IRIS: Supporting & Managing the Research Life-Cycle

Andrea Bollini
Michele Mennielli

#EUNIS15
Dundee, 10-12 June
Cineca Consortium

Not For Profit

Founded in 1969

HPC
FERMI: TOP500
EURORA: TOPGREEN500

75 Members:
70 Universities
4 Research Institutes
Ministry of Education

>900 employees
Bologna
Milan
Rome

IS
500 applications
All Italian Universities
Ministry of Higher Ed

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The role of Cineca in Italy

National Processes

Planning & Promoting Education
National Research Assessment Exercise
National Research Grants Delivery
Financial Control On Univ
Annual Public Funds Delivery

Key Performance Indicators and Dashboards

Monitoring of Academic courses (OFF.F)
Monitoring of Students trends (ANS)
Monitoring of Research Production
Assessment of Research Production (ANVUR-VQR)
National Research Grants Delivery (PRIN-FIRB)
HR & Financial Data Analysis (Personnel)

The Italian Academic System

Dashboards & KPIs - University Data Warehouse

Student & Learning Management
Research Management
Financial Management
HR Management

Local Processes

Student Management
Course Management
Research Management
Governance Control
International collaborations for Research

Sharing our experience

DuraSpace

OpenAIRE & Pentaho

euroCRIS

/ Steering Committee
/ 2 DSpace Committers
/ DSpace-CRIS
/ DSpace Registered Service Provider

/ Board Member
/ CERIF TG
/ Architecture TG
/ DRIS-Best Practice TG

NOAD
Open Access in Europe
Open Source BI solution
Advisory Board
IRIS: Cineca’s CRIS Solution

- 60 Italian Universities
- > 5 Million Research Publications
- Open Access
- The core is Open Source
- > 10 International Institutions
The value of managing Research

Collect institutional research output for evaluation and assessment purposes

Measure research results for benchmarking

Disseminate data to enhance impact and visibility

Preserve ICT investments and maximize ROI
What to manage

Research Governance: business processes, management, reporting, integration

Institutional Repository: Publications and Research Data

CRIS: people, units, projects, interactions, reputation, cooperation, dissemination
Cineca’s Vision

WHAT IRIS ADDS

Reports & Analytics  Workflows mapping business processes  System Integration (legacy, national, ...)

Open Source

Dspace extended to the CERIF entities

(People | Units | Projects | etc.)

To better support:
Interactions
Reputation
Dissemination

Institutional Repository

DSpace

DSpace

CRIS
DSpace-CRIS around the World

>20 Installations (the 5 Continents, euroCRIS & the World Health Organisation)

Support of all DSpace versions accepted by the Community

Free download available at: github.com/Cineca/dspace-cris/

How IRIS works

- **HR System**
- **IR (Institutional Repository)**
- **RM (Resource Management)**
- **AP (Activities & Projects)**
- **ER (Evaluation & Review)**
- **ES (Expertise & Skills)**

Evaluation of Research Quality

- Scopus
- Web of Science
- PubMed
- EDRA
- DataCite
- depositolegale.it
- OAuth, JSON, XML, REST, Basic-Auth
2015: The Big Migration

<table>
<thead>
<tr>
<th>Period</th>
<th>Nr Institutions</th>
</tr>
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<tbody>
<tr>
<td>Sep-Dec 2014</td>
<td>7</td>
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<tr>
<td>Jan-Apr 2015</td>
<td>25</td>
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<tr>
<td>May-Jul 2015</td>
<td>26</td>
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</table>

* Nr. Of Products
How we are dealing with the Migration

Activities for Institution (average)

- 2 Environments (Pre-Prod e Prod): 140
- 20 migration’s procedures: 2800
- 72 hours: 10K
- 70,000 products: 9M
- 20,000 records: 1.5M

Training

- > 100 meetings with Institutions
- > 250 pages of documentation
- 3 Video tutorial
- 2 Webinar
It is possible to (public API):

• Login through ORCID*;
• Claim profile through ORCID;
• Register/Associate an ORCID to your own DSpace-CRIS profile

* Authentication code is based on the work found on DSpace 5 and Dryad project
With the collaboration of The Hong Kong University (HKU) and The Hong Kong Polythecnic University

DSpace-CRIS 4.3.1 \(\rightarrow\) DSpace-CRIS 5.1.1 (June ‘15)

**PUSH** – services (members API)

DSpace-CRIS 5.1.2 (end ‘15)

**Advanced PULL** – services (members&premium API)
DSpace–CRIS & ORCID (2)

- **Research**’s bibliographic data
  (including the possibility to activate synchronisation for single field)

- **Publications**
  (with the possibility to chose the publications to sync)

- **Projects**
  (with the possibility to chose which projects to sync)

**PUSH local information to ORCID**

Propose to **import records** in DSpace-CRIS when login-in looking to the Researcher’s ORCID profile

Or

Automatically (notification and preferences allowed) when **ORCID premium membership** is available

**PULL extended information from ORCID**
Italian Researcher IDentifier for Evaluation

IRIS & ORCID: the I.R.I.D.E. HUB

(or)

IRIS & ORCID: the I.R.I.D.E. HUB
The Virtuous Circle
Tracking external authors
... some functionalities
Aggregated trends
### IRIS: Impact Factor

#### Table: Impact Factor with & Without

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<tr>
<th>Department</th>
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</table>

**Legend:**
- **With** Impact Factor
- **Without** Impact Factor
IRIS: analysis of publications
<table>
<thead>
<tr>
<th>Title</th>
<th>Citations google scholar</th>
<th>Citations PubMed</th>
<th>Citations Scopus</th>
<th>Scopus SJR index</th>
<th>Scopus SNIP index</th>
<th>Scopus SJR2 index</th>
<th>Scopus SNIP2 index</th>
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<tr>
<td>Search for magnetic monopoles in $\sqrt{s}=7$ TeV $pp$ collisions with the ATLAS detector</td>
<td>2</td>
<td>3</td>
<td>0.633</td>
<td>3.219</td>
<td>4.537</td>
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<td>Search for Production of Resonant States in the Photon-Jet Mass Distribution Using $pp$ Collisions at $\sqrt{s}=7$ TeV Collected by the ATLAS Detector</td>
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<td>The threshold region for Higgs production in gluon fusion</td>
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<td>Colloidal aggregation in microgravity by critical Casimir forces</td>
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<td>Search for low-mass dark-sector Higgs bosons</td>
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<td>Search for Pair Production of a New $t^\prime$ Quark that Decays into a Z Boson and a Bottom Quark with the ATLAS Detector</td>
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<td>3.219</td>
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<td>New Isomers in the full seniority scheme of neutron-rich lead isotopes: the role of effective three-body forces</td>
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<td>7</td>
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<td>Search for $tb$ Resonances in Proton-Proton Collisions at $\sqrt{s}=7$ TeV with the ATLAS Detector</td>
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<td>8</td>
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<td>Ancilla-assisted calibration of a measuring apparatus</td>
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<td>High-order-harmonic generation and superradiance in a seeded free-electron laser</td>
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<td>Measurement of the $ZZ$ Production Cross Section and Limits on Anomalous Neutral Triple Gauge Couplings in Proton-Proton Collisions at $\sqrt{s}=7$ TeV with the ATLAS Detector</td>
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To better support:

- Interactions
- Reputation
- Dissemination

Institutional Repository

System Integration (legacy, national, ...)

Reports & Workflow Mapping

Analytics of business processes

2016
Thank you for your attention

#EUNIS15
Dundee, 10-12 June