

*Co-ordination & Harmonisation of Advanced e-Infrastructures
for Research and Education Data Sharing*

**The CHAIN-REDS Programme on
Data Infrastructures**

Panel @ TPDL 2013 – Malta, 24 September 2013

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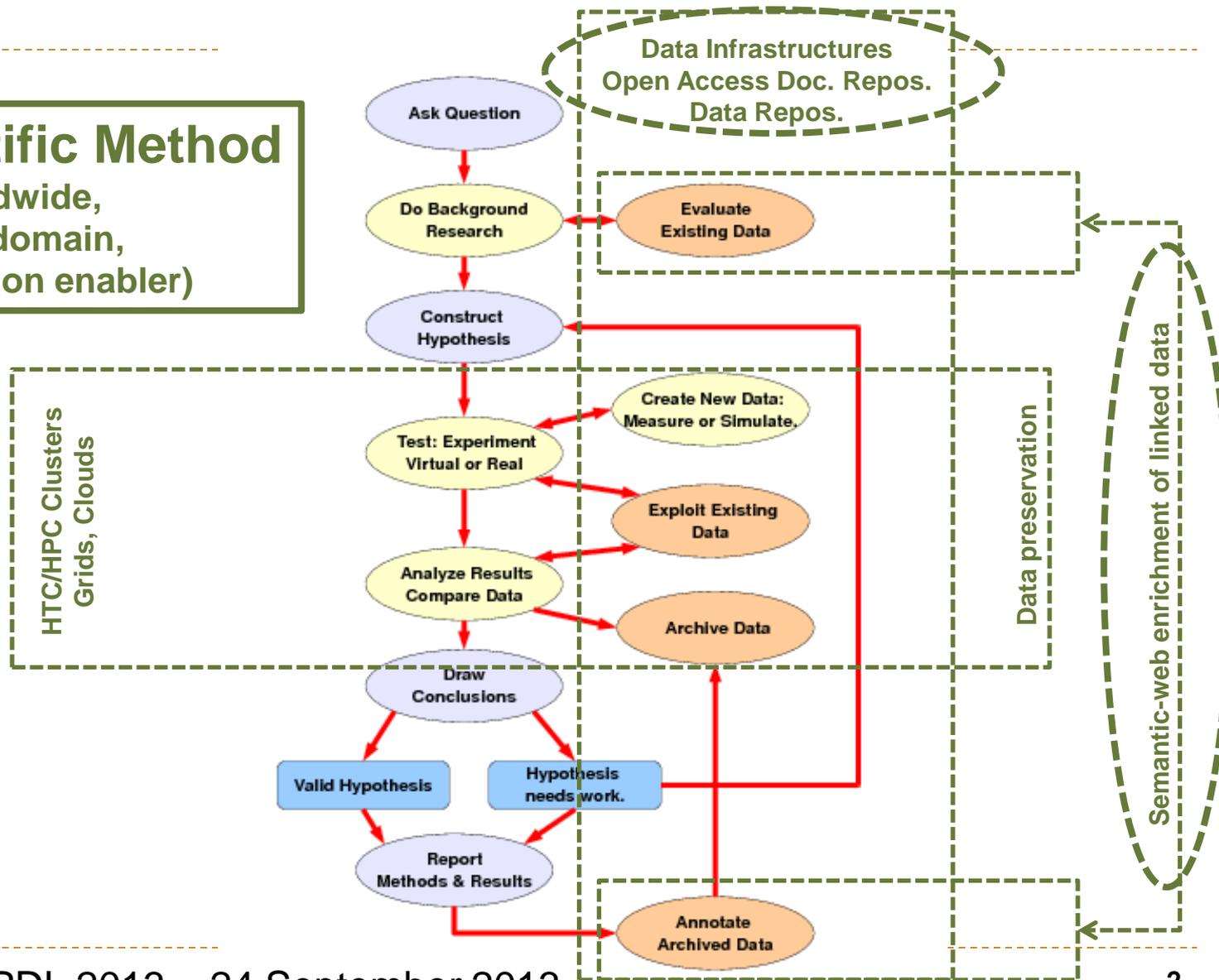
Research Infrastructures – Proposal n. 306819



What do researchers do and how can e-Infrastructures help them to improve it ?

