



Invenio v1.2

Tibor Šimko
CERN

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- 1 Overview
- 2 Optimising Search Experience
- 3 Optimising Ingestion
- 4 Authorities
- 5 JSON-ification
- 6 More!

1

Overview

INVENIO) » Invenio v1.2 (WIP)

■ history:

- work-in-progress
- to be released in 2013

■ status:

- better restricted material search
- better circulation module
- new Solr/Xapian ranking bridge
- new task schedule monitor
- new record upload differ
- new indexer taking advantage of record revisions
- new virtual global index
- new non-MARC master format support
- new JSON record structure
- new search API
- new DOI minter (via DataCite)

2

Optimising Search Experience

CERN Document Server

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Search 1,277,445 records for:

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You can use the `fulltext` operator to search inside documents. For example:
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[Articles & Preprints](#) (1,097,230)

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Search 1,315,834 records for:

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AND

All of the words:

any field

[Add to Search](#) Search also in the full-text of all documents

Articles & Preprints (1,116,490)

[Published Articles](#) (342,699) [Preprints](#) (689,341)[Theses](#) (19,300) [Reports](#) (5,809)

CERN Articles & Preprints (107,222)

[CERN Published Articles](#) (58,460) [CERN Preprints](#) (17,898) [CERN Theses](#) (5,083)[CERN Reports](#) (1,207) [Committee Documents](#) (24,692)

- teasers to display things, e.g. author profiles, e.g. help messages

CERN Accelerating science

CERN Document Server

Search Submit Help Personalize

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yellow reports [Search Tips](#) [Advanced Search](#)

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Search collections:
*** any public collection ***

Sort by: latest first desc. - or rank by - **Display results:** 10 results split by collection **Output format:** HTML brief

Looking for a particular collection? Try: [Yellow reports \(Archives\)](#), [CERN Yellow Reports](#), [CERN Yellow Report Articles](#), [sLHC Project Reports](#) [More suggestions](#)

Results overview: Found 1,312 records in 0.69 seconds.

- [Articles & Preprints](#), 995 records found
- [Books & Proceedings](#), 275 records found
- [Presentations & Talks](#), 65 records found
- [Periodicals & Progress Reports](#), 1 records found
- [Multimedia & Outreach](#), 19 records found

Articles & Preprints 995 records found 1 - 10 [▶▶▶](#) jump to record:

- 1. [IRAS 18357-0604 - an analogue of the galactic yellow hypergiant IRC +10420?](#) / [Clark, J S](#) ; [Negueruela, I](#) ; [Gonzalez-Fernandez, C](#)
Yellow hypergiants represent a short-lived evolutionary episode experienced by massive stars as they transit to and from a red supergiant phase. [...]

- no need to pre-selected restricted collections prior to search

ATLANTIS INSTITUTE OF FICTIVE SCIENCE admin :: login

Search Submit Personalize Help Administration

Home > Search Results: detector

Search: any field

[Search Tips](#) :: [Advanced Search](#)

Search collections:

Sort by: Display results: Output format:

Results overview: Found 8 records in 0.06 seconds.

[Articles & Preprints, 5 records found](#)
[Books & Reports, 1 records found](#)
[Theses, 1 records found](#)
[Drafts, 1 records found](#)
[ALEPH Theses, 2 records found](#)

Articles & Preprints 5 records found

- 1. **Development of photon beam diagnostics for VUV radiation from a SASE FEL / [Treich, R](#) ; [Lokajczyk, T](#) ; [Xu, W](#) ; [Jastrow, U](#) ; et al [TESLA-FEL-99-07]**
 For the proof-of-principle experiment of self-amplified spontaneous emission (SASE) at short wavelengths on the VUV FEL at DESY a multi-faceted photon beam diagnostics experiment has been developed employing new detection concepts to measure all SASE specific properties on a single pulse basis. [...] Published in *Nucl. Instrum. Methods Phys. Res., A* :445 2000 456-462
 Fulltext: [PDF](#) ; [Detailed record](#) - [Similar records](#)

admin

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Search Submit Personalize Help

Home > Search Results: detector

Search: any field

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Search collections:

Sort by: Display results: Output format:

Results overview: Found 6 records in 0.08 seconds.

