4SCIENCE

SHARE YOUR KNOWLEDGE

Your today's research is tomorrow's science:
manage it, preserve it, share it. Now.

DSpace-CRIS: How it works and how to leverage it
DuraSpace Webinar, 2017 June 15th

Susanna Mornati and Andrea Bollini, www.4science.it

DSpace and “extended” DSpace

- DSpace is the most popular Digital Asset Management System in the world
- More and more HE and Research Institutions are asking for Research Information & Data Management tools

- Why not using an “extended” version of DSpace to meet these two relevant needs?

DSpace-CRIS: what?

- In 2009, the team now at 4Science led by Susanna Mornati and Andrea Bollini, together with the team at Hong Kong University led by David T. Palmer, created DSpace-CRIS

- DSpace-CRIS is an “extended” version of DSpace, with a powerful and flexible data model to describe not just publications, but all the entities that populate the research environment and their meaningful links

DSpace-CRIS: why?

- Buying a commercial platform to manage Research Information (a CRIS or RIMS) is expensive and binds your institutions to a proprietary system

- DSpace-CRIS is free, open source, compliant with open standards, and provides your institution with a sustainable and effective tool to manage research information such as researchers' profiles, department pages, project grants & awards, research outputs, metrics, reports and statistics

DSpace-CRIS: how?

- Every institution can upgrade their DSpace installation to DSpace-CRIS, extending the management of research publications by creating new entities such as Researchers and Projects

- Your publications will be safely managed as before, adding the advantage of linking them to relevant information such as authors, datasets, projects, metrics, networks, statistics and much more

DSpace-CRIS: when?

- Now: every moment is appropriate to enhance your repository to support your research community and make your service more relevant for the institutional strategy

- Upgrading from DSpace to DSpace-CRIS or installing a brand-new “extended” repository does not take much extra effort and it is largely rewarded by the extraordinary results that you can get

DSpace-CRIS: where?

- Universities and Research Centers will obviously benefit from a platform that can collect, manage, preserve and disseminate all information about research and its performance.

- GLAM (Galleries, Libraries, Museums, Archives) can likewise benefit from DSpace-GLAM, a “flavour” of DSpace-CRIS specially configured to provide a rich context to digital assets of the Cultural Heritage (but this will be the topic of a future webinar…)

DSpace-CRIS: who?

- You! Are you an IT specialist, a librarian, an archivist, a research manager, a policy maker, a strategist, a researcher?

- Ask your institution to adopt DSpace-CRIS, to gain knowledge about institutional assets and performance, and to provide them with the deserved visibility to the world!

DSpace-CRIS: https://digital.csic.es/ Integrated with an internal CRIS

DC CSIC Research Pasarela Statistics Contact Search DSpace Sign on to:

English español

Welcome to **DIGITAL.CSIC**, the institutional repository of the **Spanish National Research Council**.

DIGITAL.CSIC organizes, preserves and provides open access to CSIC research outputs.

DIGITAL.CSIC Annual Reports

2014 DSA 2017

DIGITAL.CSIC OPEN SCIENCE

Send us your works

Highlights

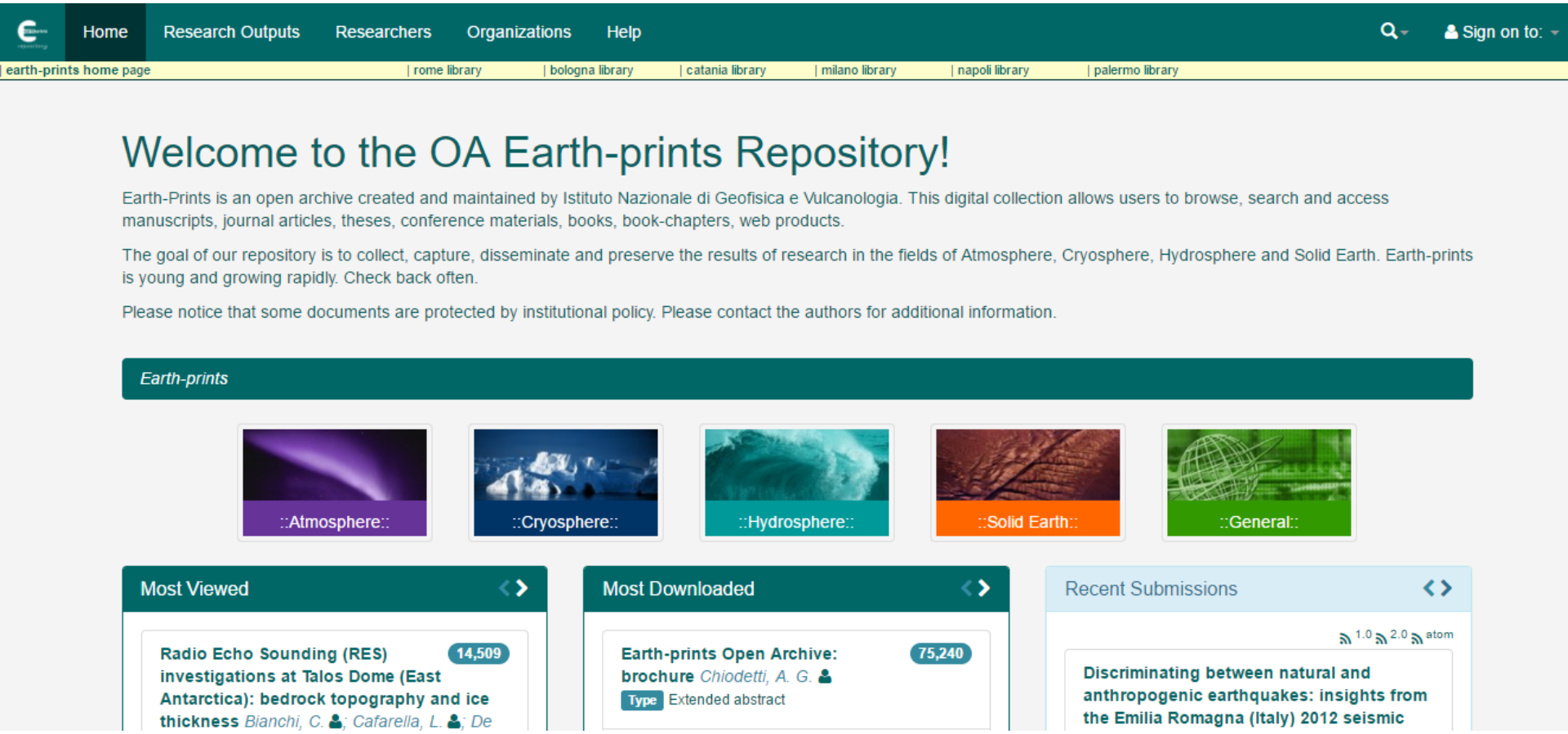
New CSIC Abierto Issue Out [11/05/2017]
CSIC Abierto 15 features how CSIC institutes have integrated the repository into their scientific communication strategies so as to maximize impact of their research outputs, enhance dissemination of non traditional research outcomes and test innovative ways to share projects. The issue also includes an interview with Open Access Button team.

DIGITAL.CSIC Workshop on Open Science [26/04/2017]
Open Science advocates for making science more collaborative and using new channels and tools to disseminate and share knowledge. Its innovative approach covers the entire research process to increase science quality, transparency and effectiveness and better align it with social challenges. The slides of "Introduction to Open Science" workshop address topics and tools of interest.