The Scientific Method

(worldwide,
cross-domain,
collaboration enabler)





The CHAIN-REDS Project

(www.chain-project.eu)



Started: 1 Dec 2012
Duration: 30 months
Targeted regions: Africa,
Middle-East and Gulf
Region, Latin America,
China, India, and
Far-East Asia

Objectives



Extend and consolidate the international cooperation of Europe with other regions of the world in the domain of e-Infrastructures for R&E, thus reinforcing the scientific collaboration and broadening the impact of the European Research Area



Promote, coordinate and support the effort of a critical mass of non-European e-Infrastructures for R&E to collaborate with Europe by addressing interoperability and interoperation of Grids and other DCIs such as potential upcoming Cloud federations and HPC centres



Study the opportunities of data sharing across different e-Infrastructures and continents thus widening the scope of the existing CHAIN Knowledge Base to Data Infrastructures and Cloud implementations



Promote trust-building towards open Scientific Data infrastructures across the world regions, including organisational, operational and technical aspects



Demonstrate the relevance of intercontinental cooperation in several scientific data fields addressing existing and emerging Virtual Research Communities (e.g. Earth Science, Climate Change, Genomics, etc.) and propose pragmatic approaches that could impact the everyday work of the single researcher, even if not structured in the framework of a Virtual Research Community



Provide guidance and recommendations for roadmaps for long-term global collaboration in e-Infrastructures and harmonisation of existing policies. These are envisaged to act as input to policy and decision-making mechanism, harmonised with the European Digital Agenda and Horizon 2020



CHAIN-REDS program for Data Infrastructures

- ▶ Identify standards to easily gather and access both Open Access Document Repositories (OADRs) and Data Repositories (DRs)
- ▶ Build a demonstrator to easily visualise and access OADRs and DRs (both geo-views and tab-views)
- ▶ Correlate OADRs and DRs to create linked data and discover new knowledge through semantic enrichment of metadata
- ▶ Promote Data Infrastructure standards and identify new OADRs and DRs from regions addressed by the project (Africa, Middle-East and Gulf Region, Latin America, China, India, Far-East Asia)
- ▶ Populate the demonstrator with these new repositories, add them to the semantic enrichment tool, and set-up at least two



- ~2,500 repos
- >33 M docs

Registry of Open Access Repositories (ROAR)



[About the ECHO Initiative](#)
[Promotion Activities](#)
[Intranet](#)

ECHO – Cultural Heritage Online

Open Access Infrastructure for a Future Web of Culture and Science



Available in ECHO

- more than 1000 authors and editors represented by ECHO collections
- 95 seed collections in several disciplines and thematic fields, in particular history of science
- more than 206,600 catalogued documents
- more than 890,000 high resolution images of historical and cultural source documents and artefacts
- more than 240 film sequences of scientific source material
- more than 57,500 full-text page transcriptions in several languages
- more than 170 institutions from 24 countries worldwide as active knowledge weavers in ECHO

Search in ECHO by title, year):

▶ List of Authors in collections

How to join

Interested institutions and projects, who share the vision of ECHO are invited to join the project. We will help you to bring in cultural heritage, research source material and scholarly metadata related to the project.

▶ Contact



[CONTACT](#) [IMPRESSUM](#) Last Update: April 2013

Papacino d'Antoni, Alessandro Vittorio, *Physikalisch-mathematische Grundsätze der Artillerie in denen die Natur und Eigenschaften des Pulvers untersucht und durch viele gründliche Erfahrungen ins Licht gesetzt werden*, 1768

Image Thumbnail overview Document information

List of thumbnails

< 1 - 10 >



None Thumbnails

page | < < 7 of 543 > >



- zoom in
- zoom out
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- full page
- page width
- set mark
- remove mark
- http: get reference
- digilib

Data Repositories (DRs)

(www.chain-project.eu/oadr-map)

Country View
DCI Site View
DCI Table View
OADR Site View
OADR Table View
DR Site View
DR Table View

Country View
DCI Site View
DCI Table View
OADR Site View
OADR Table View
DR Site View
DR Table View

Click on a red marker to get more information on the corresponding Open Access Document Repository. Data are currently taken from the more than 500 data repositories included in [Databib](#) and [DataCite](#).



