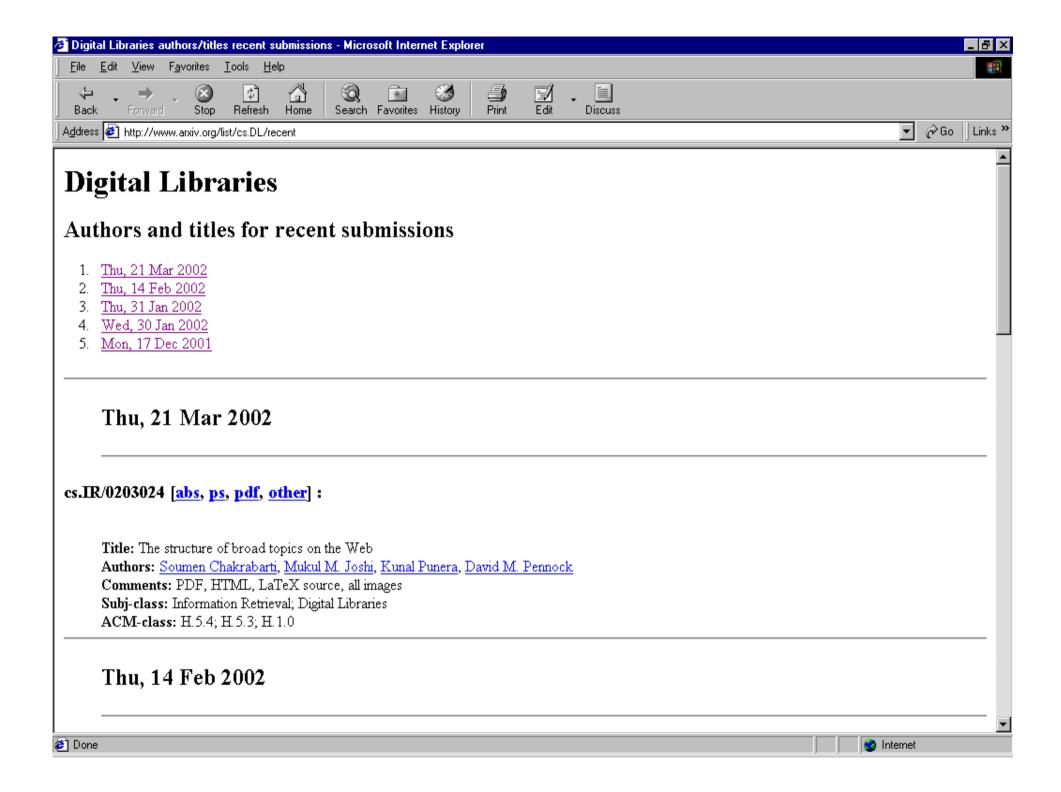


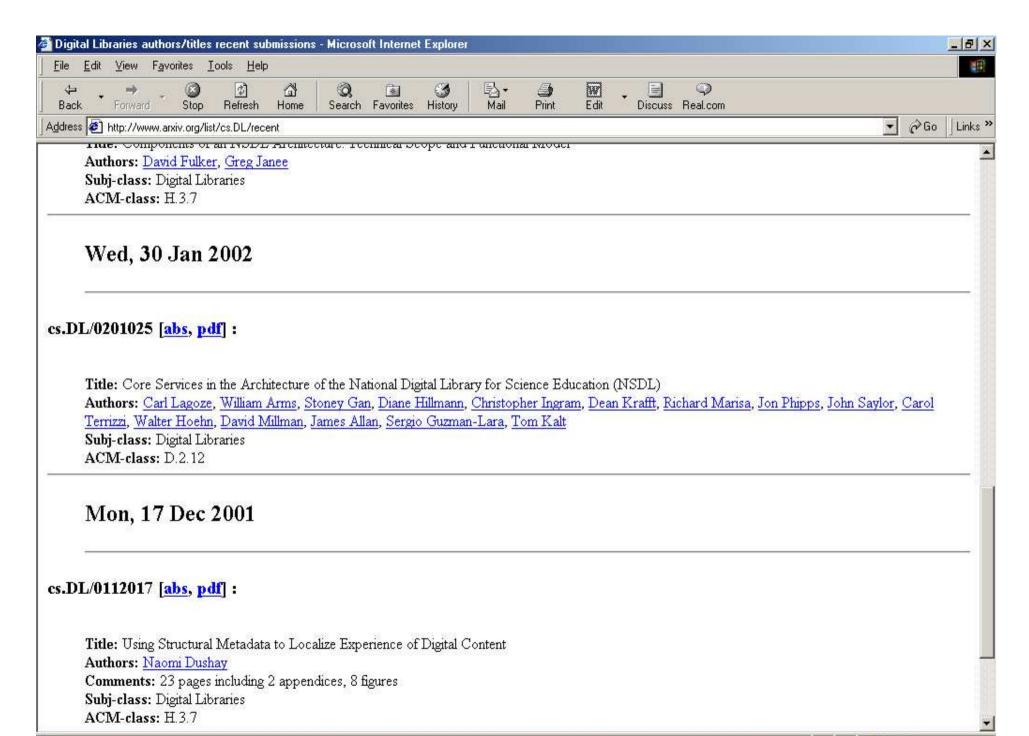


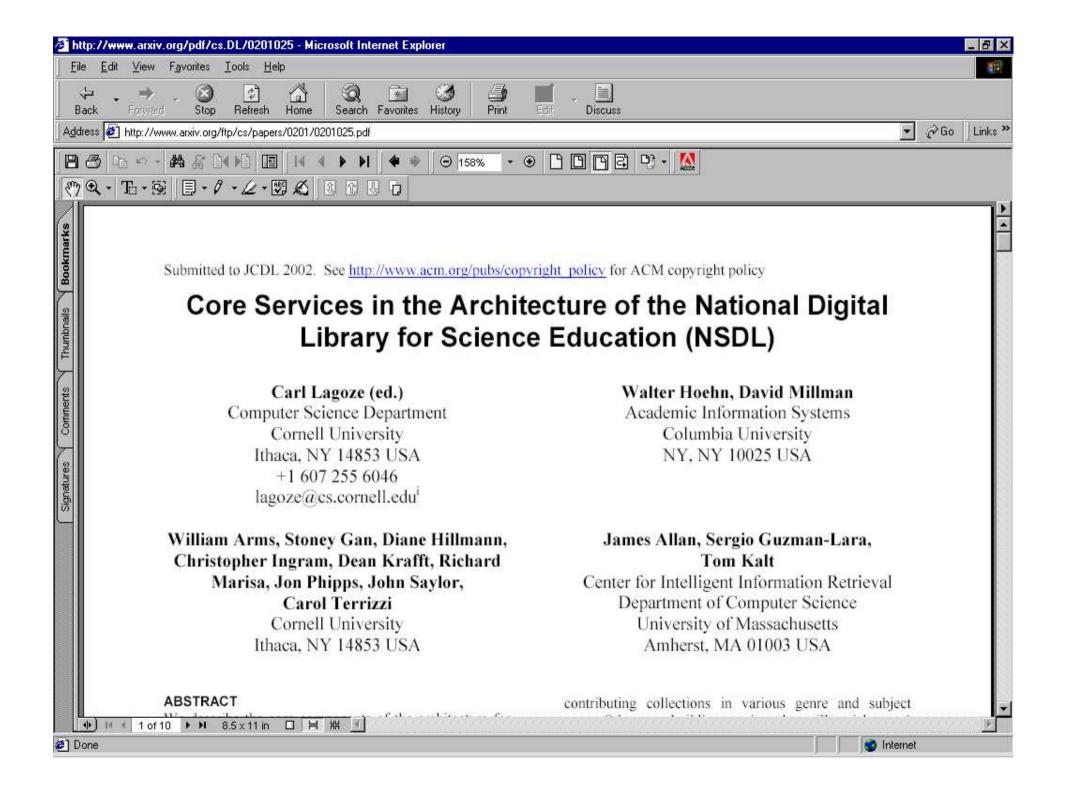
# The convenience of the medium

- From the desktop
- Velocity of research publication dramatically enhanced
- Print libraries redundant for this literature
- A commerce-free system:
  - No authentication
  - No payment