Slides of COAR Controlled Vocabularies Webinar in Spanish [23/03/2017]
On March 16, 2017 COAR in partnership with La Referencia held the webinar Vocabularios Controlados para Repositorios: Objetivos y Avances del Grupo de Trabajo COAR. The speakers are members of the Editorial Board of this COAR Working Group

4SCIENCE
Share your knowledge

DSpace-CRIS: http://www.earth-prints.org/ Ontological approach



4SCIENCE
Share your knowledge

DSpace-CRIS as a National Portal in Catalunya: http://portalrecerca.csuc.cat/

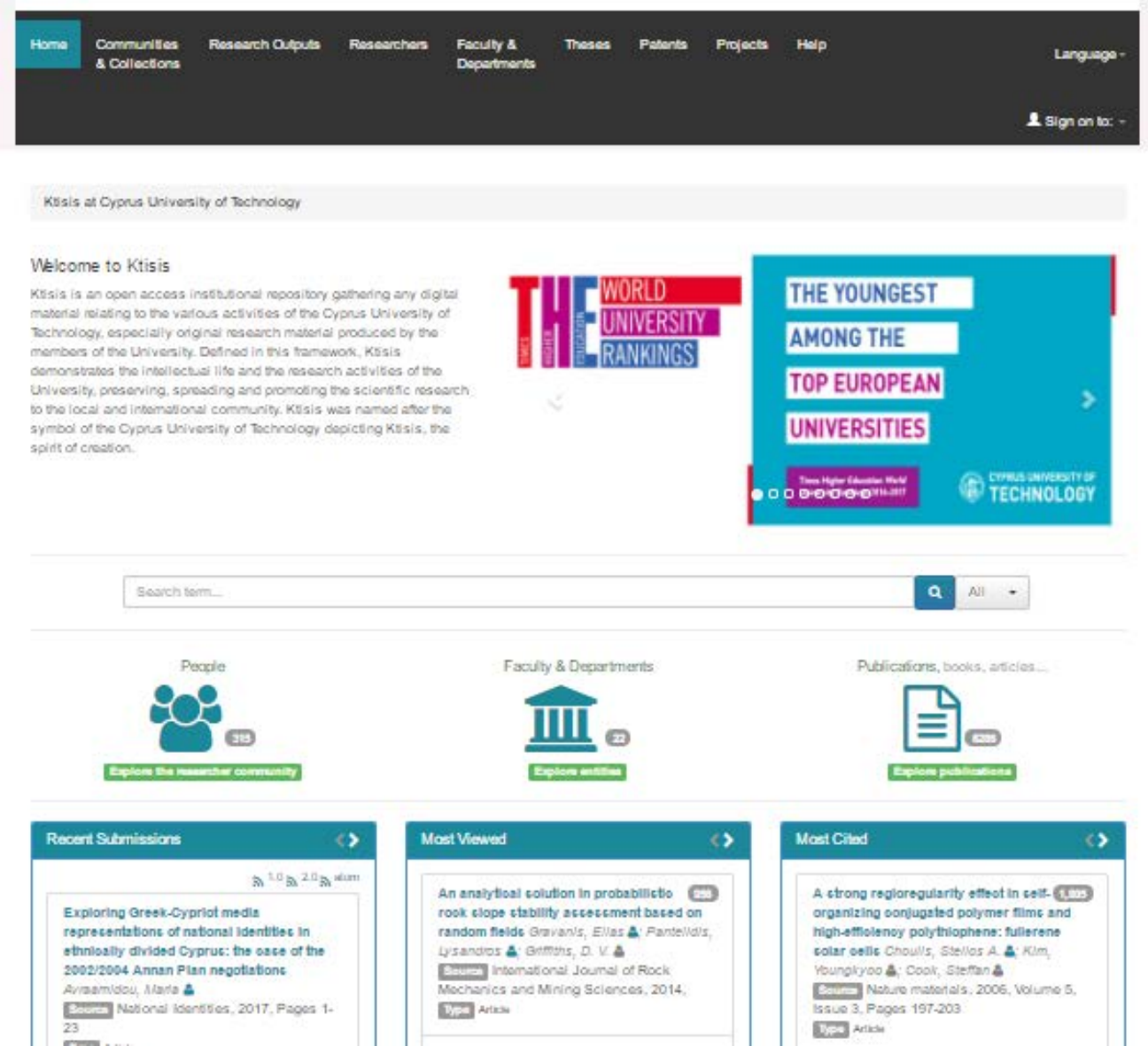
Collecting data about researchers, organizations, projects, publications from all the Catalan Universities

Run by the Consorci de Serveis Universitaris de Catalunya as a national service to raise visibility and awareness about Catalan Research

4SCIENCE
Share your knowledge

DSpace-CRIS: make it beautiful

- State-of-art technology for your UI (next: version 7 with AngularJS UI)
- Adaptive, responsive
- Icons for intuitive exploration
- Widgets for most viewed, most cited, etc.



4SCIENCE
Share your knowledge

DSpace-CRIS use cases: an item

Title:	A strong regioregularity effect in self-organizing conjugated polymer films and high-efficiency polythiophene: fullerene solar cells
Authors:	Choulis, Stelios A. Kim, Youngkyoo Cook, Steffan
Keywords:	Polymers Fullerenes Nanostructured materials Plastic films Solar cells
Issue Date:	2006
Publisher:	Nature
Source:	Nature materials, 2006, Volume 5, Issue 3, Pages 197-203
Abstract:	The influence of polymer regioregularity (RR) on the molecular nanostructure, and on the resulting material properties and device performance was analyzed. Annealed blend films show increased α regardless of RR, that indicates improved charge-carrier diffusion. It was found that the highest device efficiencies will be achieved with the highest RR P3HT. It was also found that the dark-current density of as-fabricated devices made with pristine P3HT increases with the RR of P3HT in the higher voltage regime
URI:	http://ktisis.cut.ac.cy/handle/10488/7613
ISSN:	1476-1122 (print) 1476-4660 (online)
DOI:	10.1038/nmat1574

DSpace-CRIS use cases: a researcher

Kalogirou, Soteris A.

Network Lab | View Statistics | Email Alert | RSS Feed | Claim profile

Profile | Bibliometrics | Publications | Projects

Profile

Full Name Kalogirou, Soteris A. **Greek Name** Καλογήρου, Σωτήρης

Department Department of Mechanical Engineering and Materials Science and Engineering

Faculty Faculty of Engineering and Technology

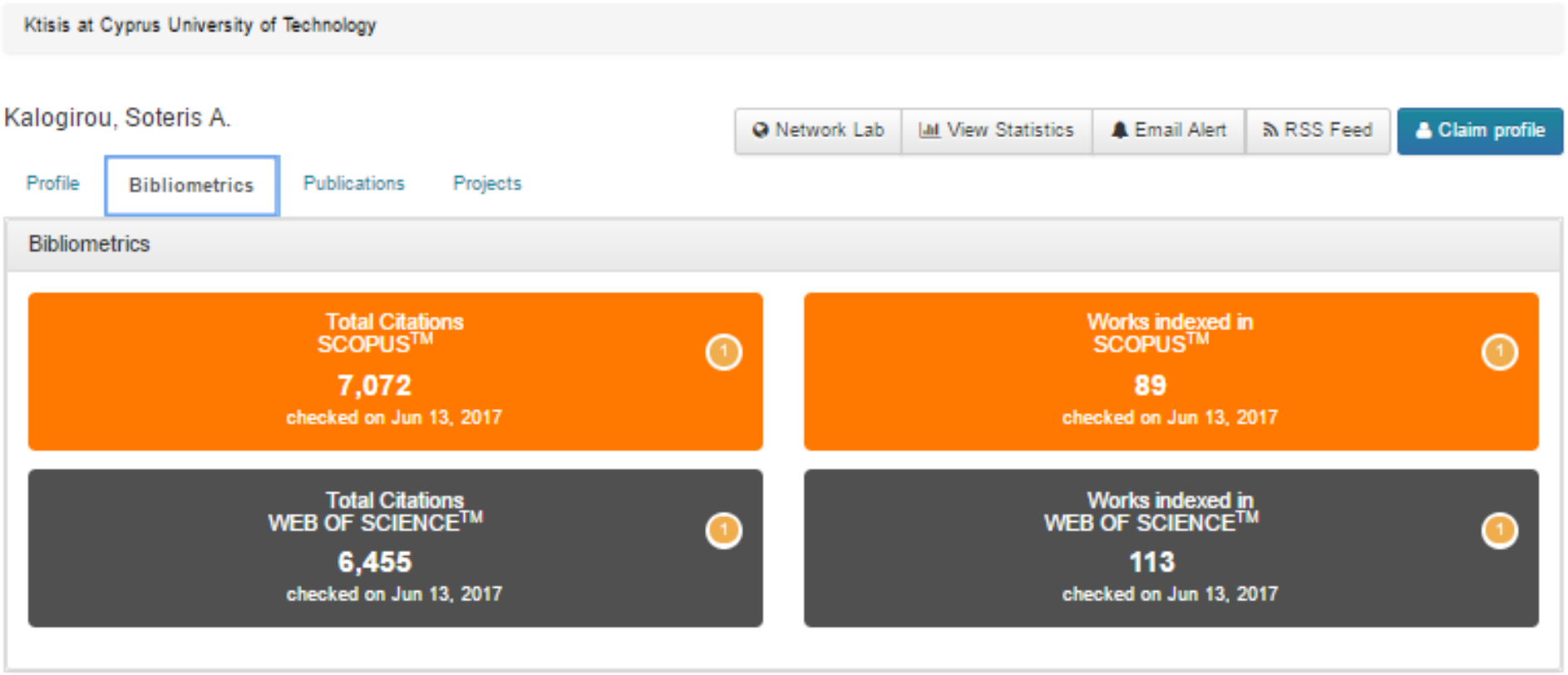
Email soteris.kalogirou@cut.ac.cy

ORCID 0000-0002-3654-1437 **Scopus Author ID** 7005998383 **Researcher ID** D-3883-2015