[Articles & Preprints, 5 records found](#)
[Books & Reports, 1 records found](#)

Articles & Preprints 5 records found

- 1. **Development of photon beam diagnostics for VUV radiation from a SASE FEL / [Treich, R](#) ; [Lokajczyk, T](#) ; [Xu, W](#) ; [Jastrow, U](#) ; et al [TESLA-FEL-99-07]**
 For the proof-of-principle experiment of self-amplified spontaneous emission (SASE) at short wavelengths on the VUV FEL at DESY a multi-faceted photon beam diagnostics experiment has been developed employing new detection concepts to measure all SASE specific properties on a single pulse basis. [...] Published in *Nucl. Instrum. Methods Phys. Res., A* :445 2000 456-462
 Fulltext: [PDF](#) ; [Detailed record](#) - [Similar records](#)
- 2. **Study of a dE/dx measurement and the gas-gain saturation by a prototype drift chamber for the BELLE-CDC / [Emi, K](#) ; [Tsukamoto, T](#) ; [Hirano, H](#) ; [Mamada, H](#) ; et al [KEK-Preprint-95-196]** [TUA-

guest

3

Optimising Ingestion

- replace mode replaces everything → too many SQL queries
- example: input file 303 records, changes in 980 field only

ncalls	totttime	percalle	cumtime	percalle	filename:lineno(function)
1	0.002	0.002	385.160	385.160	bibtask.py:709(_task_run)
1	0.038	0.038	385.127	385.127	bibupload.py:2037(task_run_core)
303	0.065	0.000	384.588	1.269	bibupload.py:125(bibupload)
153403	1.997	0.000	337.916	0.002	dbquery.py:151(run_sql)
153403	2.956	0.000	331.396	0.002	cursors.py:129(execute)
153403	0.543	0.000	325.573	0.002	cursors.py:311(_query)
153403	319.412	0.002	323.033	0.002	cursors.py:273(_do_query)
303	0.557	0.002	187.090	0.617	bibupload.py:1617(update_databases)
43601	0.350	0.000	117.853	0.003	bibupload.py:890(insert_record_b)
303	0.057	0.000	103.269	0.341	bibupload.py:1847(delete_bibrec_)
239	0.296	0.001	72.473	0.303	bibupload.py:910(synchronize_856)
43601	1.406	0.000	67.998	0.002	bibupload.py:845(insert_record_b)

- executed 150k SQL queries (!) to update all bibxxx MARC tables
- what if backend behaved more like “git diff” and “git patch”?

■ smarter uploader:

1. detect changed fields by comparing revision numbers (tag 005)
2. update only necessary bibxxx MARC tables → **few SQL queries**
3. log which fields are affected by given change:

recID	revision	affected_fields
123	2013-12-01 11:00:23	100,700
123	2013-12-02 17:15:44	035,245,999
123	2013-12-08 03:01:18	100
123	2013-12-08 03:01:18	firstauthor

■ record differ/patcher lessens need for record locking

- John and Jane can edit the same record at the same time
- upload backend figures out wanted changes from each cataloguer
- auto-merge wanted changes if possible
- alert human curator if not possible

- single `last_updated` date per record → reindex all indexes if one field changes
 - safety net, but time consuming
- take advantage of `affected_fields` of every pending record
 - if title changes, author etc indexes are not updated
 - one **record** +
one single **last_modified** date +
logging of **affected_fields** per revision upload =
multiple last_modified dates per field
- technique to be spread to BibRank, BibSort, BibAuthorID etc daemons

- global index: re-tokenises everything
 - time-consuming in case of paper claiming and author IDs
- what if indexer amended global fields while indexing given index?
 - notion of “virtual” vs “normal” index
 - virtual updated only via normal indexes

ID	Virtual index	Dependent indexes
1	global	collection, abstract, keyword, reportnumber, title, year, journal, collaboration, affiliation, exacttitle, miscellaneous