## Copyright

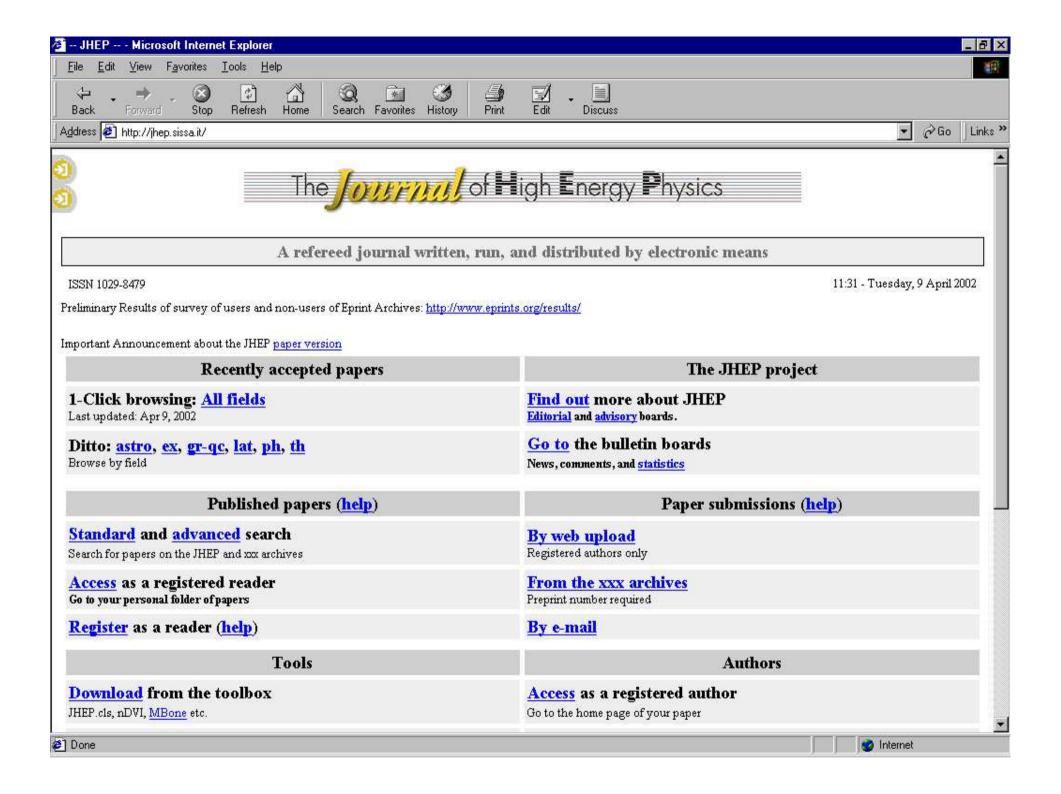
- Journal policies vary
- Liberal journals allow posting of preprints to archives, and posting of postprints (these are 'eprint archives')
- Aim is to shift model so that academic authors retain rights in secondary publication of research articles

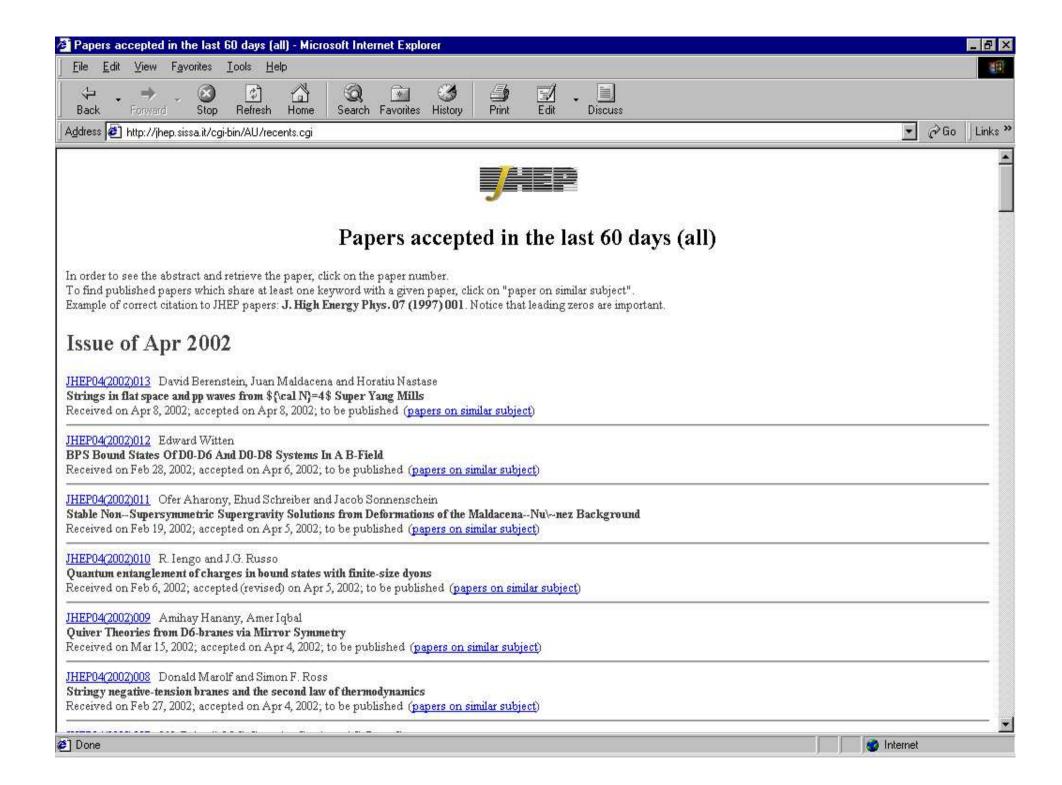


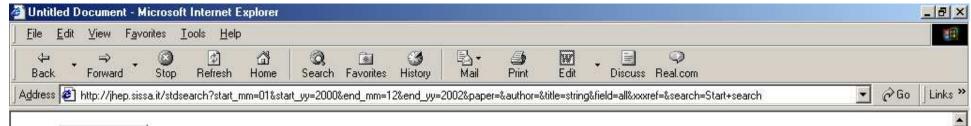
## Where do journals fit in?