Biography

Soteris Kalogirou was born in Trachonas, which is a suburb of Nicosia. He is married and has two children. He received his first Degree in Mechanical Engineering from the Higher Technical Institute (1982) his Master of Philosophy (M.Phil) in Mechanical Engineering from the Polytechnic of Wales (1991) and his Ph.D in Mechanical Engineering from the University of Glamorgan, UK (1995). In June 2011 he was awarded from the University of Glamorgan, UK the title of D.Sc. He was employed as a Building Services Consultant by the firm Intersol Engineering from 1982-1987, and in various positions in the Mechanical Engineering and Engineering Practice Departments of the Higher Technical Institute from 1987 to 2007. In 2008 he was transferred to the Cyprus University of Technology and now he is a Senior Lecturer in Mechanical Engineering. He is considered internationally as an expert in the field of solar thermal collectors and to the use of artificial intelligence techniques for the performance prediction of energy and renewable energy systems. He is member of CIBSE (Chartered Institution of Building Services Engineers),

DSpace-CRIS use cases: a researcher



4SCIENCE
Share your knowledge

DSpace-CRIS use cases: a researcher

Kalogirou, Soteris A.

Network Lab | View Statistics | Email Alert | RSS Feed | Claim profile

Profile | Bibliometrics | **Publications** | Projects

Publications (Articles) | Show/Hide filters

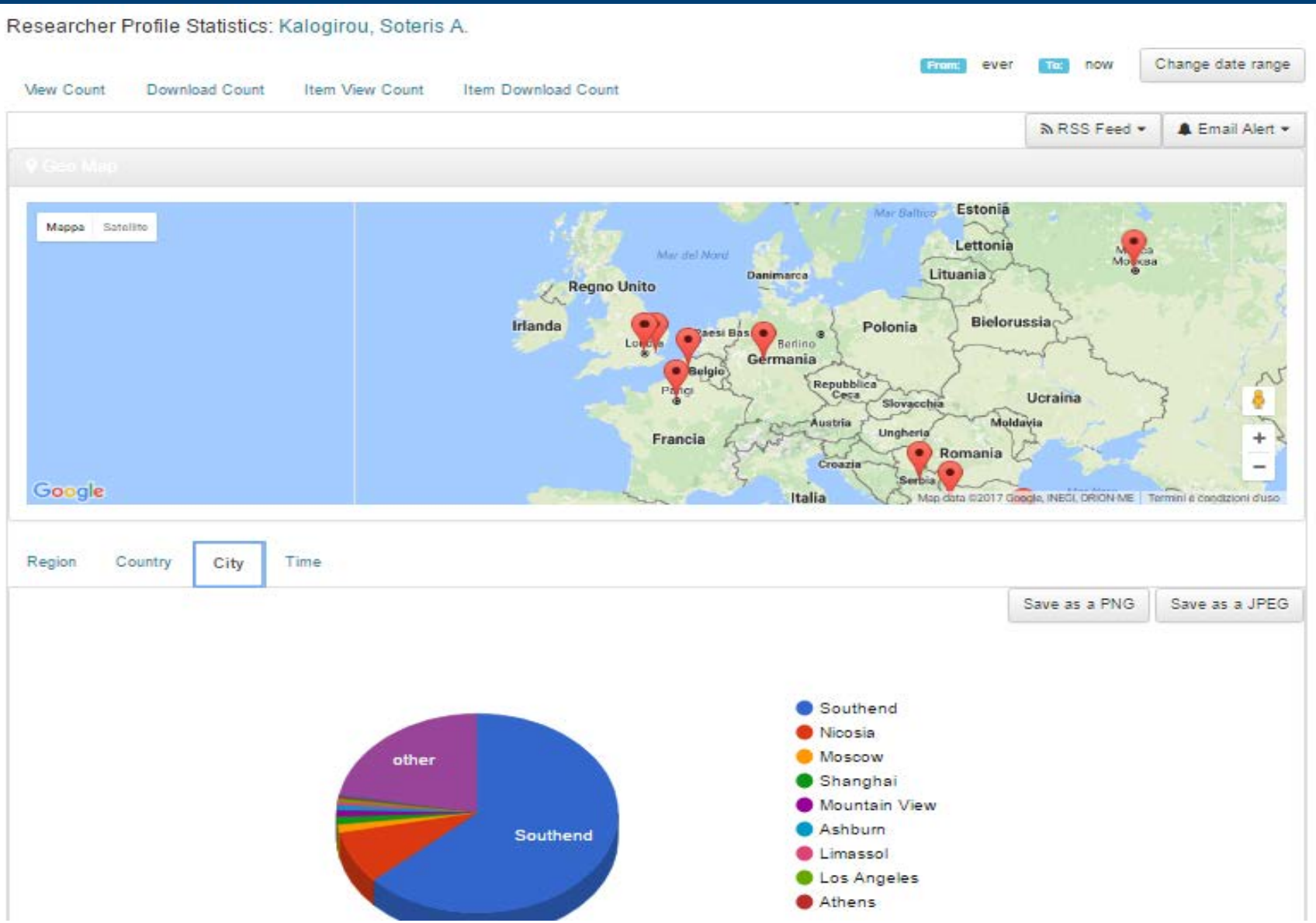
Results 1-20 of 133 (Search time: 0.044 seconds).

1 2 3 4 5 6 7 →

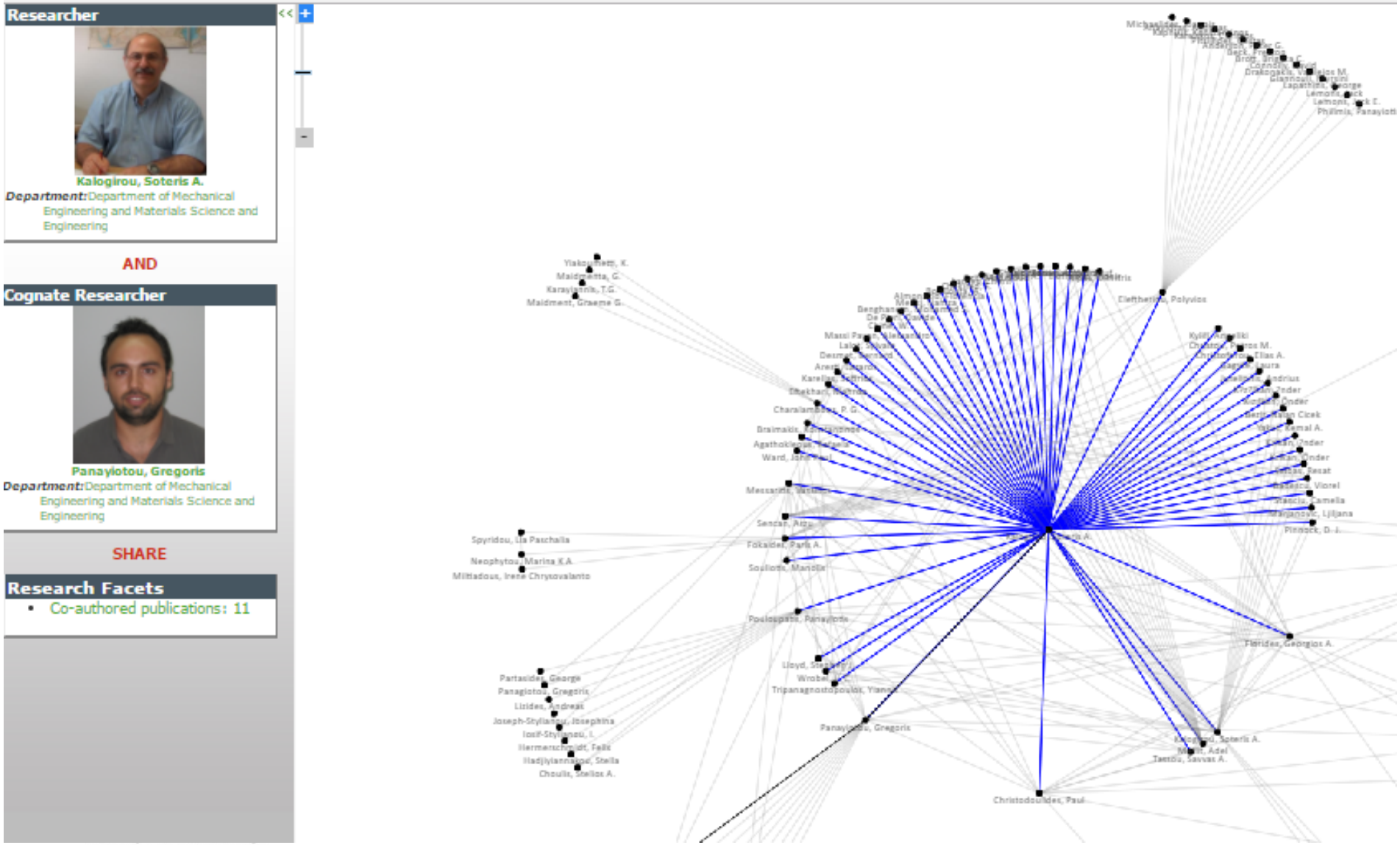
Refman | EndNote | Bibtex | RefWorks | Excel | CSV | Send via email | Export