Repositories:

- Gene Expression Nervous System Atlas (GENSAT)
 - NCBI GSS
 - NCBI HomoloGene
 - NCBI Nucleotide
 - NCBI PopSet
 - NCBI Probe
 - NCBI Protein
 - NCBI BioProject
 - NCBI GEO Profiles
 - NCBI GEO Datasets
 - NCBI dbGaP
- NCBI Conserved Domains Database
 - NCBI dbVar
 - NCBI Epigenomics
 - GenBank
- National Database for Autism Research (NDAR)
 - NCBI EST
 - NCBI Genome
 - NCBI Protein Clusters
 - NCBI Reference Sequence

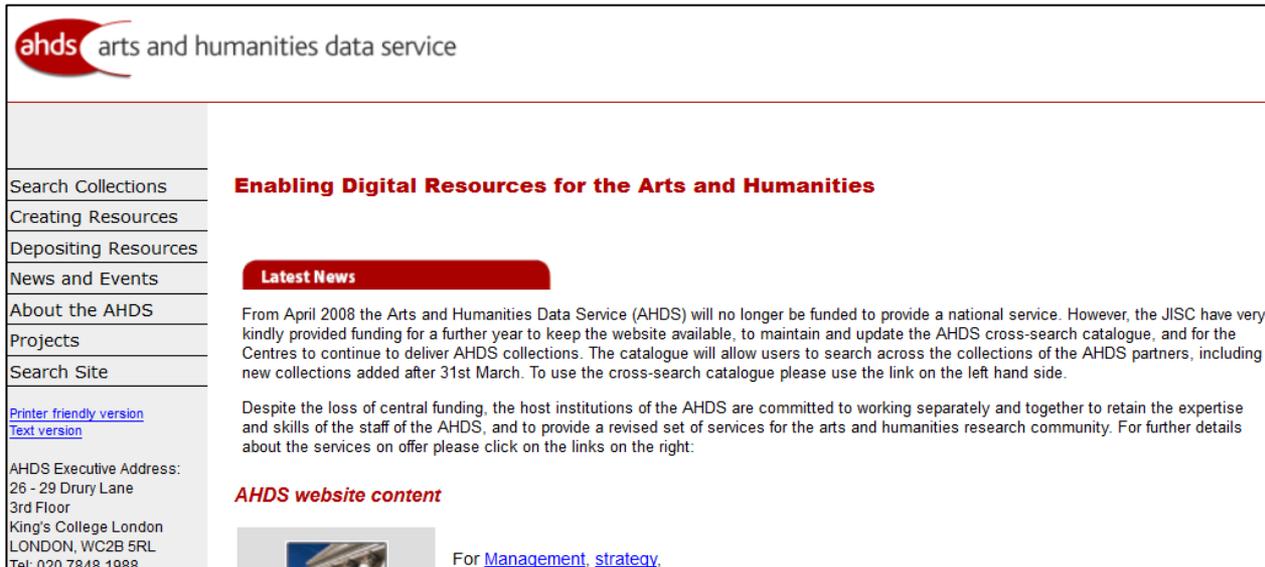
from the more than 500 Data Repositories of [Databib](#) and [DataCite](#). Yellow markers refer to other DRs, e.g. that of [CHAIN-REDS](#). Click on a marker to get more information on the corresponding DR.








- ~ 600 repos
- Lots of data !



ahds arts and humanities data service

Enabling Digital Resources for the Arts and Humanities

Latest News

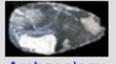
From April 2008 the Arts and Humanities Data Service (AHDS) will no longer be funded to provide a national service. However, the JISC have very kindly provided funding for a further year to keep the website available, to maintain and update the AHDS cross-search catalogue, and for the Centres to continue to deliver AHDS collections. The catalogue will allow users to search across the collections of the AHDS partners, including new collections added after 31st March. To use the cross-search catalogue please use the link on the left hand side.

