Web-Services Developer

Collaboration and the free flow of information are critical to CERN's success in achieving its scientific goals, which is why CERN is spearheading the Open Access movement with partners across the scientific community, the publishing industry and libraries worldwide. The CERN Open Access Section is looking for a talented and inspired Web-Services Developer to connect people and science through our Open Access initiatives. If you are interested in combining your skills in web-based development with your interest in world-class digital libraries, this is the opportunity for you. Take Part!

**Job Reference:** G5-SIS-OA-2013-07-LD

**Publication date:**
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**Closing date:**
02/09/2013

**Introduction**

Open Access to scientific results accelerates science and is a core mission of CERN Scientific Information Service. The Service manages the Sponsoring Consortium for Publishing in Particle Physics (SCOAP3): a partnership of libraries and funding agencies worldwide which, with scientific publishers, aims to convert key journals in the field of High-Energy Physics to Open Access, for everyone to read and freely re-use scientific results. The Service also supports CERN authors to make their publications Open Access, either in direct contact with publishers, or through a network of linked repositories such as CDS (cds.cern.ch), INSPIRE (inspirehep.net), and arXiv (arXiv.org).

You will join:

- The General Infrastructure Services Department, which provides and supports the infrastructure and technical and administrative services of the Organisation.
- The Scientific Information Service Group, which manages CERN's library as well as historical and scientific archives.
- The Open Access Section, which supports and implements CERN Open Access vision.

**Functions**

Web-Services Developer in the General Infrastructure Services Department (GS), Scientific Information Service Group (SIS), Open Access Section (OAI).
● Scope of the Repository
● Invenio: an introduction
● Demo of SCOAP$^3$ repository prototype
● Requirements of metadata and full-texts
● Added values of SCOAP$^3$ repository
“SCOAP3 Articles shall be available open access without limitation in time, and their widest re-use shall be possible. They shall be accessible without any barrier on the publisher’s website and shall be delivered in a timely manner (as defined in Section 3.2.2) to a repository operated by SCOAP³, for further distribution and re-use under the applicable License(s) as per Section 3.1 (e.g., redistribution to institutional repositories of participating institutions or subject-specific repositories).”

(from the TECHNICAL SPECIFICATION)
Invenio: an introduction

- Invenio is the software package chosen to implement the repository.
- Originally developed at CERN
- Can be extended to accommodate further requirements
- Fully supports OAI-PMH protocol
- Open source GPL2 software package
- First released in 2002

http://invenio-software.org/
INFOSCIENCE

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Directives for Research Integrity
SNF's Directive for open access publications

Access to the 99,458 scientific publications
Access to the 9,940 documentary resources

Open Access conferences, Thursday October 24, 2013
03.07.13 In the context of the Open Access Week, the EPFL library is pleased to
invite you to the event « Open Access: authors, publishers, investors and institutions
for the dissemination ... »

Collecting research data sets: a worldwide movement.
03.06.13 One often hears that the principle of open access is to make research
results available online for free as scientific publications (mostly articles). However,
scientific research produces increasingly large amounts ... »

The ASAP program, Open Access and three 30,000 $ prizes.
22.05.13 The goal of the ASAP program (Accelerating Science Award Program) is
to raise awareness and encourage the use of open access scientific research. »
Recent Uploads

03 September 2013  Dataset  Open access
Regulation of gastric acid secretion in situ by an endogenous activator protein: Studies with activator-specific antibody
Tushar K. Ray, Jyotirmoy Nandi, Larry F. Lemanski and Swapan K. Ghosh
Monospecific polyclonal antibody was raised against a homogenous preparation of endogenous activator protein (HAF) for the gastric H+,K+-ATPase system. [...]Uploaded by Tushar on 04 September 2013.

