<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Authority framework in 1.6 and CILEA’s customization for The University of Hong Kong</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td>Bollini, A; Lam, Allen; Mornati, S; Palmer, DT</td>
</tr>
<tr>
<td><strong>Citation</strong></td>
<td>Open Repositories 2010, Madrid, 6 - 9 July 2010.</td>
</tr>
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<td><strong>Issued Date</strong></td>
<td>2010-07-08</td>
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<td><strong>URL</strong></td>
<td><a href="http://hdl.handle.net/10722/61139">http://hdl.handle.net/10722/61139</a></td>
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<tr>
<td><strong>Rights</strong></td>
<td>This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.</td>
</tr>
</tbody>
</table>
Authority framework in 1.6 and CILEA’s customization for The University of Hong Kong

Andrea Bollini CILEA
Allen Lam HKU
Susanna Mornati CILEA
David Palmer HKU
Flight Plan

David
- New design & customizations for HKU’s IR
- The reason & funding wherefore
- Serendipitous discoveries

Andrea
- Authority Framework in 1.6
- Linkage between DSpace items, and author profiles
- Technical background of the RPs Project
The HKU Scholars Hub is the institutional repository of The University of Hong Kong. It seeks to collect the intellectual output of HKU and make it available to the widest possible audience. Records are made in the Hub for items that are fulltext open access, or for URLs that hyperlink to the same.

Quick search of The Hub

Search the author, title, abstract and series fields.

Search

For phrase search, please use quotation marks, for example, "Wann, John", or "Behavior Therapy".

Prof. L. Samaranayake
An interview with the HKU Dean of Dentistry on the role of interprofessional education in dental education.

HKU & Springer sign deal to allow all HKU faculty & students to publish in Open Access.
Can we arrange seminar for your dept on ResearcherPages and the Springer deal? Please write to us. Seminars now arranged.

Breaking News
HKU ResearcherPage: Tam, PKH

Prof Tam, Paul Kwong Hang

Pro-Vice-Chancellor and Vice-President (Research)
Chair of Paediatric Surgery

Also Cited As:
- Tam, Paul
- Tam, Paul KH

Research Interests:
- Genomics
- Developmental biology
- Immunology
- Paediatric surgery

About HKU ResearcherPages

- HKU ResearcherPages sustain and enhance the research reputation of HKU authors and their institution. They enable knowledge exchange between HKU and the community in Hong Kong, China, and the World.
- How to edit your ResearcherPage?
- Publications listed here are ones for which we have full text and permission to post. Complete publication lists (without full text attached) will be imported in 2010, from HKU Research Output System and Scopus, and then de-duplicated. Researchers can also upload and attach CVs later this year.

Spoken Languages: English | Cantonese | Putonghua (简体 | 繁体 | 普通话)
Written Languages: English | Chinese (英文 | 中文)

Area of expertise:
- Paediatric surgery (Hirschsprung's disease and related disorders; genetics of neuroblastoma, experimental immunology, genomics of childhood tumours, minimal invasive surgery, bilateral atresia and choledochal cyst)

Bibliometric Data

Hub Items for: Tam, PKH

Authorised Items in the HUB - 1 to 20 of 43

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<thead>
<tr>
<th>Title</th>
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<th>Year</th>
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<td>Abdominal compartment syndrome after open biopsy in a child with bilateral Wilms' tumour</td>
<td>Chung, P, Y; Wong, K; Kao, C; Lam, L; Tam, PKH</td>
<td>2009</td>
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<td>Abnormal enteric nervous system development in a Sox10NQFP mouse mutant</td>
<td>Zhang, M; Leung, C; Liu, V; Chien, B; Ott, J; Tam, PKH</td>
<td>2009</td>
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<td>Association study of PHOX2B as a candidate gene for Hirschsprung's disease</td>
<td>Garcia-Barcelo, M; Liu, V; Chien, B; Ott, J; Tam, PKH</td>
<td>2003</td>
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<tr>
<td>B考虑Based Fluorescent Probe for Perovskite Detection and Imaging in Living Cells</td>
<td>Sun, Z; Wang, H; Liu, F; Chen, Y; Tam, PKH</td>
<td>2009</td>
</tr>
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Prof Tam, Paul Kwong Hang