Despite the loss of central funding, the host institutions of the AHDS are committed to working separately and together to retain the expertise and skills of the staff of the AHDS, and to provide a revised set of services for the arts and humanities research community. For further details about the services on offer please click on the links on the right:

AHDS website content



Executive



Archaeology

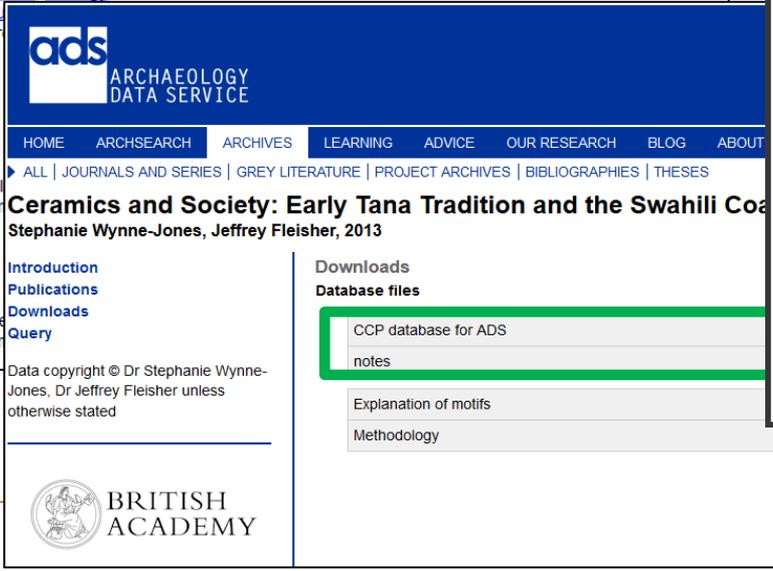


History

For [Management strategy, e-infrastructure](#) and shared r

For Archaeo services from

For History re services from



ads ARCHAEOLOGY DATA SERVICE

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Ceramics and Society: Early Tana Tradition and the Swahili Coast
Stephanie Wynne-Jones, Jeffrey Fleisher, 2013

Introduction
Publications
Downloads
Query

Data copyright © Dr Stephanie Wynne-Jones, Dr Jeffrey Fleisher unless otherwise stated