- need of a “miscellaneous” index

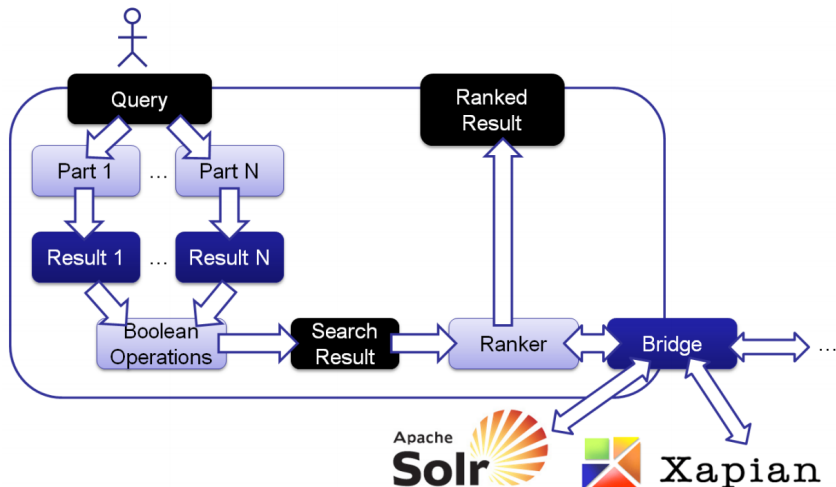
miscellaneous	01%, 02%, 031%, 032%, 033%, 034%, 035%, 036%, 037%, 038%, 04%, 05%, 06%, 07%, 080%, 082%, 083%, 084%, 085%, 086%, 09%, 100__0, 100__a, 11%, 110__0, 12%, 13%, 130__0, 14%, 15%, 150__0, 16%, 17%, 18%, 19%, 20%, 21%, 22%, 23%, 240%, 242%, 243%, 244%, 247%, 25%, 26%, 260__0, 27%, 28%, 29%, 30%, 31%, 32%, 33%, 34%, 35%, 36%, 37%, 38%, 39%, 40%, 41%, 42%, 43%, 44%, 45%, 46%, 47%, 48%, 49%, 50%, 51%, 521%, 522%, 524%, 525%, 526%, 53%, 54%, 55%, 56%, 57%, 58%, 59%, 60%, 61%, 62%, 63%, 64%, 650%, 651%, 6531_9, 6531_v, 6531_y, 654%, 655%, 656%, 657%, 658%, 66%, 67%, 68%, 69%, 700__0, 700__a, 711%, 72%, 73%, 74%, 75%, 76%, 77%, 78%, 79%, 80%, 81%, 82%, 83%, 84%, 850%, 851%, 852%, 853%, 854%, 855%, 857%, 858%, 859%, 86%, 87%, 88%, 89%, 900%, 901%, 902%, 903%, 904%, 905%, 906%, 907%, 908%, 909C1%, 909C5%, 909CK%, 909CO%, 909CP%, 909CS%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 981%, 982%, 983%, 984%, 985%, 986%, 987%, 988%, 989%
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- centralisation of index configurations: stemming, synonyms, stopwords, HTML/LaTeX markup, tokeniser, type