03 September 2013  Book  Open access
Challenges in Physical Science: Windmills (Workbook)
Coyle, Harold P. ; Hines, John L. ; Rasmussen, Kerry J. ; Sadler, Philip M.
Study of exclusive two-photon production of $W^+W^-$ in pp collisions at $\sqrt{s} = 7$ TeV and constraints on anomalous quartic gauge couplings / Chachayev, Serguei; Khachatryan, Varan ; Sirunyan, Albert; Tumasyan, Aron ; et al [CMS-FSQ-12-010] [arXiv:1305.3596] [CERN-EP-2013-084]
A search for exclusive or quasi-exclusive $W^+W^-$ production by photon-photon interactions, $p p \rightarrow \gamma \gamma W^+ W^-\gamma$, at $\sqrt{s} = 7$ TeV is reported using data collected by the CMS detector with an integrated luminosity of 5.05 inverse femtobarns. [...] 
Detail record - Similar records

Search for a light charged Higgs boson in the decay channel $H^+ \rightarrow c\bar{s}$ in $t\bar{t}$ events using pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector / Aad, Georges; Abajian, Televik; Abbott, Brad; Abdallah, Jalal; et al [CERN-PH-EP-2012-336] [arXiv:1302.3694]
A search for a charged Higgs boson ($H^+$) in $t\bar{t}$ decays is presented, where one of the top quarks decays via $t \rightarrow H^+ b$, followed by $H^+ \rightarrow$ two jets ($c\bar{s}$). [...] 
Detail record - Similar records

Observation of $B^0_s \rightarrow \chi_{c1} \phi$ decay and study of $B^0 \rightarrow \chi_{c1,2}K^{*0}$ decays / Abeij, R; Adeva, B; Adinolfi, M; Adrover, C; et al [CERN-PH-EP-2013-088LHC-PAPER-2013-024arXiv:1305.5511]
The first observation of the decay $B^0_s \rightarrow \chi_{c1} \phi$ and a study of $B^0 \rightarrow \chi_{c1,2}K^{*0}$ decays are presented. [...] 
Detail record - Similar records

Investigation of GeV-scale electron acceleration in a gas-filled capillary discharge waveguide / Walker, P.A.; Bourgeois, N.; Rittershofer, W.; Cowley, J.; et al
The generation of GeV-scale electron beams in a gas-filled capillary discharge waveguide with good reproducibility is discussed. [...] 
Detail record - Similar records

The production of $J/\psi$ and mesons in pp collisions at TeV is studied with the LHCb detector. [...]
SCOAP³ contractual requirements: Metadata

Minimum fields:
- all CrossRef mandatory fields (currently for journal articles: title, abbreviation, URL, print or electronic ISSN, year) AND, in addition all of the following:
  - article DOI
  - date of DOI registration in CrossRef
  - arXiv number of the pre-print of the article, if applicable (mandatory for all SCOAP3 Articles in Model 2, mandatory in Model 1 whenever the SCOAP3 Article has been submitted to the arXiv.org repository under any of the “HEP” categories)
  - names of all authors and for each author the corresponding institutional affiliation(s) of the author(s)
  - ORCID IDs for all authors, once these are available in the publisher’s manuscript tracking systems
  - information about the applicable License
The minimum requirement for the delivery format of SCOAP³ Articles is PDF or a self-descriptive XML format. The *preferred format* is a combination of PDF, PDF/A, and a *self-descriptive XML* format.
Example of re-distribution to SCOAP³ participants and beyond

SCOAP³ participants will be able to e.g. use OAI-PMH to access data stored in the repository.
Later next year, web-based machine-oriented interfaces are going to be rolled-out.
Added values of data in SCOAP$^3$ repository

Once you download from the repository all or some data you can derive on your system some information:

- author affiliations => national statistics
Added values of data in SCOAP³ repository

... and...

(article.xml + text mining)
Conclusions

➢ http://scoap3repo.cern.ch/
➢ Technical alignment with publishers kick-started
➢ Fully operational by 1st of January 2014
➢ An added value for the research community