Pro-Vice-Chancellor and Vice-President (Research)
Chair of Paediatric Surgery

Also Cited As:
- Tam, Paul
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Research Interests:
- Genomics
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- Paediatric surgery

Spoken Languages:
- English
- Cantonese
- Putonghua (普通话)

Written Languages:
- English
- Chinese (英文 中文)

Area of expertise:
- Paediatric surgery (Including Sprue's disease and related disorders; genetics of neuroblastoma; experimental immunology; genetics of childhood tumours; minimal invasive surgery; biliary atresia; and choledochal cyst)

Bibliometric Data

AuthorID: 7209539421
ResearcherID: C-4405-2009

Document Count: 301
Document Count: 673
Cited by: 3477
Times Cited: 7508
h Index: 25
h Index: 28
Co-authors: 150
Co-authors: Collaboration Network

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- HKU ResearcherPages sustain and enhance the research reputations of HKU authors and their institution. They enable knowledge exchange between HKU and the community in Hong Kong, China, and the World.

Hub Items for: Tam, PKH

Abdominal compartment syndrome after open biopsy in a child with bilateral Wilms' tumour
Chung, PLY, Wong, KKY, Lai, LCL, Tam, PKH
2009

Abnormal neural tissue system development
Zhang, M, Leung, C, Lui, VCH
2009
**Name:** Tam, Paul K H

**Affiliation:** University of Hong Kong, Department of Surgery

**Research**

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**h Index:** 24

**Co-authors:** 150

**Subject Area:** Medicine, Biochemistry, Genetics and Molecular Biology, Chemistry

**Publication range:** 1982-Present

**Source history:**
- Gastroenterology
- Seminars in Neonatology
- Journal of the American College of Surgeons

**Affiliation history:**
- Institute of Molecular Technology for Drug Discovery and Synthesis, Hong Kong, Department of Chemistry
- Centre for Reproduction, Development, and Growth
- Université Paris Descartes, Faculty of Medicine

**Cited By since 1996**

This author has been cited 2466 times in Scopus:

- Salcido-Ochoa, P., Tsang, J., Tam, P., Falk, K., Rotzsche, O.
- Regulatory T cells in transplantation: does extracellular adenosine triphosphate metabolism through CD39 play a crucial role?
- Synthetic fluorescent probes for imaging of peroxynitrite and hypochlorous acid in living cells.

**Find unmatched authors**
Results  Author=(tam phk) OR Author=(tam paul) OR Author=(tam kwong hang paul)
Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH.

Results: 275

1. Title: Clinical Experience in Managing Pediatric Patients with Ultra-short Bowel Syndrome using Omega-3 Fatty Acid
Author(s): Chung PHY, Wong KKY, Wong RMS, et al.
Source: EUROPEAN JOURNAL OF PEDIATRIC SURGERY  Volume: 20  Issue: 2  Pages: 139-141  Published: MAR 2010
Times Cited: 0

2. Title: Lack of association between nNOS-84G > A polymorphism and risk of infantile hypertrophic pyloric stenosis in a Chinese population
Author(s): Miao XP, Garcia-Barcelo MM, So MT, et al.
Source: JOURNAL OF PEDIATRIC SURGERY  Volume: 45  Issue: 4  Pages: 709-713  Published: APR 2010
Times Cited: 0

3. Title: Reduced RET expression in gut tissue of individuals carrying risk alleles of Hirschsprung’s disease
Author(s): Miao XP, Leon TYY, Ngan ESW, et al.
Source: HUMAN MOLECULAR GENETICS  Volume: 19  Issue: 8  Pages: 1461-1467  Published: APR 15 2010
Times Cited: 0

4. Title: Silver Nanoparticles Mediate Differential Responses in Keratinocytes and Fibroblasts during Skin Wound Healing
Author(s): Liu XL, Lee PY, Ho CM, et al.
Source: CHEMMEDCHEM  Volume: 5  Issue: 3  Pages: 468-475  Published: MAR 2010
Times Cited: 0

5. Title: Management of choledochal cyst: 30 years of experience and results in a single center
Author(s): She WH, Chung HY, Lan LCL, et al.
Conference Information: 42nd Annual Meeting of the Pacific-Association-of-Pediatric-Surgeons, MAY 10-14, 2009 Hong Kong, FEFO
Web Services to Integrate with Workflow

Institution automatically creates RID profiles

- Unique identifier for each researcher
- Researchers maintain control of information and privacy
- Current updated Web of Science citation counts into institutional repositories and systems

Updated citation counts, profile and publication data flow into institutions

HKU 港大

Slide, courtesy of Thomson Reuters.

