



# Torii

## Access the Digital Research Community

1<sup>st</sup> Open Archives Forum  
Pisa, 13-14 May 2002

# TIPS project



[tips.sissa.it](http://tips.sissa.it)

European Union  
5<sup>th</sup> framework  
IST-1999-10419



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# Participants

- ◆ Trieste, I (SISSA)  
[www.sissa.it](http://www.sissa.it)
- ◆ Udine, I (Università di Udine)  
[web.uniud.it](http://web.uniud.it)
- ◆ London, UK (City University)  
[web.soy.city.ac.uk/research/cisr/](http://web.soy.city.ac.uk/research/cisr/)
- ◆ Grenoble, F (CLIPS-IMAG UJF)  
[www-clips.imag.fr](http://www-clips.imag.fr)
- ◆ Geneva, CH (IT Division, CERN)  
[www.cern.ch](http://www.cern.ch)
- ◆ Bristol, UK (IoP)  
[www.iop.org](http://www.iop.org)

# Road Map

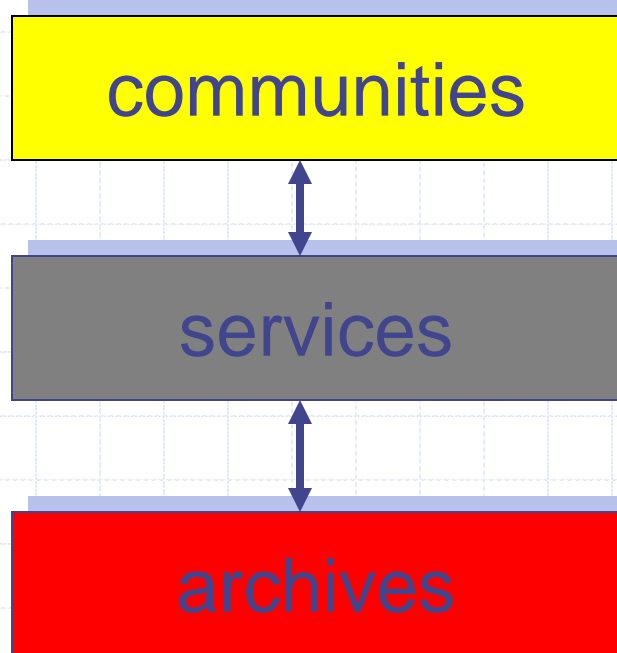
- ◆ February 2000 start
- ◆ April 2001 portal version 0.5
- ◆ May 2002 portal version 0.9
- ◆ May 2002 TIPS Conference
- ◆ June 2002 portal version 1.0

# The digital research community

**“The way  
you work  
has  
already  
changed”**

- ◆ The communication of scientific research results has changed in recent years as **digital** means of information production, distribution and access have become widespread

# A three layer structure



# Repositories of information

- Library
  - Publishers' stacks
- digitalized on:*  
(open) archives,  
databases

archives

## MILESTONE 1991

arXiv.org e-print archive

[weblib.cern.ch](http://weblib.cern.ch)

[www.slac.stanford.edu](http://www.slac.stanford.edu)

# Services

- Library desks
- Paper journals

*digitalized on:*  
review journals, cross-citation, ...

services

## MILESTONE 1997



Journal of High Energy Physics  
[jhep.sissa.it](http://jhep.sissa.it)



