



hydra
in Hull

Richard Green

Hydra Connect #2, Cleveland OH, 30 September 2014

Hydra in Hull

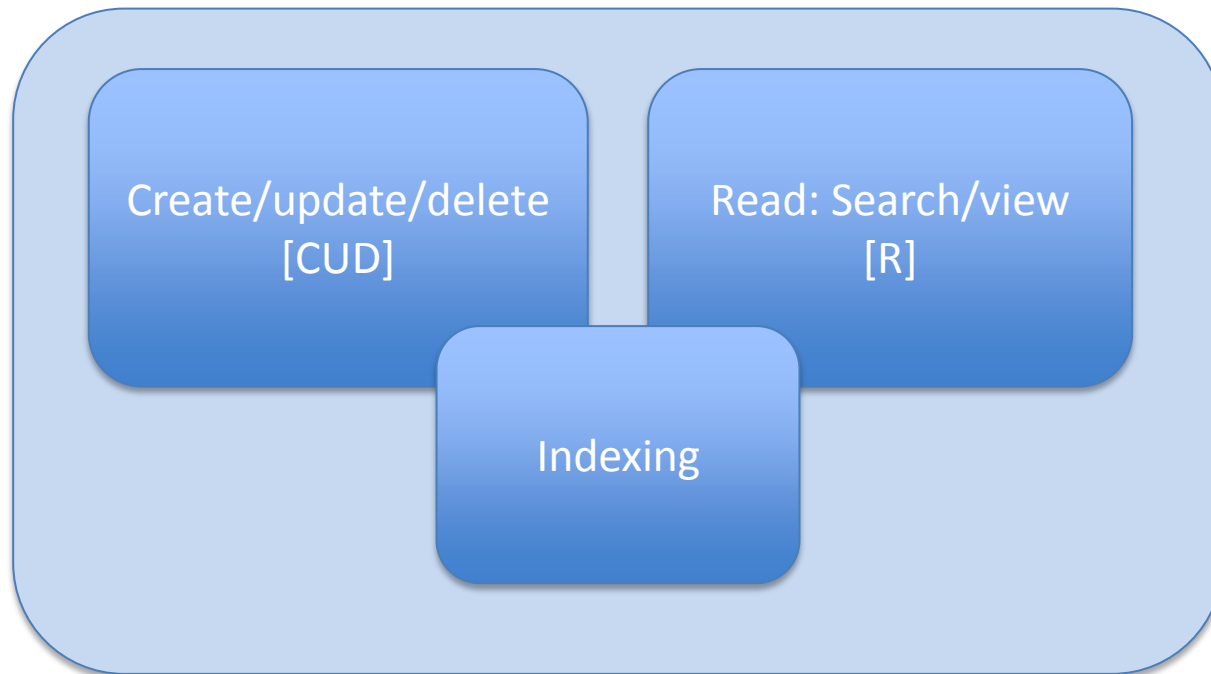
- Hull's is probably the most 'generic' Hydra head in production world-wide: very wide range of content types

- Exam papers	- Internet publications
- e-Theses & dissertations (ETDs)	- Newsletter articles
- Journal articles	- Datasets
- Meeting papers or minutes	- Sound
- Policies or procedures	- Moving images
- Dissertations (undergraduate)	- Guidance documents
- Photographs	- Licences
- Presentations	- Posters
- Books	- Events
- Book chapters	- Letters
- Regulations	- Artwork
- Reports	- Diagrams
- Conference papers or abstracts	- Maps
- Learning materials	- Software
- Handbooks	- etc (!!!)