ID	Name	Fwd.Idx Size	Rev.Idx Size	Fwd.Idx Words	Rev.Idx Records	Last updated	Fields	Translations	Stemming Language	Synonym knowledge base	Remove stopwords	Remove HTML markup	Remove LaTeX markup	Tokenizer	Indexer type
1	global	0.238 MB	0.171 MB	6,632	141	Not updated	any field	None	english	INDEX-SYNONYM-TITLE.exact	No	No	No	BibindexDefaultTokenizer	virtual
2	collection	0.001 MB	0.009 MB	36	141	2013-11-17 05:34:56	collection	None	None	None	No	No	No	BibindexDefaultTokenizer	native
3	abstract	0.123 MB	0.043 MB	3,516	80	2013-11-17 05:34:56	abstract	None	english	None	No	No	No	BibindexDefaultTokenizer	native
4	author	0.024 MB	0.013 MB	722	141	2013-11-17 05:34:56	author	None	None	None	No	No	No	BibindexAuthorTokenizer	native
5	keyword	0.001 MB	0.001 MB	27	9	2013-11-17 05:34:56	keyword	None	english	None	No	No	No	BibindexDefaultTokenizer	native
6	reference	0.253 MB	0.075 MB	7,262	48	2013-11-17 05:34:56	reference	None	None	None	No	No	No	BibindexDefaultTokenizer	native
7	reportnumber	0.013 MB	0.008 MB	374	89	2013-11-17 05:34:56	report number	None	None	None	No	No	No	BibindexDefaultTokenizer	native
8	title	0.022 MB	0.013 MB	665	115	2013-11-17 05:34:56	title	None	english	INDEX-SYNONYM-TITLE.exact	No	No	No	BibindexDefaultTokenizer	native
9	fulltext	1.428 MB	0.42 MB	39,366	73	2013-11-17 05:34:56	fulltext	None	english	None	No	No	No	BibindexFulltextTokenizer	native
10	year	0.001 MB	0.004 MB	30	78	2013-11-17 05:34:56	year	None	None	None	No	No	No	BibindexYearTokenizer	native
11	journal	0.006 MB	0.009 MB	134	141	2013-11-17 05:34:56	journal	None	None	None	No	No	No	BibindexJournalTokenizer	native
12	collaboration	0.001 MB	0.001 MB	32	5	2013-11-17 05:34:56	collaboration	None	None	None	No	No	No	BibindexDefaultTokenizer	native
13	affiliation	0.004 MB	0.007 MB	126	79	2013-11-17 05:34:56	affiliation	None	None	None	No	No	No	BibindexDefaultTokenizer	native
14	exactauthor	0.024 MB	0.013 MB	722	141	2013-11-17 05:34:56	exact author	None	None	None	No	No	No	BibindexExactAuthorTokenizer	native

INVENIO » Using external rankers

- taking advantage of external ranking systems
- Solr, Xapian supported; ElasticSearch to come?