- They don't disappear!
- Journals will become quality badges
- 'Overlay journals'
- Publishers will try to 'add value'









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#### JHEP 07(2000)012

Title: Renormalizability of the open string sigma model and emergence of D-branes

Author: W. Kummer and D.V. Vassilevich

Abstract: Rederiving the one-loop divergences for the most general coupling of the open string sigma model by the heat kernel technique, we distinguish the classical background field from the mean field of the effective action. The latter is arbitrary, i.e. does not fulfil the boundary conditions. As a consequence a new divergent counter term strongly suggests the introduction of another external one-form field (beside the usual gauge field), coupled to the normal derivative at the boundary. Actually such a field has been proposed in the literature for different reasons, but its full impact never seems to have thoroughly investigated before. The beta function for the resulting renormalizable model is calculated and the consequences are discussed, including the ones for the Born-Infeld action. The most exciting property of the new coupling is that it enters the coefficient in front of the normal derivative in Neumann boundary conditions. For certain values of the background fields this coefficient vanishes, leading to Dirichlet boundary conditions. This provides a natural mechanism for the emergence of D-branes.

Received: Jun 19, 2000 Accepted: Jul 7, 2000 Published: Aug 21, 2000

Cited by Refers to

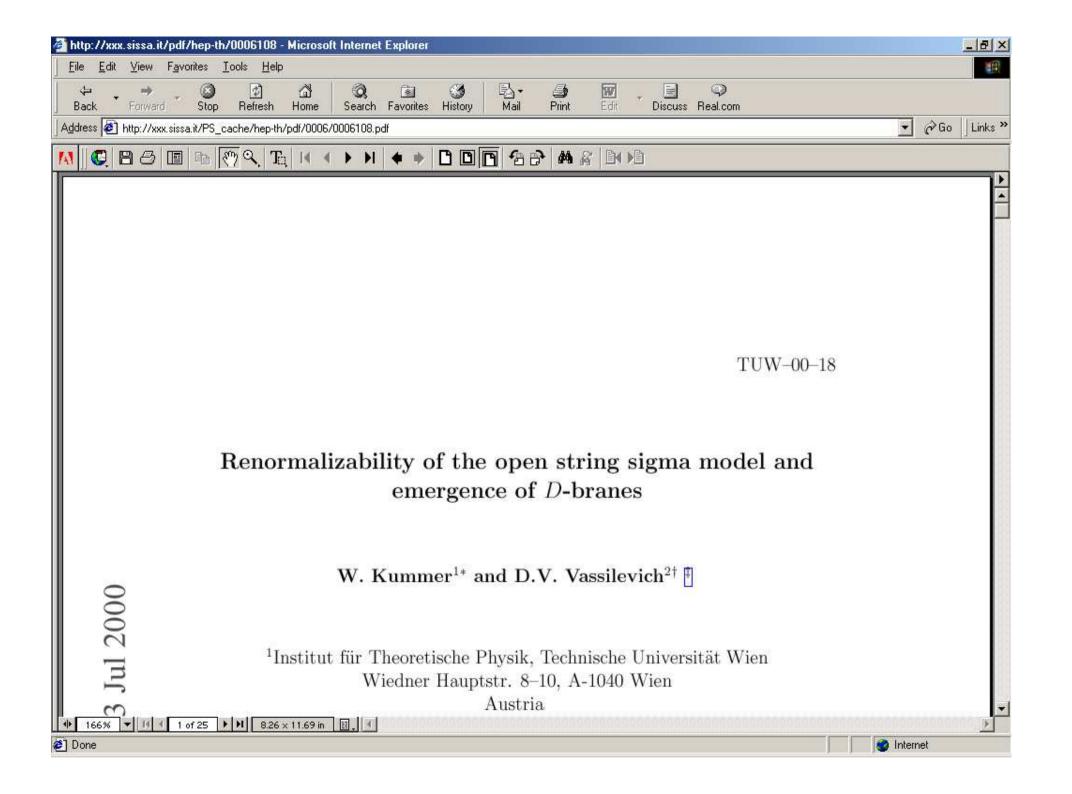
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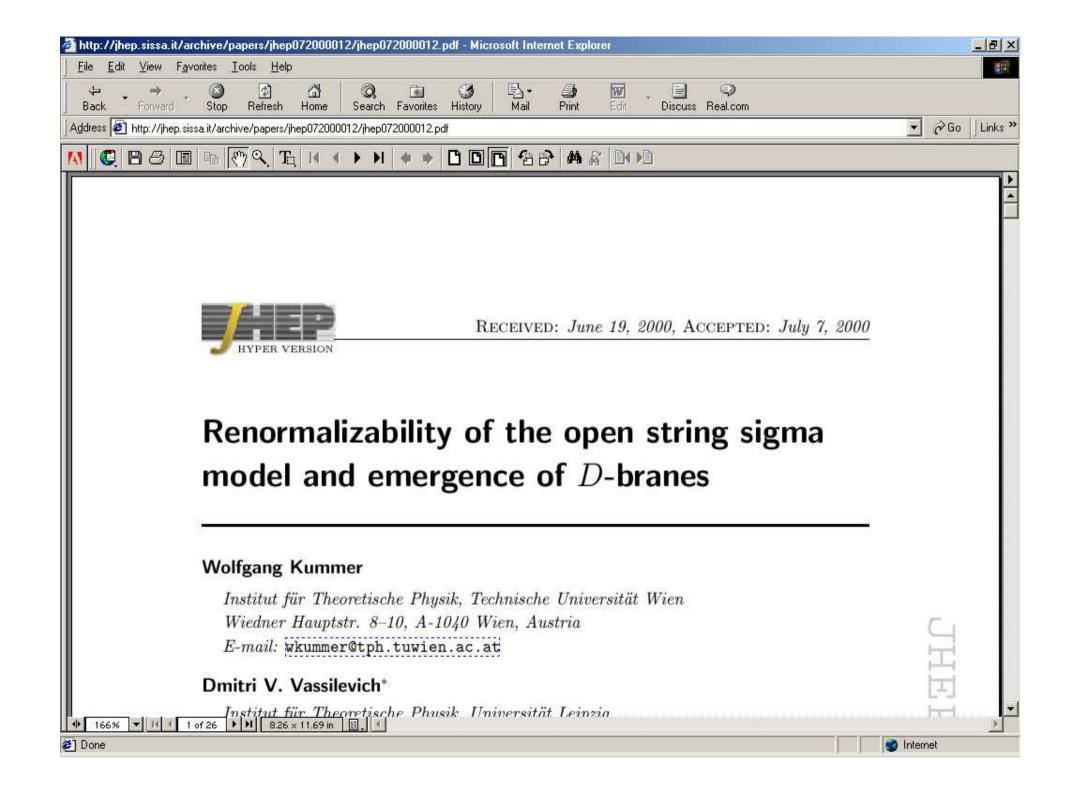
Keywords: Sigma Models Bosonic Strings D-branes