スライドはThomson Reutersの好意による
Tam, Paul

ResearcherID: C-4405-2009
Other Names: Tam PKH; Tam P; Tam KH; 潘廣亨
URL: http://www.researcherid.com/rid/C-4405-2009
Subject: Critical Care Medicine; Emergency Medicine; General & Internal Medicine; Genetics & Heredity; Immunology; Integrative & Complementary Medicine; Neurosciences & Neurology; Pathology; Pediatrics; Surgery; Transplantation
Description: Chair of Paediatric Surgery and Division Chief. Professor Tam has received numerous awards including the BAPS prize, Royal College of Surgeons’ gold medal etc. He has published extensively including 19 chapters in 11 books and over 211 original articles in international journals. He was the Founding Director of the Centre of Human Development and Birth Defects.
My URLs: http://hub.hku.hk/rp/rp00060
http://www.hku.hk/v/coffice/menu/pvc-tam_Biography.htm

Publications
My Publications (673)
View Publications
Citation Metrics

Publication List: Citation Metrics
This graph shows the number of times the articles on the publication list have been cited in each of the last 20 years. Note: Only articles from ISI Web of Knowledge with citation data are included in the calculations. More information about these data.

Citation Distribution by year

Total Articles in Publication List: 673
Articles With Citation Data: 278
Sum of the Times Cited: 7372
Average Citations per Article: 26.52
h-index: 27
Last Updated: 05/15/2010 14:04 GMT
Authority Control

- Hierarchy of Authority & Synonymy
  - Authorized headings
  - Variant headings
- Multi-script Synonymy
  - Roman, Traditional Chinese, Simplified Chinese, Japanese, Korean, etc. (UTF-8)
Prof. Bacon-Shone
Associate Dean of Social Sciences
Research Interest: “Gambling”

Relevant searches usually appear at top, or near the top of the list.
Why did we do it?

Knowledge Transfer:
- "the systems and processes by which knowledge, including technology, know-how, expertise and skills are transferred between higher education institutions and society, leading to innovative, profitable or economic or social improvements"

US$6.5M/yr, divided by 8 Universities in Hong Kong

At HKU
- Re-articulated Vision:
  - Teaching & Learning
  - Research
  - Knowledge Exchange (KE)

KE includes,
- Database of Visible Expertise to Enable & Measure KE
  - Metrics from citation databases
  - Research Output & Grants, etc.
  - Expanded OA Strategy
Serendipity
1) Online Reputation Management

- Internet Footprint
- Findability
- Identity exposure, disclosure
- Cybervetting
  - One bad apple...
2) Meanwhile,

Reputation & identity of the institution:
- University rankings
- RAE
- Peer Review
- Parent’s choice of school for child
- Recruiter’s choice
- Media spokespersonship
- Collaborative partnerships
- Contract research undertaken
- Funding received
- Etc.
The Reputation of the University?
<table>
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<th>Apr 2010</th>
<th>30 June 2010</th>
<th>Increase/Decrease</th>
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<td>47,013</td>
<td>46,720</td>
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<td>4,892</td>
<td>5,210</td>
<td>6.5%</td>
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3) HK’s Research Assessment Exercise

- UK:
  - Research Excellence Framework (REF)

- Australia
  - Excellence in Research for Australia (ERA)
4) For HKU, a trusted authority

- ORCID - Open Researcher &Contributor ID
  - Based upon ResearcherID
  - All authors & publishers to use
  - Citation databases; Scopus, WoS
  - June 2010

- BKNpeople – Bibliographic Knowledge Network People
5) Re-positioning the academic library

- OCLC Report
  - Leverage value of IR in RAEs
  - Provide a researcher-centred view
  - Moving beyond putting books on shelves
  - Aligned with institution’s vision & mission