Downloads
Database files

- CCP database for ADS notes
- Explanation of motifs
- Methodology

BRITISH ACADEMY

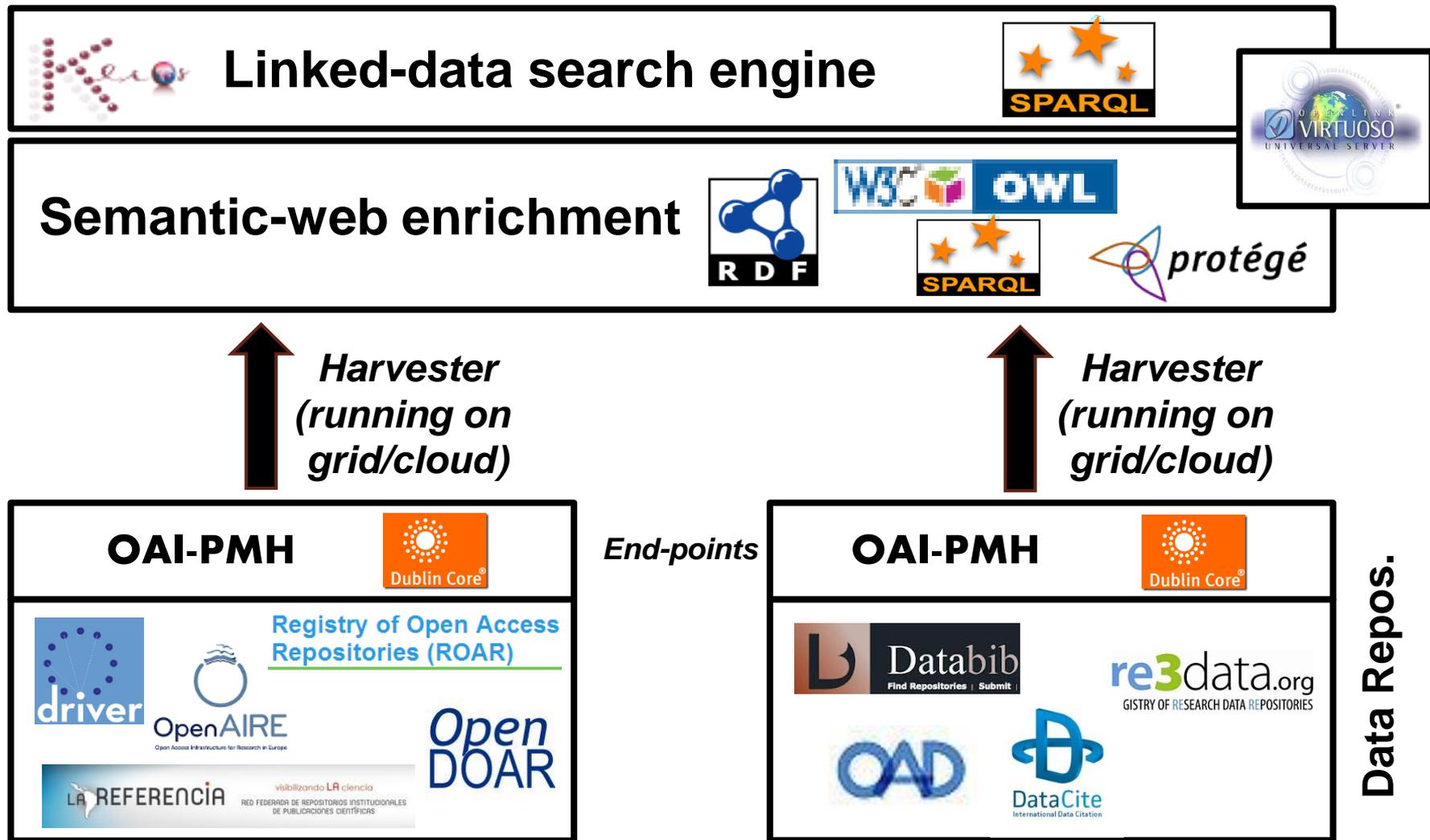
Powered by Highslide JS

CCP database for ADS

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CCP sherd #,site,unit x,unit y,context,exc. she
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CCP0002,manda,MHII,,14,,1,64.3,63.2,6.8,,,,,
CCP0003,manda,MHI,,7,,1,57.6,67,8.86,6.77,,,,
CCP0004,manda,MHH,,8,,1b,46.12,44.28,6.95,,,,
CCP0005,manda,MHH,,5,,1,34.43,77.46,8.84,,12.7
CCP0006,manda,MHH,,8,,1b,59.09,87.87,7.66,,27
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```

CCP_database_for_ADS.csv
[DOWNLOAD] right-click and save link

PDF 372 Kb



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Semantic Search on Linked Data

Here you can search across more than 20 million resources contained in the thousands of semantically enriched [Open Access D](#) and [Data Repositories](#) included in the [CHAIN Knowledge Base](#). Some exemplar keywords are: cardiology, cell, cornea, geology, gas.

Select a language: All ▼



Enter a keyword or select a language and then choose a subject

Results Graphs

Records found. Displaying 1 to 20

Title
Bacterial diversity in faeces from polar bear (*Ursus maritimus*) in Arctic Svalbard

Author
Glad Trine; Nielsen KaareMagne; Sundset MonicaAlterskjær; Bernhardsen Pål; Aars Jon; Andersen Magnus; Brusetti Lorenzo

Description
Background Polar bears (*Ursus maritimus*) are major predators in the Arctic marine ecosystem, feeding mainly on seals, and are associated with sea ice. Little is known of their gut microbial ecology and the main purpose of this study was to investigate the microb in faeces of...

Repository
[Munin - Open Research Archive](#)

[More Info](#)

>22 M resources
~600 M triples

(Table 3) Stable nitrogen and carbon isotope ratios, and mercury content in teeth of polar bears (*Ursus maritimus*)

General Information

Authors : Sonne Christian ; Wiig Øystein ; Dietz Rune ; Aubail Aurore ; Rigét Frank F ; Caurant Florence
DateStamp : 2013-04-04T05:33:13Z
Publisher : PANGAEA - Data Publisher for Earth & Environmental Science
Identifier : doi:10.1594/PANGAEA.807119
Subject (1) : Mercury
Subject (2) : delta 13C
Subject (3) : Isotope ratio mass spectrometry
Subject (4) : Sample amount
Subject (5) : delta 13C, standard deviation
Subject (6) : delta 15N
Subject (7) : Sampling date
Subject (8) : delta 15N, standard deviation
Subject (9) : Mercury, standard deviation
Subject (10) : Advanced Mercury Analyser AMA-254, LECO
Language : eng
Date : 2012
Rights : Creative Commons Attribution 3.0 Unported (CC-BY)

Dataset Information

Identifier DOI : [10.1594/PANGAEA.807119](https://doi.org/10.1594/PANGAEA.807119)

Type : Dataset

Format (1) : text/plain separated values
Format (2) : 17 data points

Relation DOI : [10.1594/PANGAEA.807120](https://doi.org/10.1594/PANGAEA.807120)