	Issue Date	Title	Author(s)
1	2012	A detailed thermal model of a parabolic trough collector receiver	*Kalogirou, Soteris A.*
2	2005	A new approach using artificial neural networks for determination of the thermodynamic properties of fluid couples	*Sencan, Arzu; Kalogirou, Soteris A.*
3	2011	A note from the Editors of Energy	*Wang, Ruzhu; Lund, Henrik; Kalogirou, Soteris A.*
4	1999	A thermal model for reptiles and pelycosaurs	*Florides, Georgios A.; Wrobel, L. C.; Kalogirou, Soteris A.; Tassou, Savvas A.; Florides, Georgios A.; Wrobel, L. C.; Kalogirou, Soteris A.; Tassou, Savvas A.*
5	2006	An adaptive wavelet-network model for forecasting daily total solar-radiation	*Mellit, Adel; Benghanem, Mohamed S.; Kalogirou, Soteris A.; Mellit, Adel; Benghanem, Mohamed S.; Kalogirou, Soteris A.*
6	2011	ANFIS-based modelling for photovoltaic power supply system: a case study	*Mellit, Adel; Kalogirou, Soteris A.; Mellit, Adel*

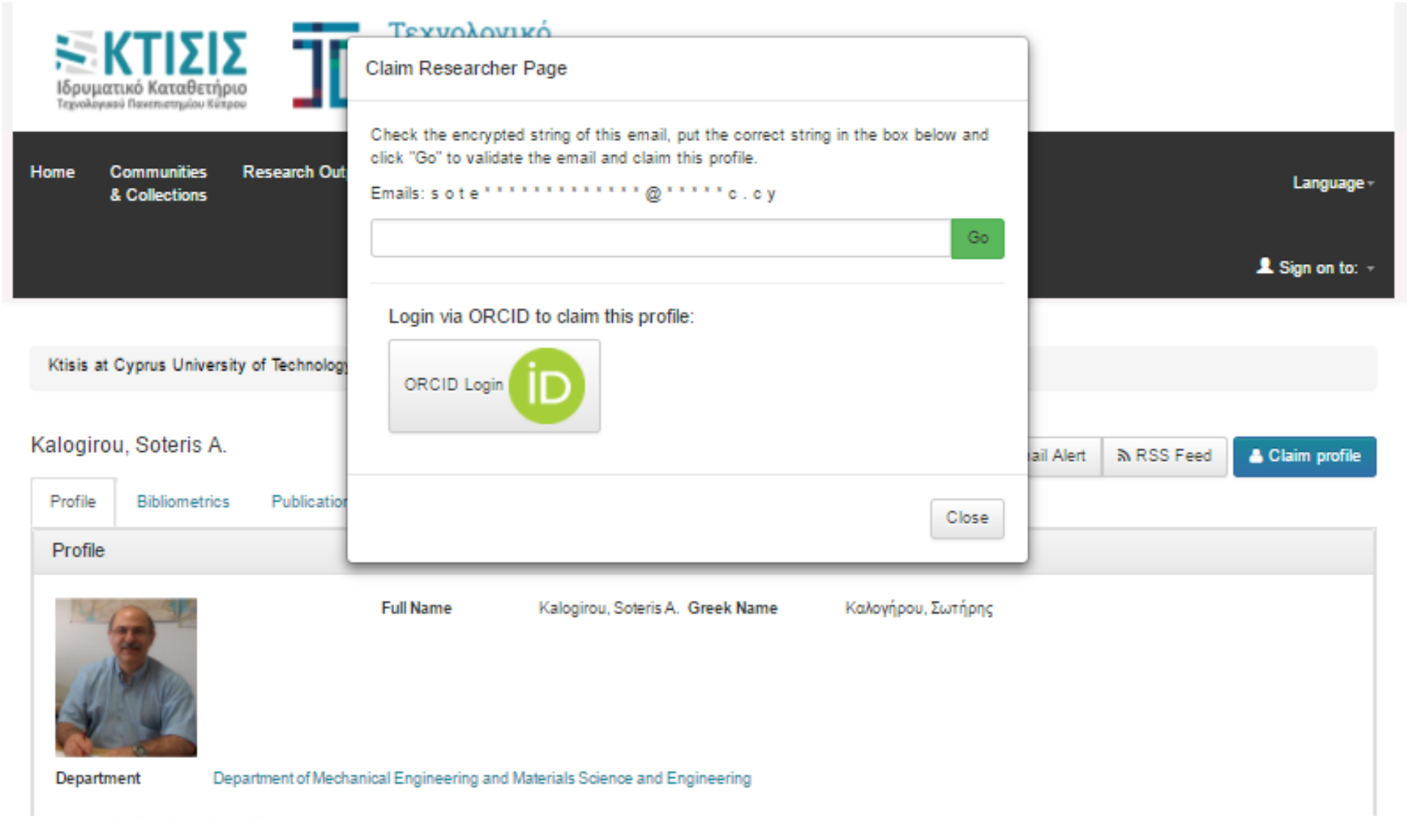
DSpace-CRIS use cases: a researcher



DSpace-CRIS use cases: a researcher



DSpace-CRIS use cases: a researcher



DSpace-CRIS use cases: identifiers

- And here I come to one of the most beautiful sides of DSpace-CRIS: a whole world of persistent identifiers!

- A flexible but robust data model that leverages persistent identifiers, wherever possible, to create unambiguous and navigable relations among all entities: a researcher's ORCiD with their publication / dataset handle / DOI, journal ISSN, project ID, funder ID, previous and next version, and so on…

DSpace-CRIS use cases: identifiers in a dataset

Please use this identifier to cite or link to this item: `http://hdl.handle.net/123456789/13`

Title:	Example of XLS tosetup CRIS data model
Authors:	Bollini, Andrea
Issue Date:	2016
Project:	Gamma ray burst
Related Publication:	Research Data sample item
Conference:	Conference on High Energy
Abstract:	This is the sample data model configuration sh org.dspace.app.cris.batch.StartupMetadataCo
URI:	http://hdl.handle.net/123456789/13
Appears in Collections:	Datasets

Show full item record

person(s)

project(s)

publication(s)

event(s)