Hydra in Hull

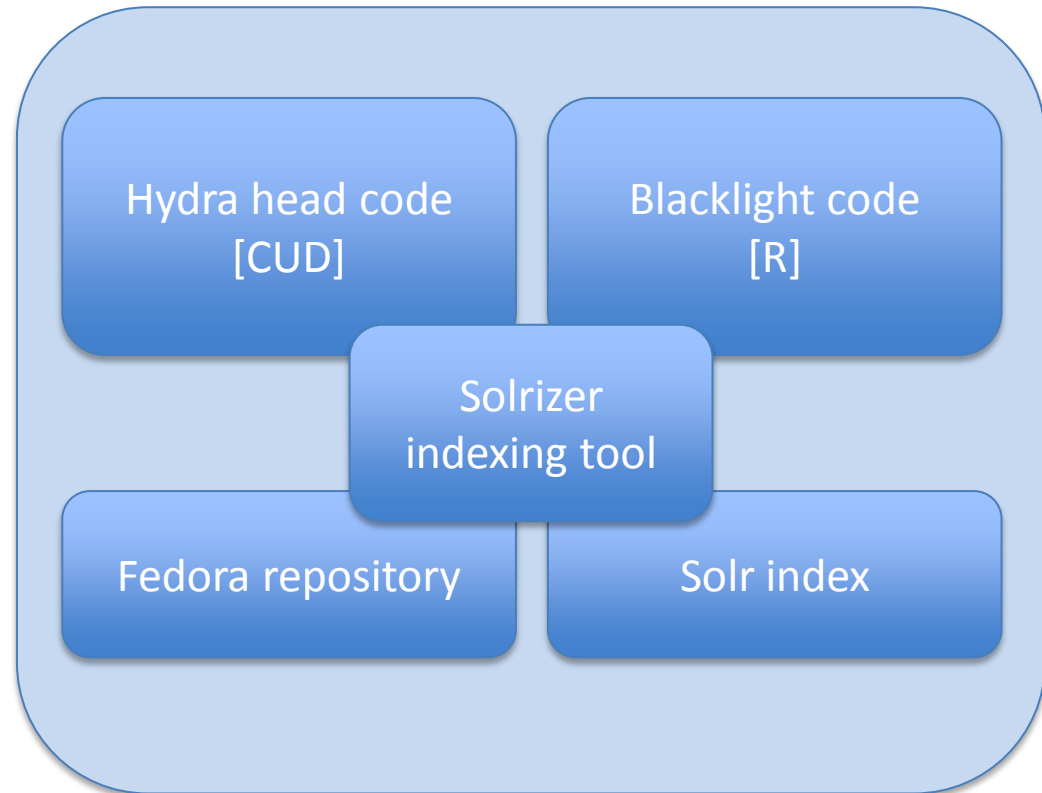
- Hull's vision of a digital repository is one that covers all the University's digital content. Whilst many Hydra heads deal with 'specialist' content, Hydra's flexibility allows us in Hull to create specialist handling as necessary within a single repository rather than a 'one size fits all' approach.
- We've started with a generalised approach but are steadily building out specific provision for content that needs it
 - Representing geo-data on splash pages
 - Specialised display for images, page-turning books, ...
 - etc
- Hull also has some rather specialised needs to cope with 'Hydra-compliant' content entering our Fedora instance from other systems (some are not Hydra based)