- better task parallelism and auto execution
- auto-wakeup from manual mode

ID	PROC [PRI]	USER	RUNTIME	SLEEP	STATUS	HOST	PROGRESS
342486	bibsort [-11]	kaplun	2013-10-24 00:38:06	1h	WAITING		
342372	bibauthorid [-11]	kaplun	2013-10-25 11:05:03	10m	WAITING		Will execute: /opt/cds-invenio/bi
342364	bibrank:solr [-11]	kaplun	2013-10-27 01:48:37	1h	WAITING		Will execute: /opt/cds-invenio/bi
342475	bibsort [-11]	kaplun	2013-10-31 17:17:20	10m	WAITING		Will execute: /opt/cds-invenio/bi
258964	bibexport [-11]	admin	2013-11-01 14:35:40	6h	WAITING		Will execute: /opt/cds-invenio/bi
12641	bibrank [1]	admin	2013-11-14 23:56:50	6h	ERRORS	REPOp05153026637155.cern	Journal references done 0 of 2621
357477	refextract	arxiv-pdf-checker	2013-11-16 21:02:28		ERRORS	REPOp05153026637155.cern	Extracting for 561402 (61/65)
70889	arxiv-pdf-checker:h [1]	admin	2013-11-16 22:02:28	1h	CONTINUING	p05153026637155.cern	Done 6700 of 7549
340017	oaiharvest:lhcb	jlavik	2013-11-17 12:00:00	24h	WAITING		Will execute: /opt/cds-invenio/bi
345513	oaiharvest:cms-pas	jlavik	2013-11-17 12:00:00	24h	WAITING		Will execute: /opt/cds-invenio/bi
345515	oaiharvest:atlas-conf	jlavik	2013-11-17 12:00:00	24h	WAITING		Will execute: /opt/cds-invenio/bi
342854	bibauthorid [-1]	kaplun	2013-11-18 04:47:32	1h	RUNNING	p05153026637155.cern	0/151 current: 1264640
291033	webauthorprofile [-1]	admin	2013-11-18 04:48:10	10m	WAITING		Will execute: /opt/cds-invenio/bi
136939	bibindex:author [-1]	admin	2013-11-18 04:49:35	5m	WAITING		Will execute: /opt/cds-invenio/bi
342397	bibreformat:WAPDAT	kaplun	2013-11-18 05:05:12	5m	RUNNING	p05153026637155.cern	Will execute: /opt/cds-invenio/bi
345024	bibreformat	adeiana	2013-11-18 05:05:13	5m	WAITING		Will execute: /opt/cds-invenio/bi
342395	bibreformat:HA	kaplun	2013-11-18 05:06:07	5m	WAITING		Will execute: /opt/cds-invenio/bi
342398	bibreformat:WAPAFF	kaplun	2013-11-18 05:06:22	5m	WAITING		Will execute: /opt/cds-invenio/bi
342391	webcoll [6]	kaplun	2013-11-18 05:06:27	5m	WAITING		Will execute: /opt/cds-invenio/bi
342396	bibreformat:HDREF	kaplun	2013-11-18 05:06:37	5m	WAITING		Will execute: /opt/cds-invenio/bi
342381	bibindex:affiliation	kaplun	2013-11-18 05:07:23	5m	WAITING		Will execute: /opt/cds-invenio/bi
342383	bibindex:caption	kaplun	2013-11-18 05:07:33	5m	WAITING		Will execute: /opt/cds-invenio/bi
235623	bibindex:exacttitle	admin	2013-11-18 05:07:48	5m	WAITING		Will execute: /opt/cds-invenio/bi
342393	bibreformat:HB	kaplun	2013-11-18 05:07:48	5m	WAITING		Will execute: /opt/cds-invenio/bi
342387	bibindex:publisher	kaplun	2013-11-18 05:07:53	5m	WAITING		Will execute: /opt/cds-invenio/bi
342377	bibindex:title	kaplun	2013-11-18 05:07:58	5m	WAITING		Will execute: /opt/cds-invenio/bi
342378	bibindex:year	kaplun	2013-11-18 05:08:13	5m	WAITING		Will execute: /opt/cds-invenio/bi
342376	bibindex:keyword	kaplun	2013-11-18 05:08:18	5m	WAITING		Will execute: /opt/cds-invenio/bi
342386	bibindex:subject	kaplun	2013-11-18 05:08:38	5m	WAITING		Will execute: /opt/cds-invenio/bi
342394	bibreformat:HX	kaplun	2013-11-18 05:08:38	5m	WAITING		Will execute: /opt/cds-invenio/bi
342380	bibindex:reference	kaplun	2013-11-18 05:08:44	5m	WAITING		Will execute: /opt/cds-invenio/bi
342374	bibindex:reportnumber	kaplun	2013-11-18 05:08:49	5m	WAITING		Will execute: /opt/cds-invenio/bi
342373	bibindex:collection	kaplun	2013-11-18 05:08:54	5m	WAITING		Will execute: /opt/cds-invenio/bi

Change queue to manual mode

5 min | 1 hour | forever

```

Records pending per indexing method since ..... N/A
- global ..... 141
- collection ..... 4
- abstract ..... 4
- author ..... 4
- keyword ..... Up to date
- reference ..... 4
- reportnumber ..... 4
- title ..... Up to date
- fulltext ..... 4
- year ..... 4
- journal ..... 4
- collaboration ..... 4
- affiliation ..... 4
- exactauthor ..... 4
- caption ..... 4
- firstauthor ..... 4
- exactfirstauthor ..... 4
- authorcount ..... 4

```

```

Records pending per ranking method since ..... 17 Nov 2013, 05:40
- wrd ..... 4
- demo_jif ..... 4
- citation ..... 4
- citerank_citation_t ..... 4
- citerank_pagerank_c ..... 4
- citerank_pagerank_t ..... 4

```

```

Records pending per sorting method since ..... 17 Nov 2013, 05:40
- latest first ..... 4
- title ..... 4
- author ..... 4

```

4

Authorities



Search

Submit

Personalize ▾

Help

Administration ▾

[Home](#) > Authority Records

Authority Records

Search 24 records for:

any field ▾

Search

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Narrow by collection:

- [Authors](#) (5)
- [Institutions](#) (15)
- [Journals](#) (0)
- [Subjects](#) (4)