SCOPUS™ Citations

10

checked on Nov 8, 2016

WEB OF SCIENCE™ Citations

45

checked on Nov 8, 2016

Title:	DSpace-CRIS 5 Technical documentation
Authors:	Bollini, Andrea Pascarelli, Luigi Andrea
Issue Date:	2016
Project:	DSpace-CRIS Open Source: CRIS made easy with DSpace
Related Dataset:	Example of CSV to import items into repository Example of XLS to import organizations into repository Example of XLS to import projects into repository Example of XLS to import researchers into repository Example of XLS to import journals into repository Example of XLS to import events into repository Example of XLS tosetup CRIS data model
Journal:	Music and waves

back link

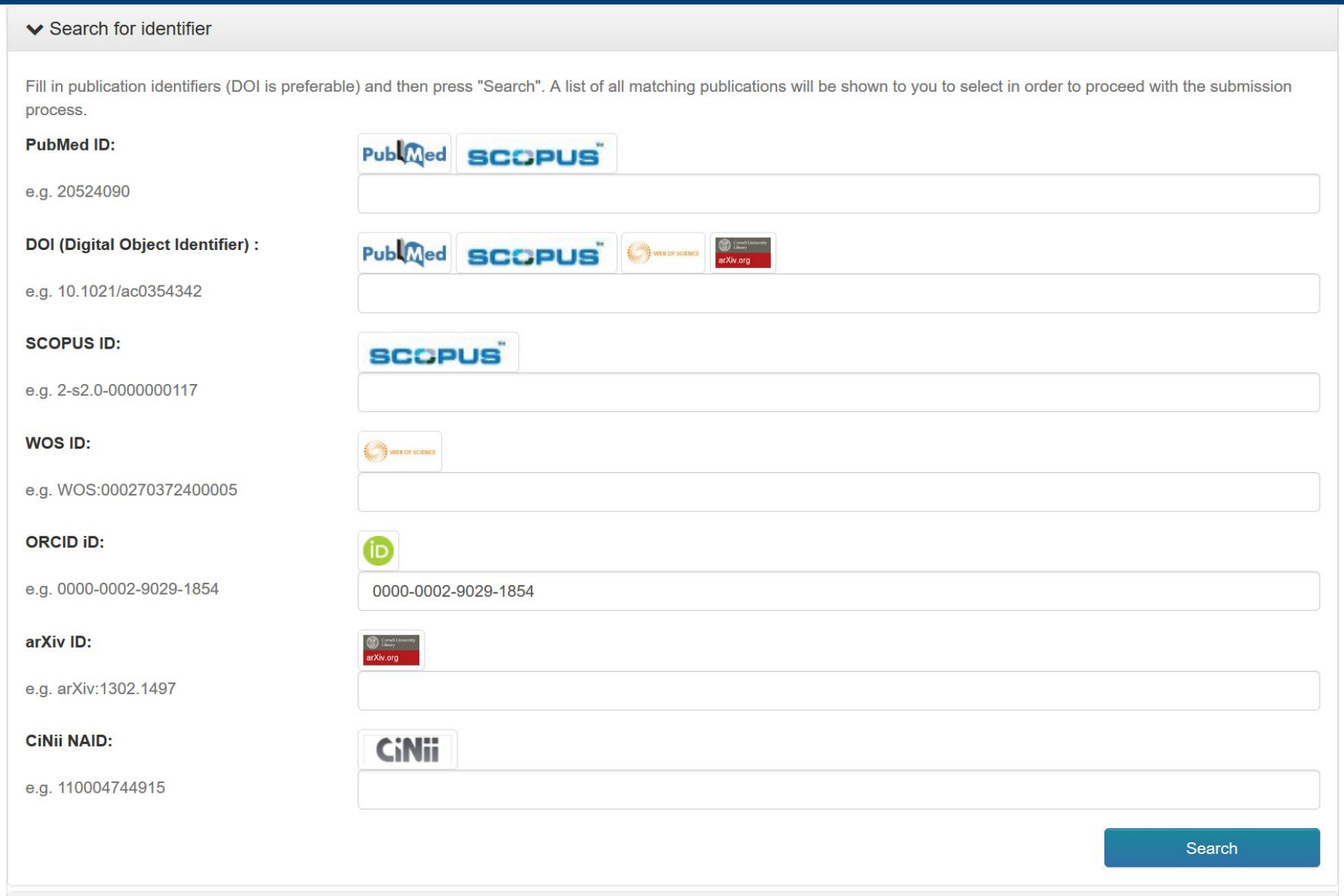
4SCIENCE
Share your knowledge

DSpace-CRIS: interoperability

- How not to mention another powerful feature of DSpace-CRIS? Save your researcher's time and provide records from ORCiD, PubMed, Scopus, WebOfScience, ArXiv, CrossRef and more…

- Import information from master legacy systems such as HR, export information to your data warehouse or your analytics solution, integrate your DSpace-CRIS with the institutional Identity Management system to control authentication and authorization, and so on…

DSpace-CRIS: interoperability in submission



DSpace-CRIS: interoperability magic!

Bollini, A.
2006

See details & import the record

Guia de instalação DSpace-CRIS
Lucas Ângelo da Silveira, Milton Shintaku, Andrea Bollini
2016

See details & import the record

Publication metadata in CERIF: Inspiration by FRBR
Dvořák, J., Drobíkova, B., Bollini, A.
2014

See details & import the record

DSpace-CRIS@HKU: Achieving visibility with a CERIF compliant open source system
Palmer, D.T., Bollini, A., Mornati, S., Mennielli, M.
2014

See details & import the record

Full integration with ORCiD, pull and push APIs for all entities:
Profiles
Publications
Projects

DSpace-CRIS use cases: Research Data

- And here we come to another piece of magic you can do with DSpace-CRIS: recently at 4Science we released, free and open source, an integration with CKAN, the world's leading open-source data management platform
- You can now offer data discovery, exploration, preview, sampling and visualization from your DSpace-CRIS repository just by adopting the CKAN add-on!
- CKAN makes open webservices for tabular data available: https://ckan.org/
- DSpace-CRIS & DSpace-CKAN add-on: https://github.com/4Science/dspace-ckan

4SCIENCE
Share your knowledge

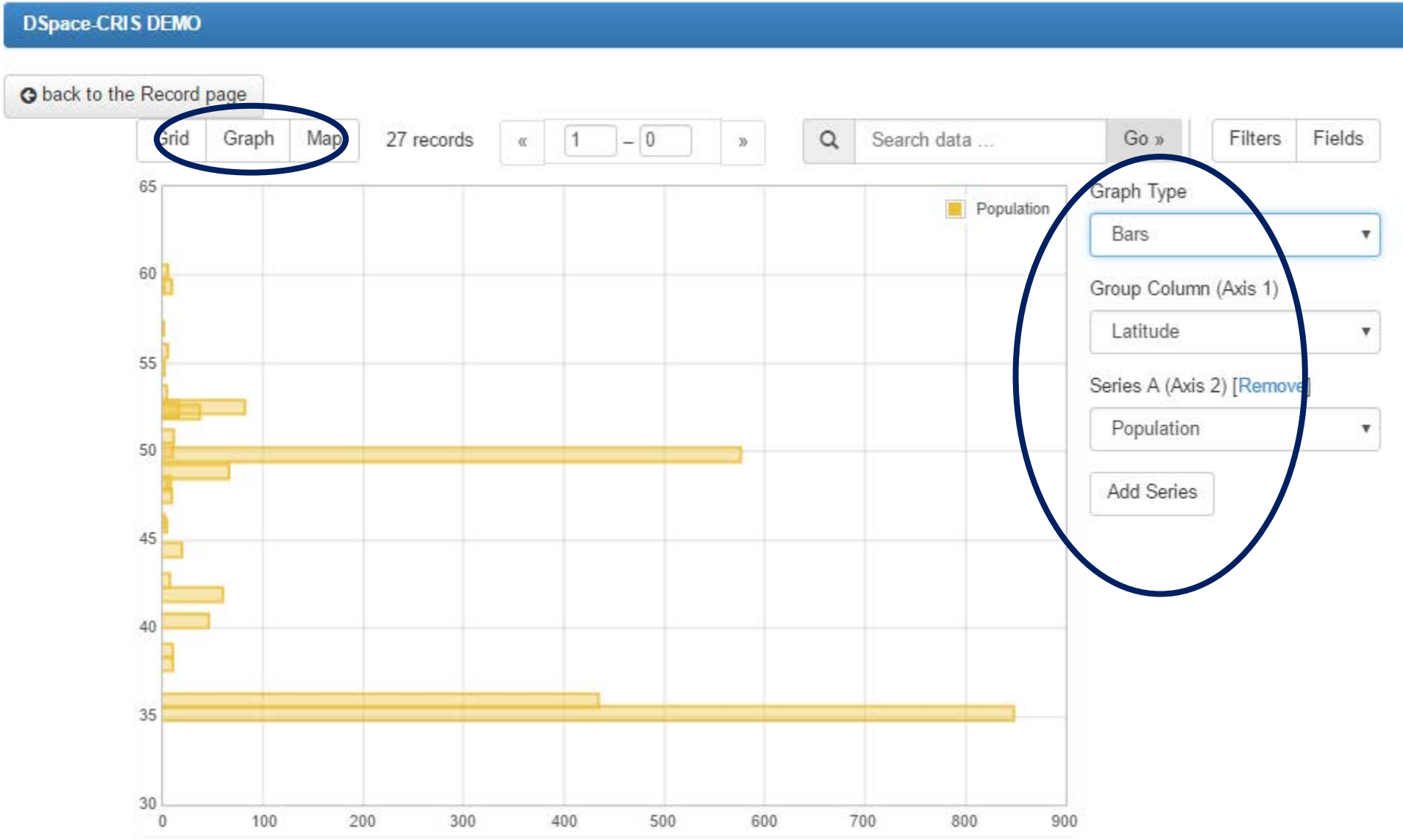
CKAN Add-On Module: preview tabular & geospatial data