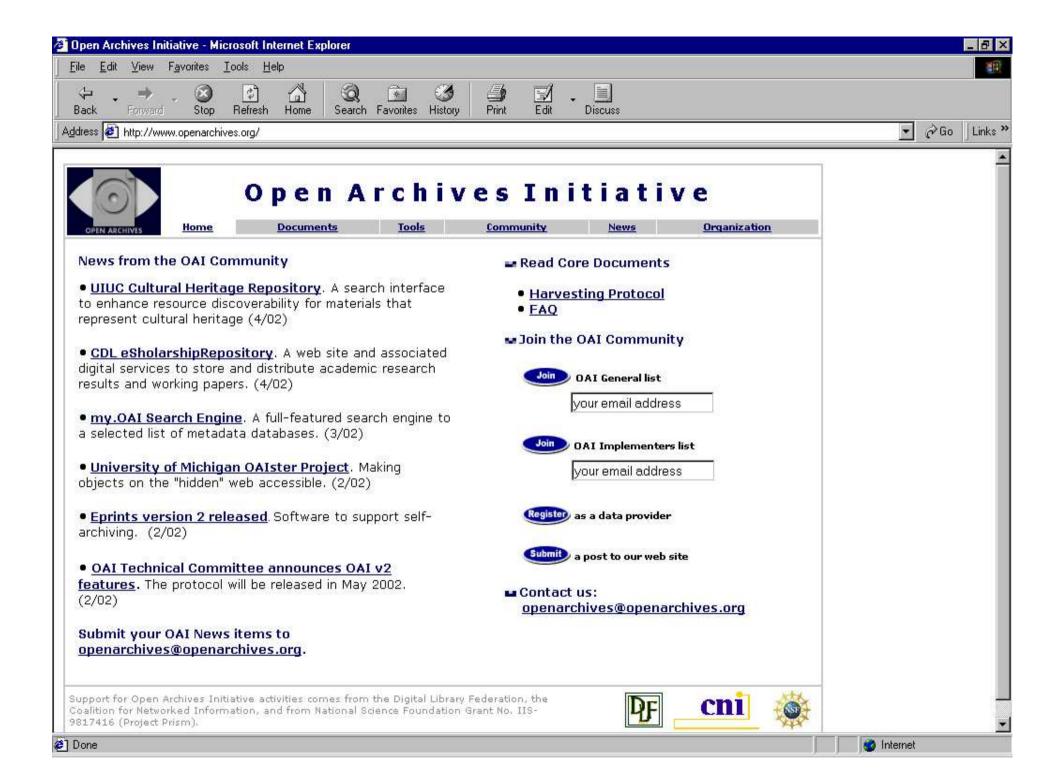
E-print number: hep-th/0006108 E-mail: vassil@itp.uni-leipzig.de