[Search](#)[Submit](#)[Personalize ▾](#)[Help](#)[Administration ▾](#)[Home](#) > [Authority Records](#) > [Authors](#) > Record #118[Information](#)[References \(0\)](#)[Citations \(0\)](#)[Keywords](#)[Discussion \(0\)](#)[Usage statistics](#)[Files](#)[Plot](#)[Linkbacks](#)

Authority Record

Control Number(s): AUTHOR|(DLC)n 80141717 (0 dependent records), AUTHOR|(SzGeCERN)aaa0005 ([4 dependent records](#))

Main author name: Ellis, John, 1946-

Variants(s): Ellis, J., 1946-, Ellis, Jonathan Richard, 1946-

[Search](#)[Submit](#)[Personalize](#)[Help](#)[Administration](#)[Home](#) > [Authority Records](#) > [Record #118](#) > MARC

```
000000118 001__ 118
000000118 005__ 20131117053442.0
000000118 035__ $$aAUTHOR|(DLC)n 80141717
000000118 035__ $$aAUTHOR|(SzGeCERN)aaa0005
000000118 100__ $$aEllis, John$$d1946-
000000118 400__ $$aEllis, J.$$d1946-$$q(John),
000000118 400__ $$aEllis, Jonathan Richard$$d1946-
000000118 670__ $$aEurophysics Study Conference on Unification of the Funda
000000118 670__ $$aSupersymmetry and supergravity, c1986:$$bCIP t.p. (J. El
000000118 670__ $$aQuantum reflections, 2000:$$bCIP t.p. (John Ellis) data
000000118 980__ $$aAUTHORITY
000000118 980__ $$aAUTHOR
```

[Home](#) > [Articles & Preprints](#) > [Articles](#) > [Non-compact supergravity solves problems](#) > MARC

```
000000018 001__ 18
000000018 005__ 20131117053300.0
000000018 041__ $$aeng
000000018 088__ $$aCERN-TH-4036
000000018 100__ $$0AUTHOR|(SzGeCERN)aaa0005$$0INSTITUTION|(SzGeCERN)
000000018 245__ $$aNon-compact supergravity solves problems
000000018 260__ $$aGeneva$$bCERN$$cOct 1984
000000018 300__ $$a15 p
000000018 65017 $$2SzGeCERN$$aGeneral Theoretical Physics
000000018 6531_ $$aKahler
000000018 6531_ $$amanifolds
000000018 6531_ $$agravitinos
000000018 6531_ $$aaxions
```



Search

Submit

Personalize ▾

Help

Administration ▾

[Home](#) > Search Results: author:"Ellis, Jonathan Richard"

Search:

Search

Browse

[Search Tips](#) :: [Advanced Search](#)

Search collections:

Sort by:

Display results:

Output format:

Results overview: Found 4 records in 0.07 seconds.[Articles & Preprints, 4 records found](#)**Articles & Preprints**

4 records found

- 1. **Non-compact supergravity solves problems** / [Ellis, J](#) ; [Enqvist, K](#) ; [Nanopoulos, D V](#) [CERN-TH-4036]
Published in [Phys. Lett., B :151 1985 357-362](#)
[Detailed record](#) - [Similar records](#) - [Cited by 1 record](#)
- 2. **From the standard model to grand unification** / [Ellis, J](#) [CERN-PRE-82-006]
[Detailed record](#) - [Similar records](#)
- 3. **Physics at the front-end of a neutrino factory : a quantitative appraisal** / [Mangano, M L](#) ; [Alekhin, S I](#) ; [Anselmino](#) [[hep-ph/0105155](#)]
We present a quantitative appraisal of the physics potential for neutrino experiments at the front-end of a muon storage ring. [...]
Fulltext: [PDF](#) [PS.GZ](#);
[Detailed record](#) - [Similar records](#)
- 4. **Grand unification with large supersymmetry breaking** / [Ellis, J](#) ; [Ibanez, L E](#) ; [Ross, G G](#) [PRE-25553] [RL-82-024]
[Detailed record](#) - [Similar records](#)

5

JSON-ification

INVENIO » Non-MARC Master Formats

- non-MARC master formats: UNIMARC, EAD
- standardising into JSON
- testing speed: MongoDB vs PostgreSQL
- extending JSON store for non-record namespaces
- search API