Paginated and filterable

4SCIENCE
Share your knowledge

CKAN Add-On Module: preview tabular & geospatial data

Graph visualization

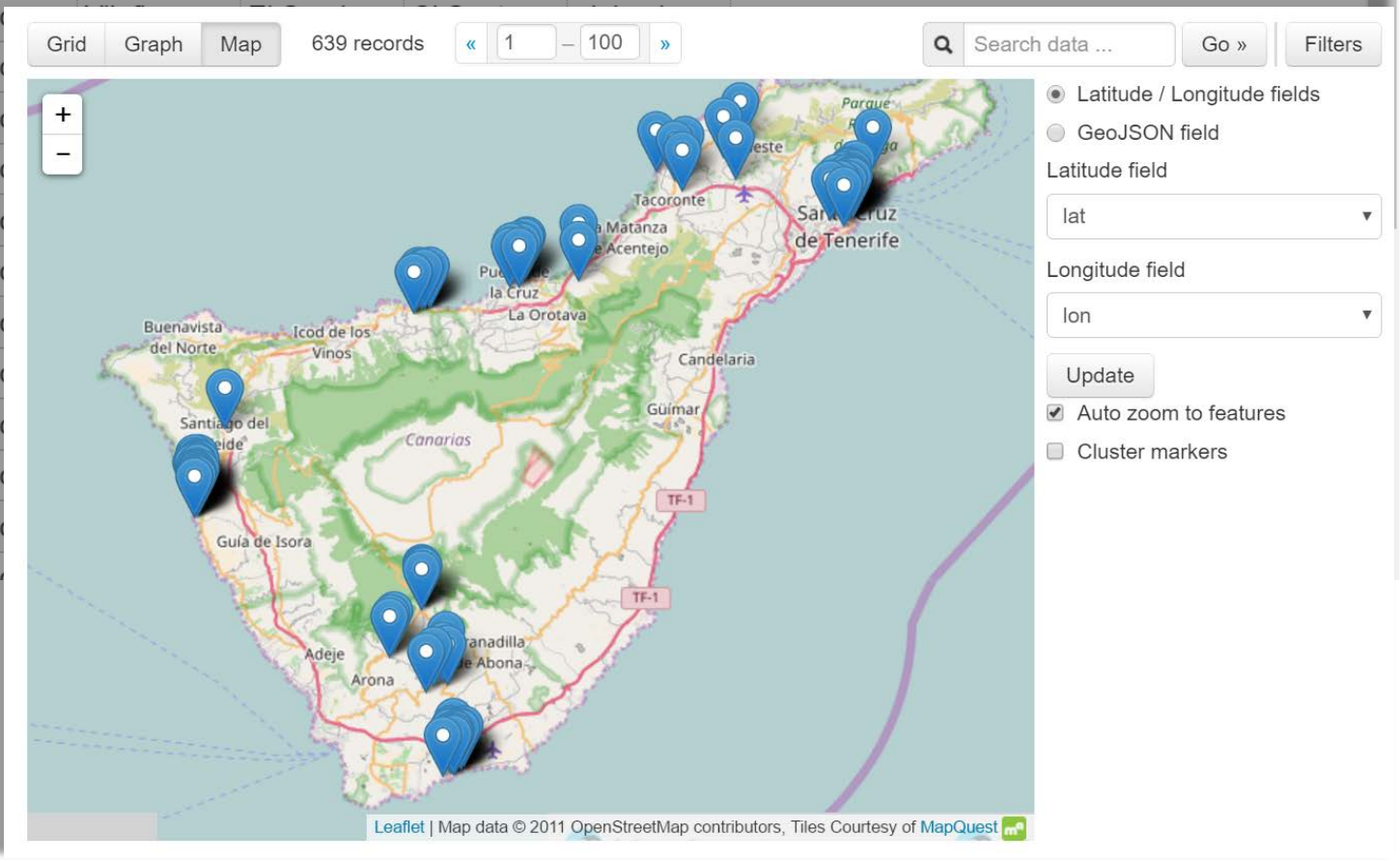


CKAN Add-On Module: preview tabular & geospatial data

Interactive map visualization

Grid | Graph | Map | 639 records | « 1 – 100 » | Search data ... | Go » | Filters

lon	lat	clase	*municipio*	nombre	dirección	actividad
-16.637585	28.1580…	turismo	Vilaflor	Hotel Vill…	Cm San …	alojamie…
-16.637835	28.1549…	turismo				
-16.662599	28.1216…	turismo				
-16.636974	28.1593…	turismo				
-16.636297	28.1585…	turismo				
-16.66551	28.1187…	turismo				
-16.666047	28.1168…	turismo				
-16.636497	28.1572…	turismo				
-16.366122	28.5127…	turismo				
-16.35427	28.4963…	turismo				
-16.3502…	28.5253…	turismo				
-16.425668	28.5024…	turismo				
-16.399875	28.4985…	turismo				



4SCIENCE
Share your knowledge

CKAN Integration Add-On: architecture

Can be integrated with LTP strategy

DSPACE CRIS

DURACLOUD™

proxing

- *Open access*
- *Embargo*
- *Restricted*

backend

ckan

4SCIENCE
Share your knowledge

Open Source, get it from GitHub!