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## History of the OAI

- October 1999 Santa Fe Convention
- Universal Preprint Service (UPS)
- Eprints → other domains
- 'a low-barrier interoperability framework'
- Dienst Protocol → Metadata Harvesting Protocol
- Carrier protocol is HTTP
- Responses are encoded in XML
- Early 2000 the Cambridge Meetings
- August 2000 support from CNI and DLF
- Steering Committee formed



## History of the OAI

- Late 2000: Mission Statement
- The Open Archives Metadata Set → the DC Metadata Element Set (unqualified)
- Aim was to 'reveal a market of community-developed metadata practices'
- Supporting 'coarse granularity resource discovery'
- OAI 'Independent of content and economic mechanisms'
- OAI is 'an organization and an effort explicitly in transition'
- Currently in an experimentation phase



## Two classes of participant

- Data Providers adopt the OAI technical framework as a means of exposing metadata about their content (held in 'repositories')
  - OAI-conformant
  - OAI-registered
  - OAI-namespace-registered
- Service Providers harvest metadata from data providers using the OAI protocol and use the metadata as the basis for value-added services

#### The BOAL

- Launched February 14 2002
- Meeting in Budapest of Soros Open Society Institute
- \$1m per year for 3 years for:
  - the development of business models and plans for sustainable selfarchiving and open access publishing
  - use of library networks to mobilise support for open access globally
  - support for researchers in low and middle income countries to publish in open-access journals which charge up front fees
  - development of software tools and templates for open access publishing, self-archiving, indexing and navigation
  - promotion of the open access philosophy worldwide
- OSI may also, at a later stage, provide direct seed funding to certain types of open access and self-archiving initiatives

#### The BOAL

#### Two complementary strategies

- OAI-based self-archiving
- Alternative journals, committed to open access. 'Because journal articles should be disseminated as widely as possible, these new journals will no longer invoke copyright to restrict access to and use of the material they publish. Instead they will use copyright and other tools to ensure permanent open access to all the articles they publish. Because price is a barrier to access, these new journals will not charge subscription or access fees, and will turn to other methods for covering their expenses.'



## The Budapest signatories

'We invite governments, universities, libraries, journal editors, publishers, foundations, learned societies, professional associations, and individual scholars who share our vision to join us in the task of removing the barriers to open access and building a future in which research and education in every part of the world are that much more free to flourish.

February 14, 2002 Budapest, Hungary

Leslie Chan: Bioline International

Darius Cuplinskas: Director, Information Program, Open Society Institute

Michael Eisen: Public Library of Science

Fred Friend: Director Scholarly Communication, University College London

Yana Genova: Next Page Foundation

Jean-Claude Guédon: University of Montreal

Melissa Hagemann: Program Officer, Information Program, Open Society Institute

Stevan Harnad: Professor of Cognitive Science, University of Southampton, Universite du Quebec a

Montreal

Rick Johnson: Director, Scholarly Publishing and Academic Resources Coalition (SPARC)

Rima Kupryte: Open Society Institute

Manfredi La Manna: Electronic Society for Social Scientists István Rév: Open Society Institute, Open Society Archives

Monika Segbert: eIFL Project consultant

Sidnei de Souza: Informatics Director at CRIA, Bioline International

Peter Suber: Professor of Philosophy, Earlham College & The Free Online Scholarship Newsletter

Jan Velterop: Publisher, BioMed Central'