The screenshot shows the INVENIO search interface. At the top, there is a navigation bar with 'Search', 'Deposit', and 'Help' links, and a user profile icon labeled 'Guest'. Below this is a breadcrumb trail 'Home /'. A secondary navigation bar contains tabs for 'Information', 'References', 'Citations', 'Keywords', 'Comments', 'Reviews', 'Usage statistics', 'Files', 'Plots', 'Holdings', and 'Linkbacks'. The main content area displays a record with the following details:

Author	[Joint author] Sabatini, Rafael
Title	Cavalleria : romanzo / di Rafael Sabatini ; traduzione dall'inglese Alfredo Pitta.
Names	Pitta, Alfredo
Document code	ANAD0087488
Language	Italian
Publication	Milano : Casa editrice Sonzogno, 1937
Series	Romantica mondiale Sonzogno. 158.
Translation of	Chivalry / Rafael Sabatini. - Sabatini, Rafael
Type of record	Language materials, printed
Series	Romantica mondiale Sonzogno ; 158
Physical description	372 p. ; 18 cm

Original metadata format:
015Zbran0 22002053 450
0010011000000050017000111000041000281010008000691020007000720000830000842100041001672150018002082250037002264100059002634540096003227000040004187002
a20030403d1937 ||0tac50 bal aita at1 aCavalleriaromanzofdi Rafael Sabatinigraduzione dall'inglese Alfredo Pitta alMianoCasa editrice Sonzogno1937 a372 p d18 cm aRomantica
mondiale SonzognoV158 01001RAV007413112001 aRomantica mondiale SonzognoV158 01001ANA00225812001 aChivalryRafael Sabatini1700 1aSabatini,
Rafael3RAVV0352314070 1aSabatini, Rafael3RAVV0352314070 1aPitta, Alfredo3CFIV061908 aIT-M0185 0aBiblioteca Nazionale Braidensev. - 1.22.24-38.39-41.43-47-49-51.53-
61.63-66-69.71-79.81-83.86-92.94-101.103-105.109.111.113-124.126-129.131-135.137-143.146.148-149.151-159.162-164.167-171.173-174.176-179.181-186.187-191.193-
194.196.199.201-208.211.213-214.216.218-219.222-226; +69 v. Alm 32 v. in Amena C 23cv. 158d NBROM. O. 0916e NB 0003522215 N 1 vFC h2003040320030403

```
authors[0], creator:
  creator:
    @legacy(((("100", "100__", "100__%"), ""),
              ("100__a", "first author name", "full_name"),
              ("100__e", "relator_name"),
              ("100__h", "CCID"),
              ("100__i", "INSPIRE_number"),
              ("100__u", "first author affiliation", "affiliation")))
    marc, "100__", { 'full_name':value['a'], 'first_name':util_split(value['a'])
checker:
  check_field_existence(0,1)
  check_field_type('str')
documentation:
  "Main Author"
producer:
  json_for_marc, {"100__a": "full_name", "100__e": "relator_name", "100__h":
  json_for_dc, {"dc:creator": "full_name"}

_number_of_comments:
  calculated:
    @parse_first(('recid', ))
    get_number_of_comments(self.get('recid'))
documentation:
```

INVENIO » Record in JSON

```
In [1]: from invenio.bibfield import get_record
```

```
In [2]: rec = get_record(81)
```

```
In [3]: rec['authors']
```

```
Out[3]:
```

```
[{'affiliation': 'Stanford University',  
  'first_name': 'A',  
  'full_name': 'Adams, A',  
  'last_name': 'Adams'},  
 {'first_name': 'J',  
  'full_name': 'McGreevy, J',  
  'last_name': 'McGreevy'},  
 {'first_name': 'E',  
  'full_name': 'Silverstein, E',  
  'last_name': 'Silverstein'}]
```

```
In [4]: rec['authors.full_name']
```

```
Out[4]: ['Adams, A', 'McGreevy, J', 'Silverstein, E']
```

6

More!

- more topics covered elsewhere throughout this workshop
- release date?
 - v1.2 vs v1.3 vs ... vs v2.0