6) Re-thinking the IR

Moral and philosophical approaches have failed
And here, pilots switch in mid-stream

Authority Framework in DSpace 1.6
Technical details

- The Authority framework is one of the new major features of DSpace 1.6

- Main contribution & projectual idea by Larry Stone

- CILEA / HKU Project was an early adopter. For this we provided JSPUI & PostgreSQL porting, browse & search enhancement with support for variants names and forms
Authority Framework: responsibilities

- Bind metadata fields to an Authority
- Retrieve *matching values* from user queries / input
- Supply the standard form and variants for an authority key
Authority Framework: main classes

org.dspace.content.authority

- MetadataAuthorityManager
- ChoiceAuthorityManager

Extensibility provided by:

- ChoiceAuthority
- AuthorityVariantsSupport

How TO Query? WS, SQL, ...
Configuration
Query
Retrieve variants
Authority Framework: extension points

```
org.dspace.content.authority

ChoiceAuthority 5124
- getMatches(String, int, int, int, String) : Choices
- getBestMatch(String, int, String) : Choices
- getLabel(String, String) : String

org.dspace.content.authority

AuthorityVariantsSupport 4365
- getVariants(String, String) : List<String>
```
Authority Framework: which authorities?

- Library of Congress Personal names authority: \texttt{LCNameAuthority}
- Sherpa RoMEO Project, publisher names authority: \texttt{SRPublisherAuthority}
- Sherpa RoMEO Project, Journal titles authority: \texttt{SRJournalTitle}
- DSpace Input Form XML based controlled list: \texttt{DCInputAuthority}
Authority Framework: which authorities?

```java
plugin.named.org.dspace.content.authority.ChoiceAuthority = \ 
org.dspace.content.authority.SampleAuthority = Sample, \ 
org.dspace.content.authority.LCNameAuthority = LCNameAuthority, \ 
org.dspace.content.authority.SHERPARoMEOPublisher = SRPublisher, \ 
org.dspace.content.authority.SHERPARoMEOJournalTitle = SRJournalTitle
```

```bash
## This ChoiceAuthority plugin is automatically configured with every 
## value-pairs element in input-forms.xml, namely: 
## common_identifiers, common_types, common_iso_languages
plugin.selfnamed.org.dspace.content.authority.ChoiceAuthority = \ 
org.dspace.content.authority.DCInputAuthority
```
Changes to the Data Model

Two new fields for the MetadataValue class: authority & confidence

```
CREATE TABLE MetadataValue
(
    metadata_value_id INTEGER PRIMARY KEY DEFAULT NEXTVAL('metadatavaluSeq'),
    item_id INTEGER REFERENCES Item(item_id),
    metadata_field_id INTEGER REFERENCES MetadataFieldRegistry(metadata_field_id),
    text_value TEXT,
    text_lang VARCHAR(24),
    place INTEGER,
    authority VARCHAR(100),
    confidence INTEGER DEFAULT -1
);
```

Added fields in DSpace 1.6
Authority Framework: settings

Interactive settings

- `choices.plugin.dc.contributor.author = LCNameAuthority`
- `choices.presentation.dc.contributor.author = lookup | suggest | select`
- `choices.closed.dc.contributor.author = false`

General settings – model constraints

- `authority.controlled.dc.contributor.author = true`
- `authority.required.dc.contributor.author = false`
- `authority.minconfidence.dc.contributor.author = accepted *`
- `authority.minconfidence = ambiguous *`

* More on this later
Authority Framework: UI lookup

Pop-up windows

![authority framework interface](image-url)
Authority Framework: UI lookup

An icon shows metadata value bind to an authority key.
Authority Framework: UI suggest

Autocomplete AJAX

Publisher:

Enter the name of the publisher of the previously issued instance of this item.