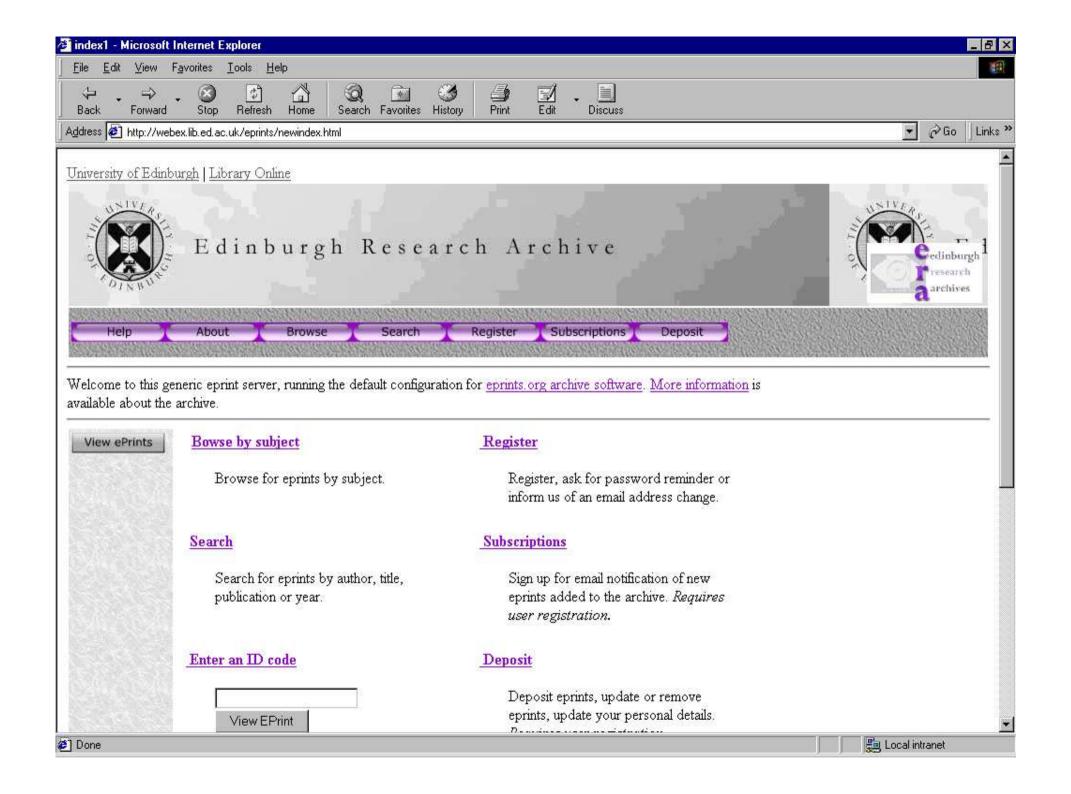
### Institutional archives?

- New concept
- Designed to spread the use of archives by scholars across all communities
- Based on the concepts of distribution and interoperability
- Take the search engine centralised database approach
- Made possible by the Open Archives Initiative Metadata Harvesting Protocol (OAI MHP)

# Benefits of an institutional open archive

- RAE administration
- Part of an international archive
- Distributed network of archives increases the total pool of public domain research
- Librarians can do the work ...
- Library ultimately will make savings