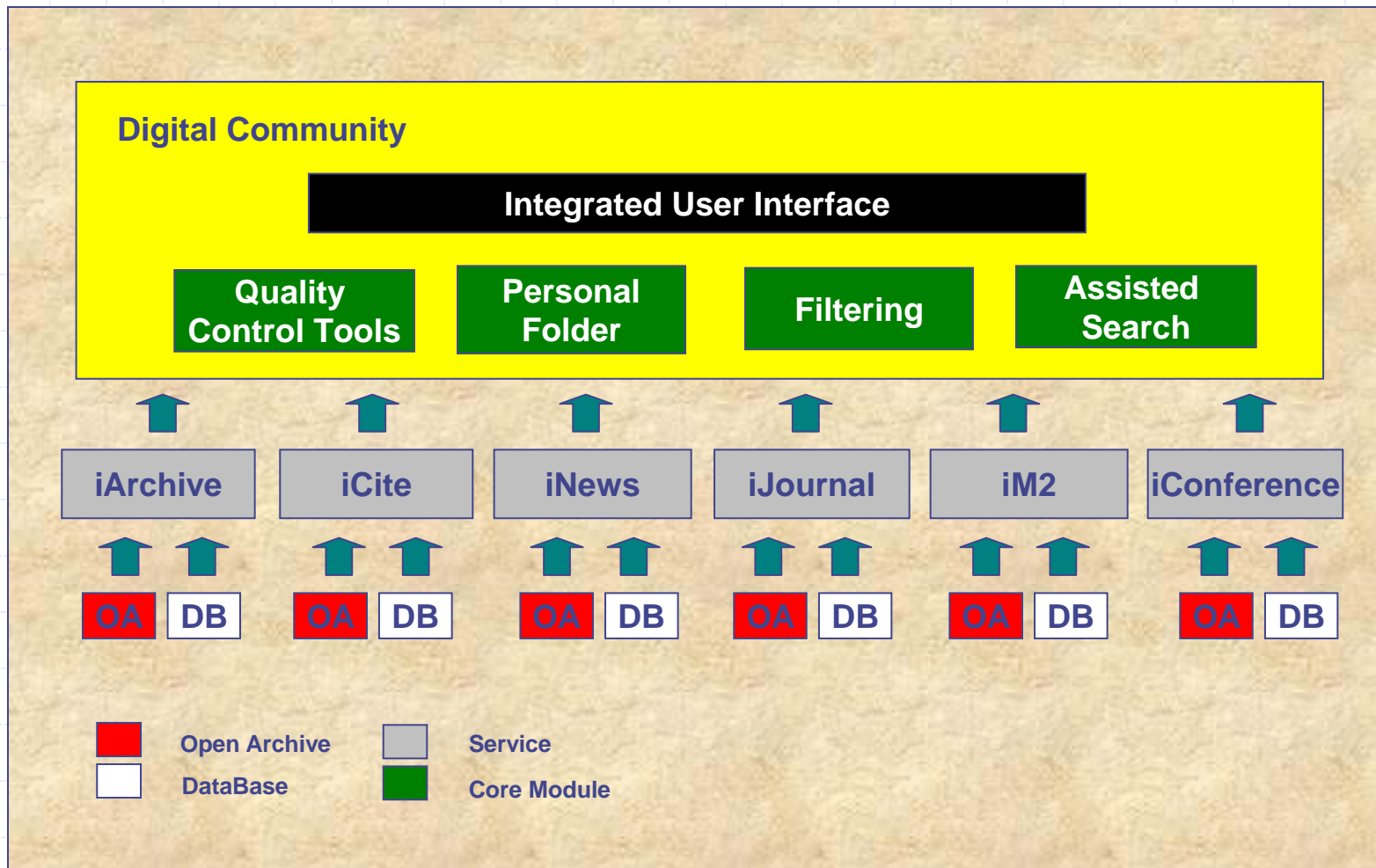
# Communities

*digitalized on:*  
e-mail, text and graphical  
authoring sw ...