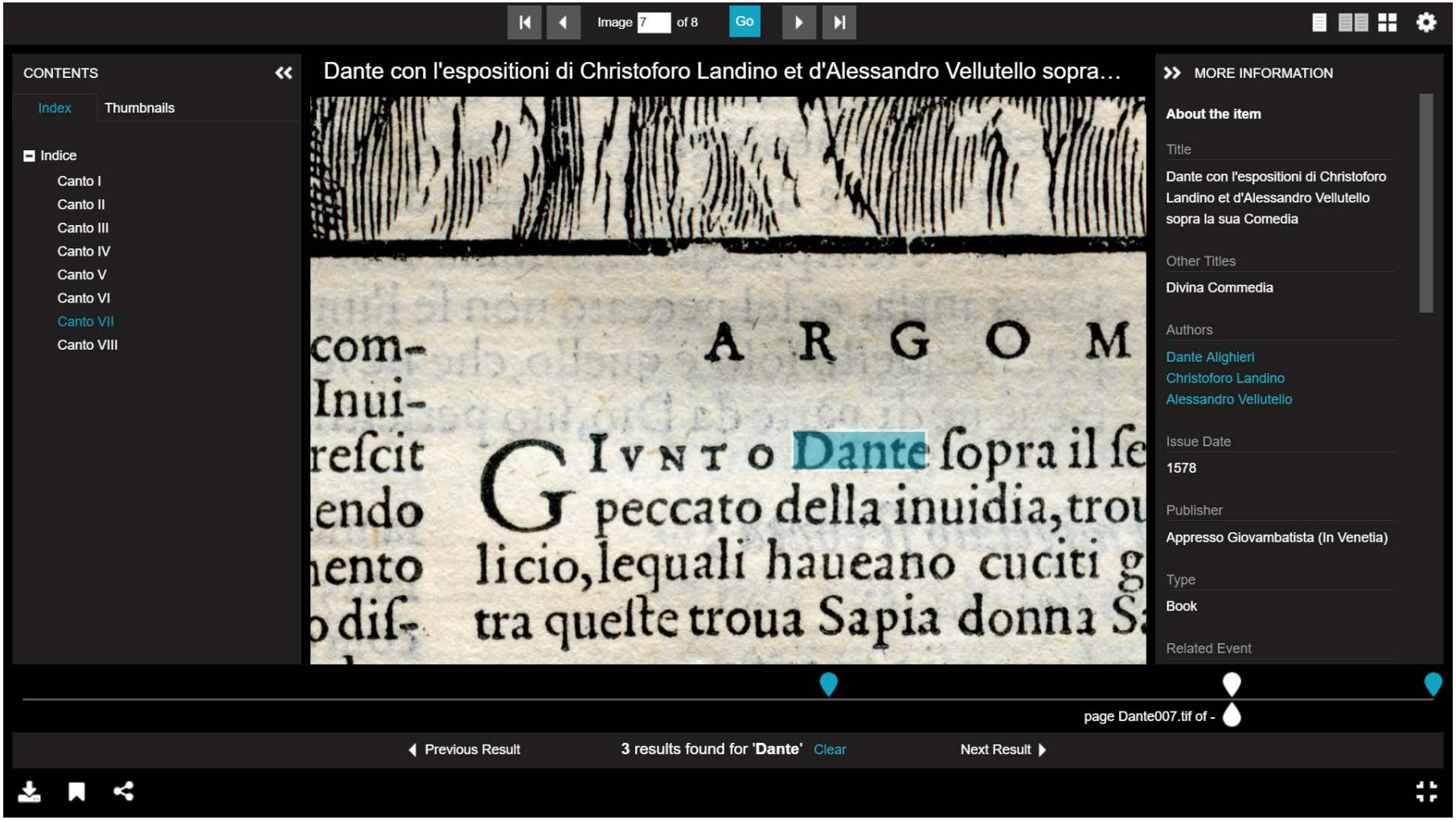
DSpace-CRIS use cases: Images

- An astrophysics image can be over 5GB!
- High-quality scanned books have images typically over 100MB for each page
- Medical images can also be very large
- The structure of image sequences are complex and relevant (page sequences, evolution of phenomena in medical images, etc.)

DSpace-CRIS use cases: beyond publications

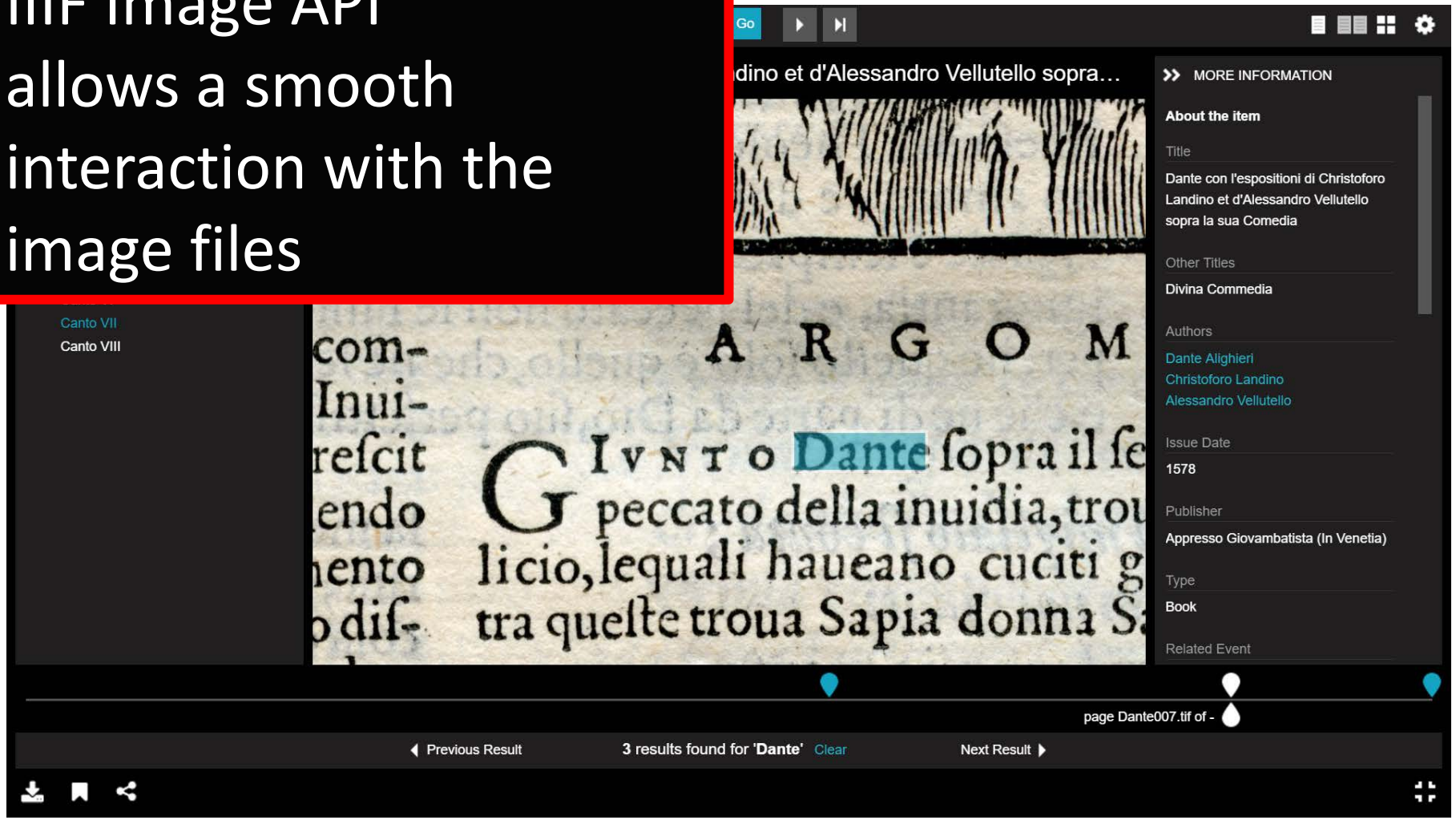
Image files (medical, astrophysics, cultural heritage: digitalized manuscript, rare books, etc.) need to be consulted online, discussed and commented / annotated

IIIF protocols and formats allow you to meet these requirements in a standard and understandable way (for both humans and machine)