Publisher:

Citation:

Series/Report No.:
Authority Framework: UI conclusion

- For a short authority list a simple `html select` widget can be used
- The input facility is available also in the `edit item page`
- All the widgets are available in both UIs: JSPUI and XMLUI
Authority Framework: UI conclusion
Authority Framework: XML response

The html widget are build on standard AJAX XML response
Developers can easily extend or build new widget reusing existing infrastructure

```xml
<select xmlns="http://www.w3.org/1999/xhtml" start="0" total="6">
  <option authority="n 89103996" value="Clemens, Olivia Langdon, 1845-1904">
    Clemens, Olivia Langdon, 1845-1904
  </option>
  <option authority="n 93099439" value="Clemens, Samuel Langhorne, 1835-1910">
    Clemens, Samuel Langhorne, 1835-1910
  </option>
  <option authority="no2003079632" value="Conte, Louis de, 1835-1910">
    Conte, Louis de, 1835-1910
  </option>
  <option authority="n 93099461" value="Snodgrass, Quintus Curtius, 1835-1910">
    Snodgrass, Quintus Curtius, 1835-1910
  </option>
  <option authority="n 82045653" value="Twain, Mark, 1835-1910">
    Twain, Mark, 1835-1910
  </option>
  <option authority="n 79021164" value="Twain, Mark, 1835-1910">
    Twain, Mark, 1835-1910
  </option>
</select>
```
Keep the metadata clean

- New administrative tool to:
  - Check authority usage
  - Review, reject, or confirm automatic linkage

- Plan to release this functionality to the community after the HKU Scholars Hub migration to DSpace 1.6
Tentative matches for RP rp00857

RP Details

Label: He, Hongming
Authority key: rp00857
Variants: He, Hongming, He, H, 何洪明, 何洪鸣
Department: Dept of Geography

Researcher interests:
1. Climate change impacts on human dimensions
2. Water resources sciences, specialized in hydrological modelling
3. Urbanization process
4. Environmental modelling

Items awaiting Accept/Reject

Confidence level: UNCERTAIN

<table>
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<tr>
<th></th>
<th>Title</th>
<th>Author(s)</th>
<th>Year</th>
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<td>1</td>
<td>Early Upregulation of Cyclooxygenase-2 in Human Papillomavirus Type 16 and Telomerase-Induced Immortalization of Human Esophageal Epithelial Cells</td>
<td>Zhuang, Z; Tsao, GSW; Deng, W; Wang, J; Xia, HHX; He, H; Feng, H; Wang, L; Gu, Q; Lam, SK; Lin, MC; Kung, HF; Wong, BCY</td>
<td>2008</td>
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<td>Generation of repetitive sequence-depleted microdissected chromosome arm painting probe</td>
<td>He, H; Huang, W; Guan, XY</td>
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<td>Generation of repetitive sequence-depleted microdissected chromosome arm painting probes</td>
<td>He, H; Huang, W; Guan, XY</td>
<td>1999</td>
</tr>
</tbody>
</table>

Accept  Reject

Previous return to the list
Spring IoC & AoP (TxManager)
Hibernate & Hibernate Search
Spring MVC

... some tricks/tips to use Spring DI in the Authority Plugin in the next slides
Integration authority framework to HUB

```java
it.cilea.hku.authority.dspace.HKUAuthority implements ChoiceAuthority,
AuthorityVariantsSupport,
NotificableAuthority

Keep static references to the RP “services” (persistence + search), injected by Spring
```
Integration

- Dependencies Injection with Spring on classes managed by the DSpace plugin system needs a workaround:
  - Use static fields and semaphore/init method to assure proper initialization both in web and batch contexts (Our approach for the RP Project)
  - Expose and retrieve the Spring context as JMXBean: use the Spring API to retrieve dependencies (DSpace services approach)
Integration of RP presentation

- Servlet filter on the browse url to make HTTP redirect to the RP
  - No changes in dspace jsp tags
  - No changes in browse pages
  - Simple turnoff of ResearcherPage without loss of the metadata quality
  - Low overhead for no rp browsing

- Integration with the HKU SSO, the netID as bridge between DSpace Eperson & RPs
HKU Colleagues
港大同僚
Terima Kasih
спасибо
شكرا لك
謝謝您
감사합니다
cảm ơn bạn
धन्यवाद
Σε ευχαριστώ
תודה
有り難うございます
Thank You
Grazie
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http://creativecommons.org/licenses/by-nc-nd/3.0/hk/

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- http://hub.hku.hk/handle/123456789/61139