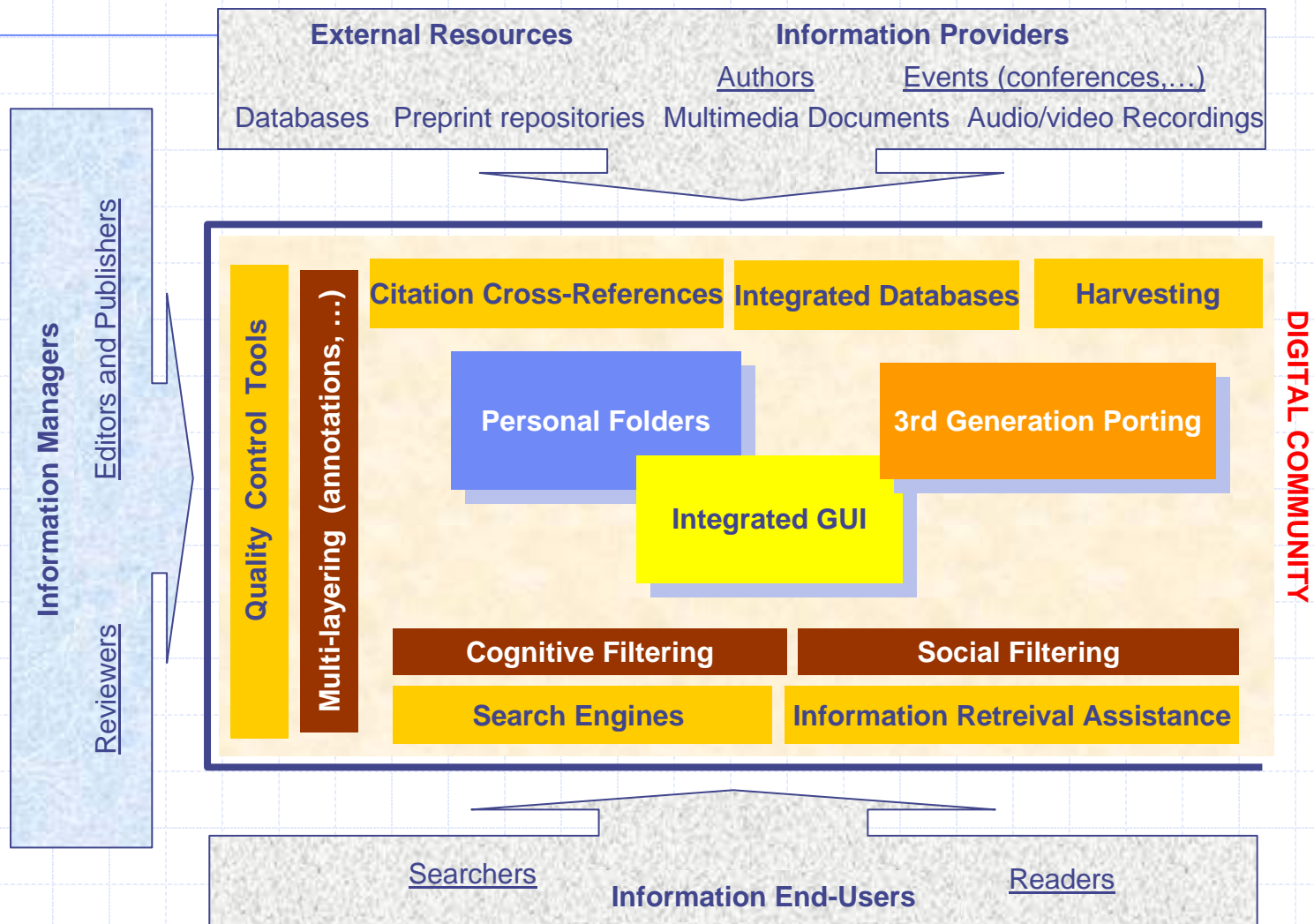
communities

**MILESTONE 2003 ?**

# Three (digital) layers



# Overview



# Torii: your direct access

**“It works  
the way  
you work”**



torii.info

◆ Torii gives you direct access to the Digital Research Community

- Unified access point (on web)
- Customizable to fit your interests
- Synergic combination of services and information

# A snapshot

The screenshot shows the Torii web interface. At the top, there is a navigation bar with links for LIST, SEARCH, CUSTOMIZE, LOGOUT, and HELP. A user greeting reads "Hello, Marco Fabbrichesi. Tuesday, 23 April 2002". Below the navigation bar is a search and filter section with a "Document ID" input field, a "Sector" dropdown menu set to "mySectors", and a "Browse" dropdown menu set to "since last List on mySectors". There are also "From" and "To" date range selectors. On the right side of this section are "List" and "Reset" buttons.

The main content area is divided into two columns. The left column contains a sidebar with categories: InBox, CP, and ELD. Under "InBox", there are three items: "arXiv:hep-ph/0009290 Strong CP problem ...", "arXiv:hep-th/0106058 Scales of Gravity", and "arXiv:hep-ph/0101259 CP violation, the ...". Under "CP", there are three items: "arXiv:hep-ph/0105305 Rephasing-invaria ...", "arXiv:hep-th/0111235 Brane World Susy ...", and "arXiv:hep-ph/9807344 Phenomenology, As ...". Under "ELD", there are two items: "arXiv:hep-ph/0106165 Experimental intr ...".