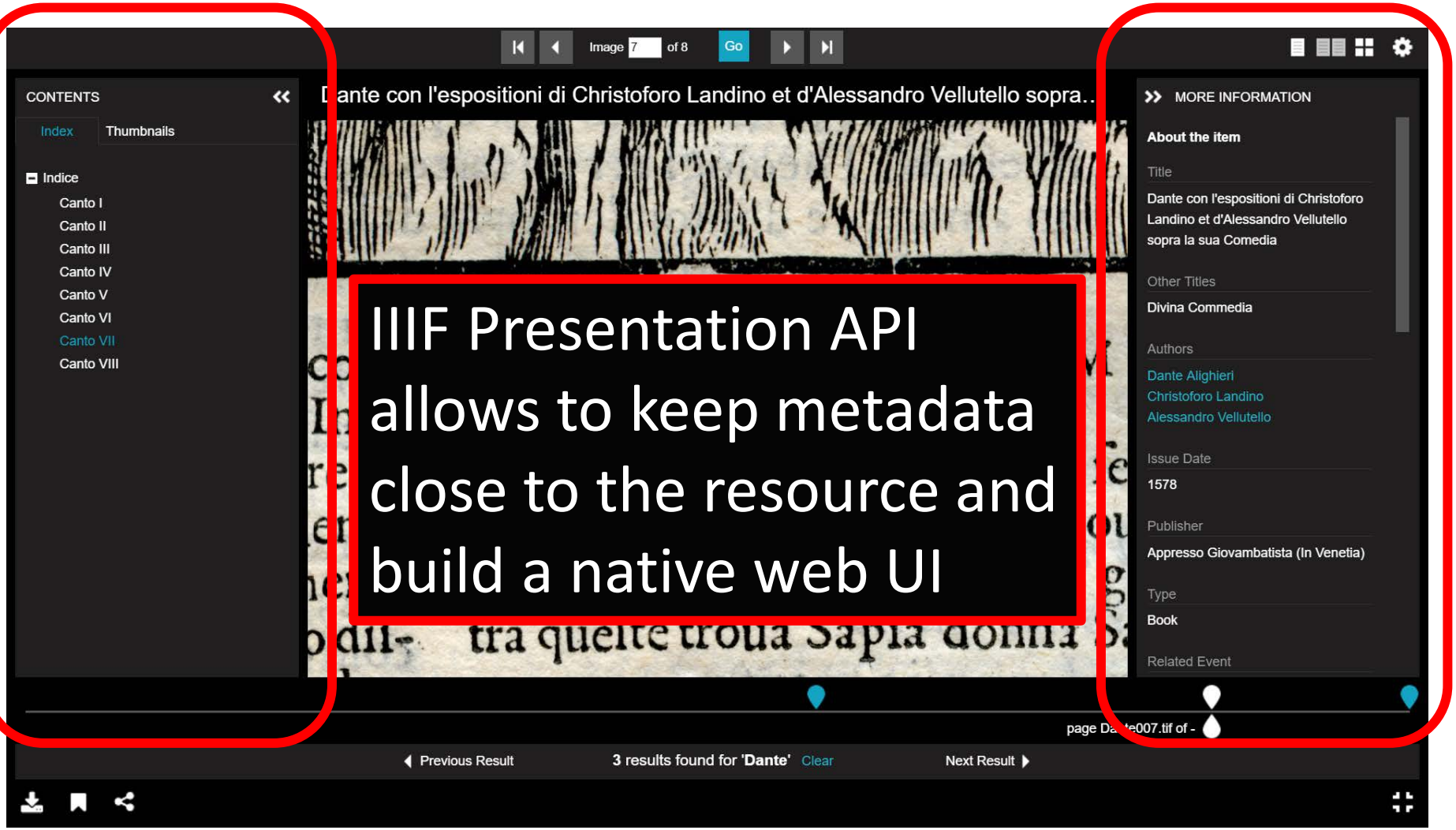


Discussion around the IIIF Support in DSpace:
https://wiki.duraspace.org/display/DSPACE/IIIF+and+DSpace

IIIF Image API allows a smooth interaction with the image files

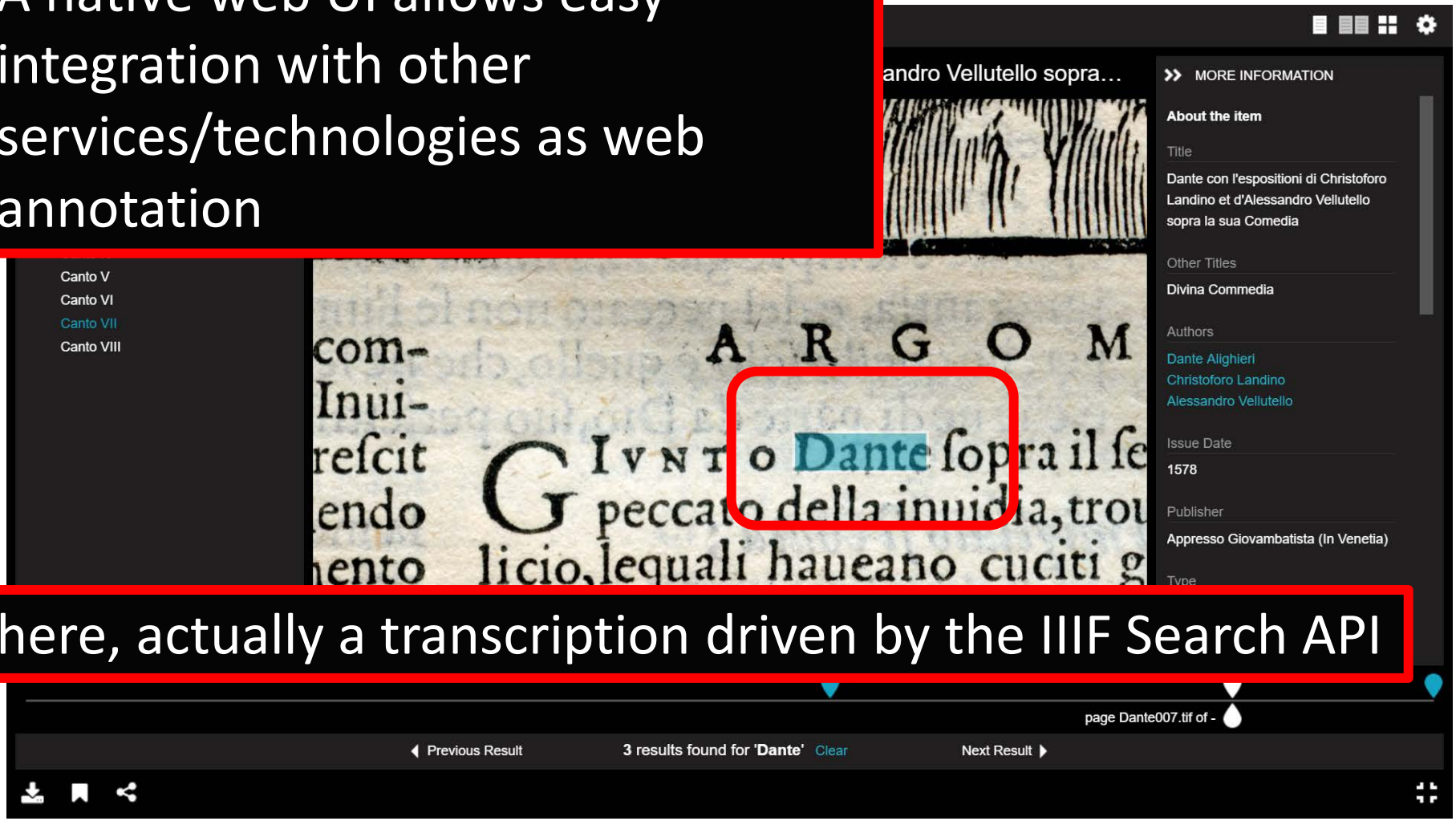


Discussion around the IIIF Support in DSpace:
https://wiki.duraspace.org/display/DSPACE/IIIF+and+DSpace



Discussion around the IIIF Support in DSpace:
https://wiki.duraspace.org/display/DSPACE/IIIF+and+DSpace

A native web UI allows easy integration with other services/technologies as web annotation



here, actually a transcription driven by the IIIF Search API

Discussion around the IIIF Support in DSpace:
https://wiki.duraspace.org/display/DSPACE/IIIF+and+DSpace

DSpace-CRIS use cases: beyond publications

The same requirements apply to audio and video content

- Streaming
- Internal structure
- Annotation / commenting / transcript

Adopt an open standard: the MPEG-DASH format allows adaptive streaming over simple html client with full support for multiple tracks, ToC, subtitles

DSpace-CRIS add-ons

The IIIF Image Viewer, Document Viewer, OCR & Transcription, Video/Audio Streaming are add-on modules presently distributed by 4Science with an innovative business model: contribute to make them open source soon!

http://www.4science.it/en/dspace-add-ons/

4SCIENCE
Share your knowledge

DSpace-CRIS in a nutshell

Version 5.6.1 released on 16th November 2016
https://github.com/4Science/DSpace/tree/dspace-cris-5.6.1
Version 6 RC coming on June 20th 2017

Participate in our Testathon! To be announced in the next days

More than 80 DSpace-CRIS installations worldwide:
Asia | North America | South America | Europe | Australia | Africa

The only open-source CRIS, maintained in the context of a vast and authoritative worldwide community.

Documentation and software available on the DSpace Wiki:
https://wiki.duraspace.org/display/DSPACECRIS/DSpace-CRIS+Home

4SCIENCE
Share your knowledge

DSpace-CRIS: undergoing

- Smart tabular & visual (diagrams, graphs) reporting and benchmarking analysis
- Sentiment analysis from social media and predictive machine-learning algorithms
- Working with authoritative partners (to be announced soon)
- More detailed roadmap at: https://wiki.duraspace.org/display/DSPACECRIS/Project+RoadMap

4Science: a DSpace Registered Service Provider, with two DSpace Committers, the Lead of the REST API sub-team for DSpace 7, and a member in the Steering Group

A **longtime commitment** in open source, open standards, interoperability, contributing to the most relevant international communities.

Where to find us next?

OAI 10
Geneva
21-23 June

Open
Repositories
2017
Brisbane
26-30 June

TPDL 2017
Thessaloniki
18-21 Sept

German DSpace
User Group
Meeting
Stuttgart
21 Sept

euroCRIS
Fall Meeting
Bratislava
20-22 Nov

And more
to come!

Thanks for your attention!

Susanna Mornati

susanna.mornati@4science.it

skype: susanna.mornati

linkedin: susannamornati

orcid: 0000-0001-9931-3637

Andrea Bollini

andrea.bollini@4science.it

skype: a.bollini

linkedin: andreabollini

orcid: 0000-0002-9029-1854

4SCIENCE
Share your knowledge

www.4science.it