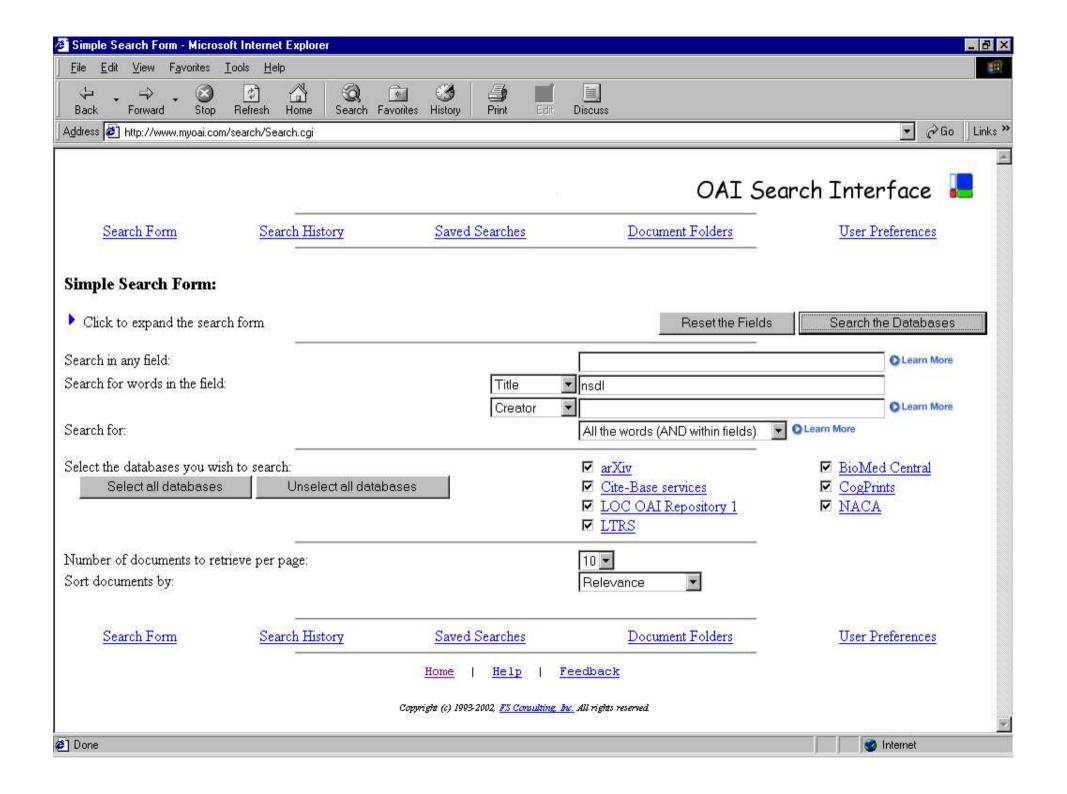


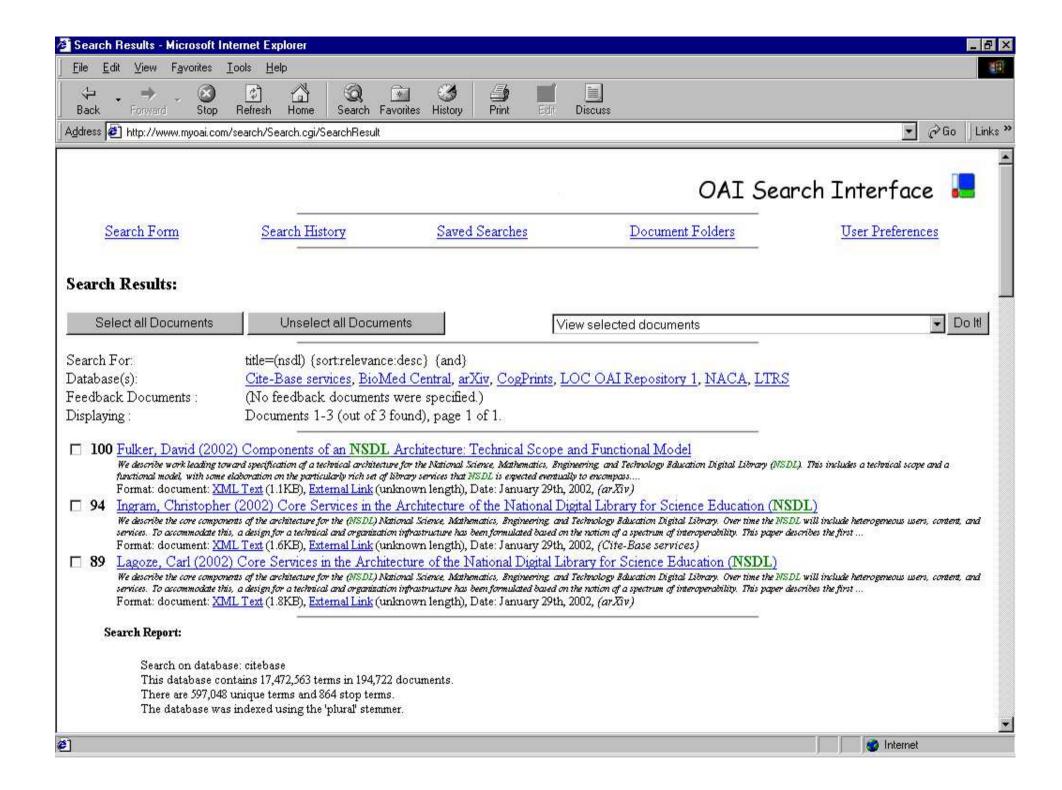


### **Anxieties**

- What is interoperability?
- 'Ingelfinger Rule'
- Lack of quality control
- Preservation
- 'I don't want the journals to disappear'
- Others?







## Copyright transfer agreements

'These take many forms. Whatever the wording is, if it does not explicitly permit online self-archiving, modify it so that it does.

Some publishers (about 10%) already explicitly allow selfarchiving of the refereed postprint (e.g., the American Physical Society.) Most other publishers (perhaps 70%) will also accept this clause, but only if you explicitly propose it yourself (they will not formulate it on their own initiative). If this is successful, selfarchive the refereed postprint.'



## Recommended wording

"I hereby transfer to [publisher or journal] all rights to sell or lease the text (on-paper and online) of my paper [paper-title]. I retain only the right to distribute it for free for scholarly/scientific purposes, in particular, the right to self-archive it publicly online on the Web."



### Last resort

'Hence, for about 80% of journals, once you have done the above, you can go ahead and self-archive your paper. Some journals (about 20%), however, will respond that they decline to publish your paper unless you sign their copyright transfer agreement verbatim. In such cases, sign their agreement and archive the "corrigenda".'



## Edinburgh's Informatics wording

'The <research sponsor> and the University of Edinburgh are authorised to reproduce and distribute reprints and on-line copies for their purposes notwithstanding any copyright annotation hereon.'



## Next steps ...

'Researchers: Self-archive all present, future (& past) papers

Universities: Install Eprint Archives, mandate them; help in author start-up

Universities should create institutional Eprint Archives for all their researchers. They should also mandate that they be filled. It is already becoming normal practise for faculty to keep and update their institutional CVs online on the Web; it should be made standard practise that all CV entries for refereed journal articles are linked to their archived full-text version in the university's Eprint Archive.

#### Libraries: Maintain the University Eprint archives; help in author startup

Libraries are the most natural allies of researchers in the self-archiving initiative to free the refereed journal literature. Not only are they groaning under the yoke of the growing serials budget crisis, but librarians are also eager to establish a new digital niche for themselves, once the journal corpus is on-line.'

## Thank You