The right column displays a list of documents. At the top right of this section is a "Sort by:" dropdown menu set to "profile: Neutrinos". The list title is "Documents since my last List (2002-04-23) on mySectors [ 0 -20 of 317 records ]". The first document is "arXiv:hep-ph/0102234 [document] [Submitted: 2001-02-19 | Last revision: 2002-04-22]". Its title is "Frequentist analyses of solar neutrino data (updated including the CC, NC and day/night data from SNO)". Its authors are "Creminelli, Paolo | Signorelli, Giovanni | Strumia, Alessandro". The second document is "arXiv:hep-ph/0202122 [document] [Submitted: 2002-02-13 | Last revision: 2002-04-19]". Its title is "Neutrinos in cosmology" and its author is "Dolgov, A. D.". The third document is "arXiv:hep-ph/0204194 [document] [Submitted: 2002-04-16]". Its title is "If sterile neutrinos exist, how can one determine the total 8B and 7Be solar neutrino fluxes?". Its authors are "Bahcall, John N. | Gonzalez-Garcia, M. C. | Pena-Garay, C.". The fourth document is "arXiv:hep-ph/0109124 [document] [Submitted: 2001-09-14 | Last revision: 2001-12-23]". Its title is "CP violation and matter effect in long-baseline neutrino oscillation in the four neutrino model".

# Scientific documents and the Web

- ◆ In scientific publishing the correct markup of **semantic** and **graphical** content can be quite complex

An answer:

- Extensible Markup Language (XML)
- Java language

# Open portal to open archives

- ◆ Key features for the integration of dynamic access to the information are the XML language and the Open Archive Initiative protocol
- ◆ The OAI Protocol for Metadata Harvesting is the basic communications protocol between Torii and the services
- ◆ Torii will be easily extensible to any archive implementing the protocol