Relation DOI : [10.1039/c1em10681c](https://doi.org/10.1039/c1em10681c)

data

paper

Repository Information

Name : DataCite/Databib (DataCite)
URL : <http://www.datacite.org>
OAI-PMH address : <http://oai.datacite.org/oai>
Country Code : 0

Linked data semantic search

(www.chain-project.eu/linked-data)

Results **Graphs**

Filter to view a struct of Resource (max 10 Resource)

Select one or more Resources to view

- [R17] Selective inhibition of the cellular sodium pump by emicymarin and 14A anhydroxy bufadienolides
- [R18] Opsin stability and folding: modulation by Phospholipid Bicelles
- [R19] The effects of intracellular signalling pathway inhibitors on phagocytosis by haemocytes of Manduca sexta
- [R20] Role of human tear fluid in Acanthamoeba interactions with the human corneal epithelial cells

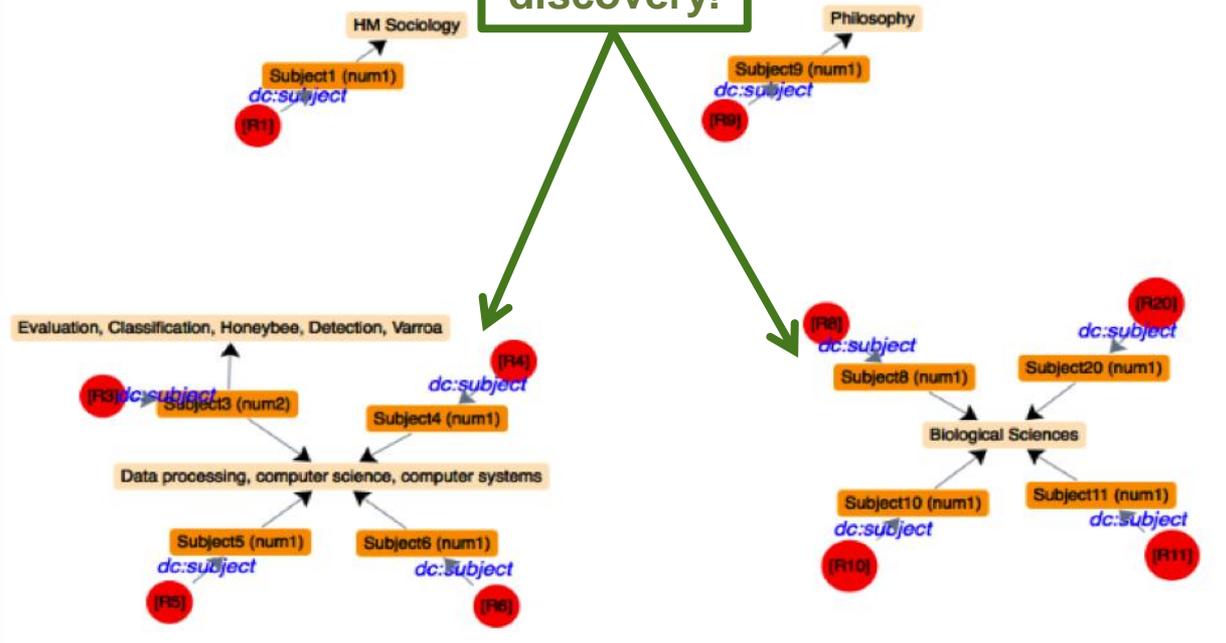
9 Resources Selected

Select a Filter for visualization:

- Subjects
- Authors
- Subjects**
- Publishers

(To clear the graph wait until the particles are firmly)

New knowledge discovery!



Summary and conclusions

- ▶ Data Infrastructures are becoming an essential component of e-Infrastructures
- ▶ Next years' biggest challenges will be
 - ▶ To build reliable, sustainable and up to date data discovery services
 - ▶ To uniquely correlate scientific papers with data used to write them with applications used to analyse them so to be able to go across the knowledge path both ways
- ▶ Semantic-web and linked-data technologies can play a major role in this context and CHAIN-REDS aims to promote these standards in the targeted regions
- ▶ OADRs' and DRs' managers/owners are welcome to share their data within the CHAIN Knowledge Base (both in Africa and Latin America this is already happening)

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Questions ?

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