# The multi-layered document

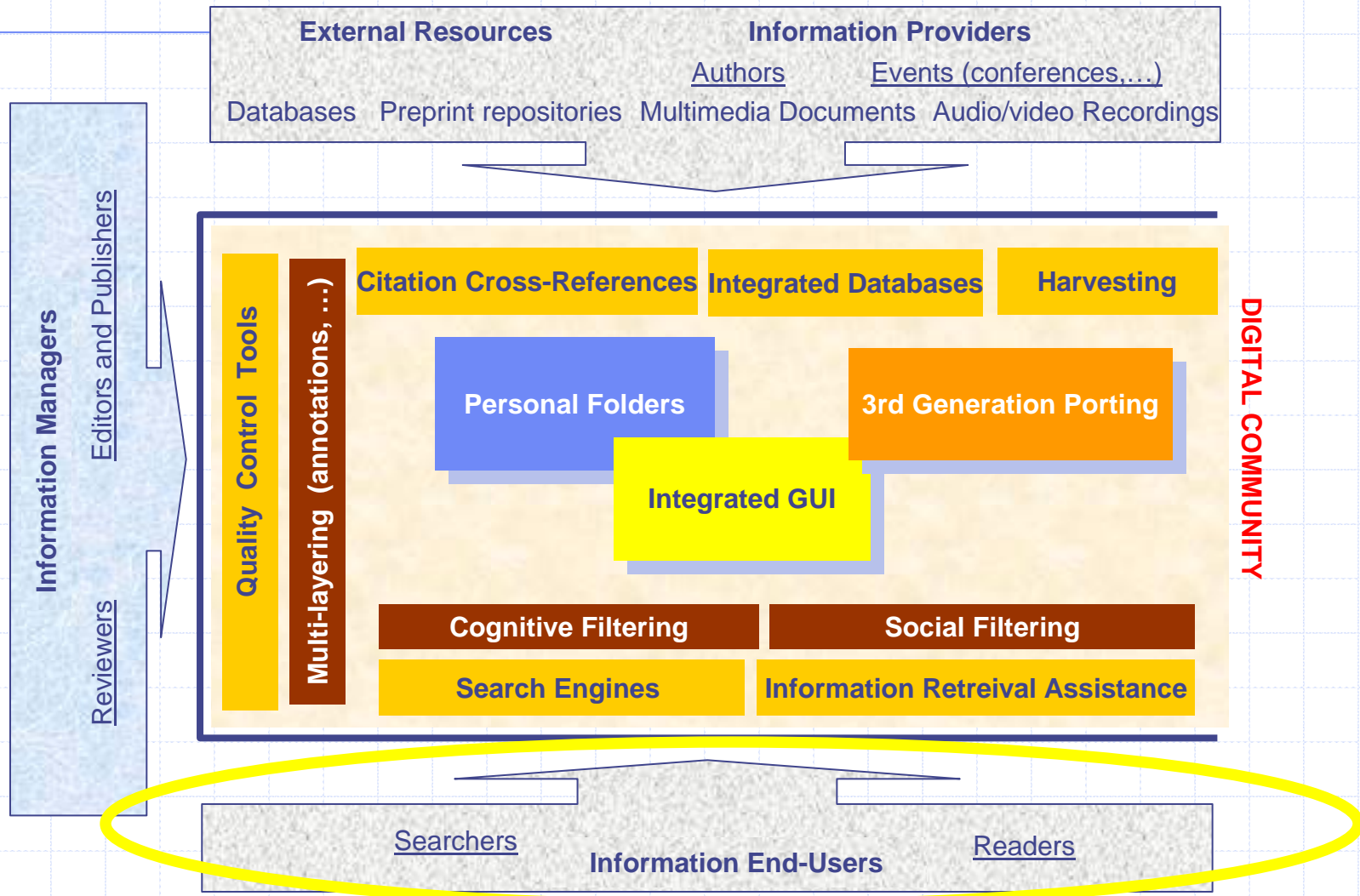
**“How  
does it  
work?”**

◆ The multi-layered document is a stack of different pieces of information about a document

- Dynamic access
- Graphic interface
- Support tools



# Overview



# Searching with Okapi

- ◆ Sophisticated search environment based on:
  - Probabilistic model
  - Relevance feedback

The screenshot shows a search interface with the following elements:

- Search for:** A large text input field.
- Title:** A text input field.
- Author:** A text input field.
- Abstract:** A text input field.
- In:** A dropdown menu currently set to "Default archives".
- Keywords:** A text input field.
- From:** Three dropdown menus for selecting a date range.
- To:** Three dropdown menus for selecting a date range.
- Search:** A button with a magnifying glass icon and the text "Search".

# The assistant

**“You are not  
left alone in  
searching”**

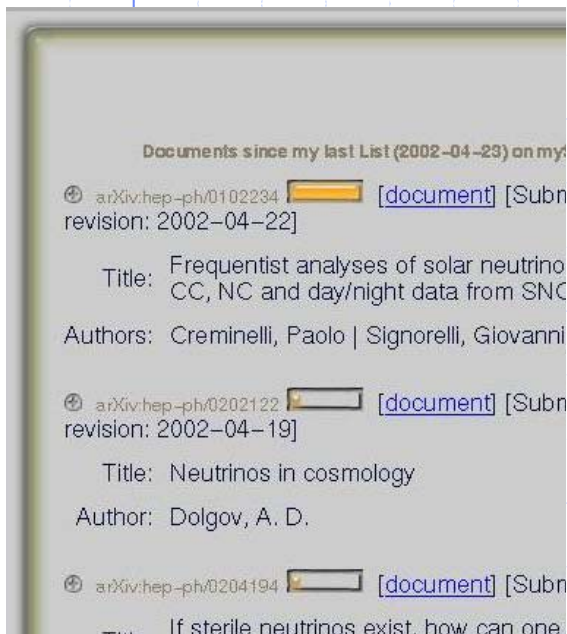
- ◆ IRA: the Information Retrieval Assistant helps you with:
  - Helpful hints
  - Terminological suggestions
  - Contextual suggestions

# Personalized information

- ◆ Broad-casting vs. narrow-casting
- ◆ Mass-media vs. personal-media

# Cognitive filtering

- ◆ The user defines his **research interest profiles**
- ◆ The profile is automatically updated every time the user provides explicit relevance **feedback**
- ◆ Every day the module **filters** the submissions to the archives
- ◆ The user is able to see the most **relevant** document at the top of the list



# Social filtering

- ◆ It is the digital analogy of sharing papers among colleagues
- ◆ It circulates documents among users who **share interests**
- ◆ It automatically delivers to the personal folder those documents that are **relevant**

# A network of QCT

**About**

Document ID : oai:arXiv:hep-ph/0102234  
User ID : marco  
Date/Hour : 2002-04-23 10:38:00

**Evaluation**

**Research quality** Gives a global measure of the quality of the scientific contents presented in the article [?](#) **X**

Excellent  
 Good  
 Average  
 Marginal  
 Poor  
 No answer

**Presentation** Well organized, clearly written, appropriate length,... **X**

Excellent  
 Good  
 Average  
 Marginal  
 Poor  
 No answer

**Intended audience** Level and quantity of knowledge required to understand the article **X**

Broad interest  
 Narrow interest  
 No answer

Valid Evaluation Form    Reset Evaluation

◆ Quality Control Tools memorize and exploit human evaluation

◆ The results are numerical scores about the *scientific quality* of the document

# iCite

- ◆ Extracts all citations from all the documents
- ◆ Creates a network of cross-references



[icite.sissa.it](http://icite.sissa.it)



# Document description

arXiv:hep-ph/0105305 [document] [Submitted: 2001-05-29 | Last revision: 2001-06-29]

**Rephasing-invariant CP violating parameters with Majorana neutrinos**

Authors: Pal, Palash B.  
Nieves, Jose F.

Abstract: We analyze the dependence of the squared amplitudes on the rephasing-invariant CP-violating parameters of the lepton sector, involving Majorana neutrinos, for various lepton-conserving and lepton-violating processes. We analyze the conditions under which the CP-violating effects in such processes vanish, in terms of the minimal set of rephasing invariants, giving special attention to the dependence on the extra CP-violating parameters that are due to the Majorana nature of the neutrinos.


Comment: Latex, axodraw, 11 pages. A few typos corrected, and a clarifying statement added regarding the higher order corrections


Journal: Phys.Rev. D64 (2001) 076005


SPIRES: [References](#), [Citations](#) iCite: [References](#), [Citations](#) [ 1]


Evaluations

|                     | QCT | Profiles                         |
|---------------------|-----|----------------------------------|
| # Of Evaluations :  |     | ELD : <input type="text"/>       |
| Research Quality :  |     | Neutrinos : <input type="text"/> |
| Presentation :      |     |                                  |
| Intended Audience : |     |                                  |

 InBox  Add to folder

 Evaluate

 Comment

 Feedback

# The personal folder



- ◆ Is the hub of the system
- ◆ This is where you can store your documents for future reference
- ◆ Here you will find new documents suggested by the social filtering engine

# 3G technology

**“Torii is  
ready to  
move into  
the future of  
digital  
networking”**

◆ You can connect and use it via  
**WAP:** [torii.info/wml/ia.wml](http://torii.info/wml/ia.wml)

...but we must wait for the 3G broad  
bandwidth

# Final event



Workshop on Personalization Techniques  
in Electronic Publishing on the Web: Trends and Perspectives

28-05-2002 Malaga, Spain

[www.dimi.uniud.it/~mizzaro/AH2002/](http://www.dimi.uniud.it/~mizzaro/AH2002/)

at

**2nd International Conference on Adaptive Hypermedia  
and Adaptive Web Based Systems**

29/5/2002 - 31/5/2002

Malaga, Spain

[sirius.lcc.uma.es/AH2002/](http://sirius.lcc.uma.es/AH2002/)

# Conclusion

- ◆ It works the way you work
- ◆ Easy desk- and palm-top access
- ◆ Over open archives
- ◆ Open integration of service providers
- ◆ Improved search tools

# The future

- ◆ Information providers
- ◆ Information managers
- ◆ Extends to audio, images and video data



tips.sissa.it



torii.info

Thank you!

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