CRUD in repositories



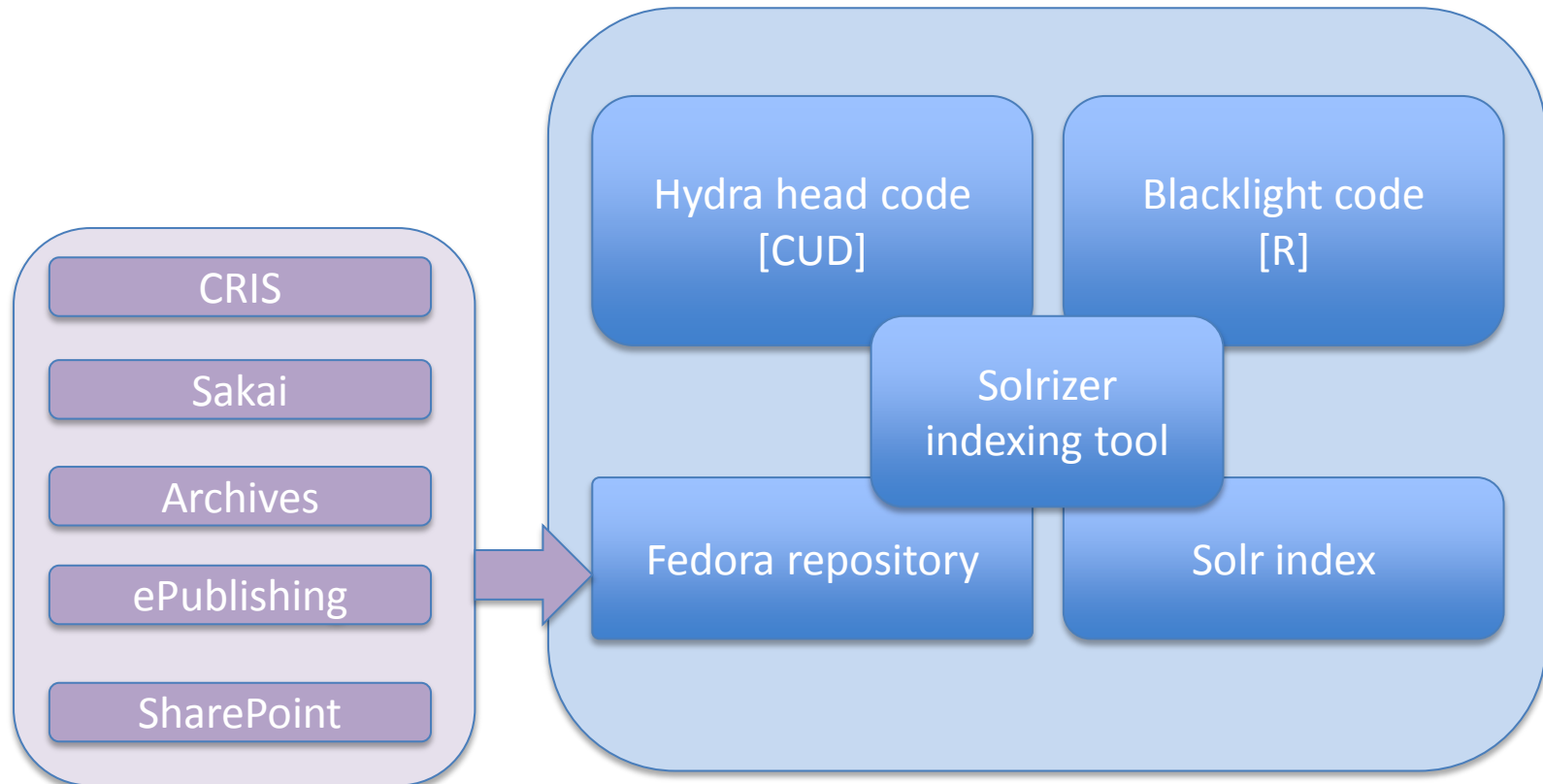
Typical schematic for repository CRUD

CRUD as implemented in most Hydra heads



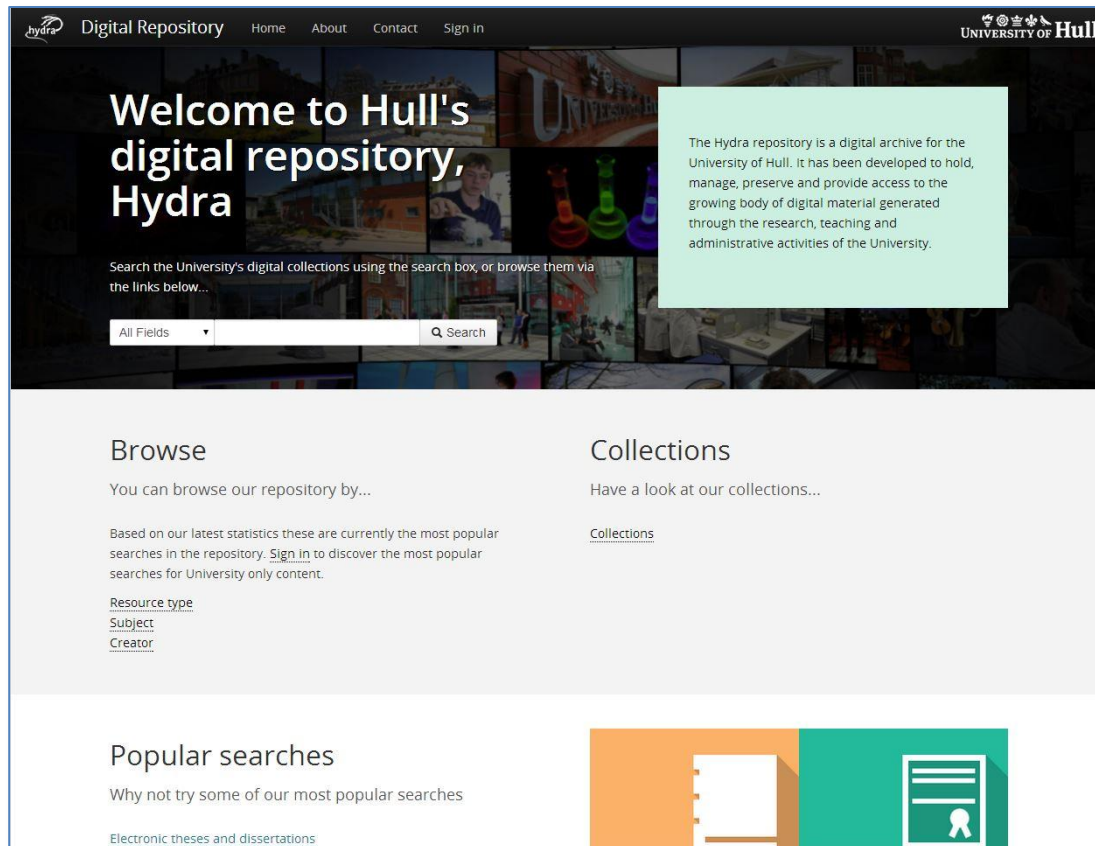
The Hydra software stack

CRUD as implemented in Hull's Hydra



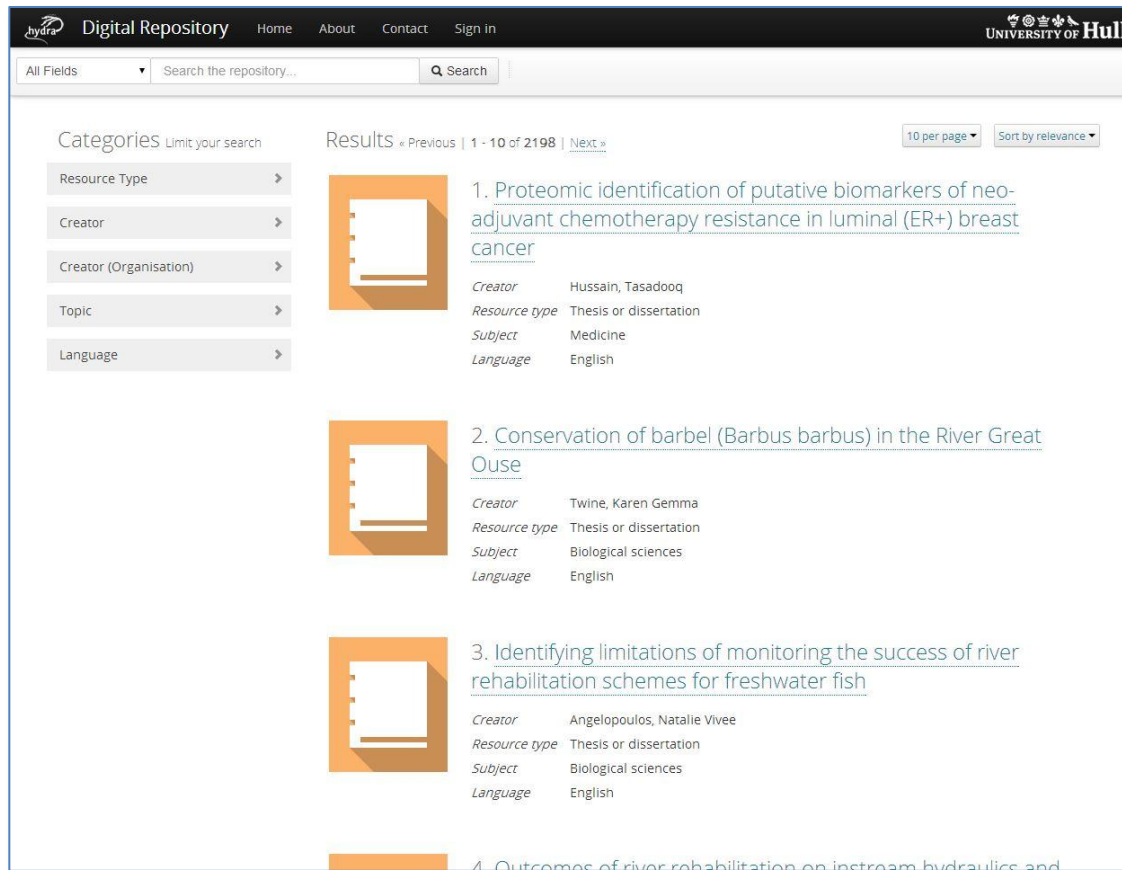
Hull brings together the Hydra software stack and external systems which feed Fedora directly

Hydra in Hull home page



- This is the 'public' view of the repository – no explicit login required
- Responsive design (tiled approach)

Typical search return



Categories Limit your search

- Resource Type
- Creator
- Creator (Organisation)
- Topic
- Language

Results « Previous | 1 - 10 of 2198 | Next »

10 per page Sort by relevance

- [1. Proteomic identification of putative biomarkers of neo-adjuvant chemotherapy resistance in luminal \(ER+\) breast cancer](#)

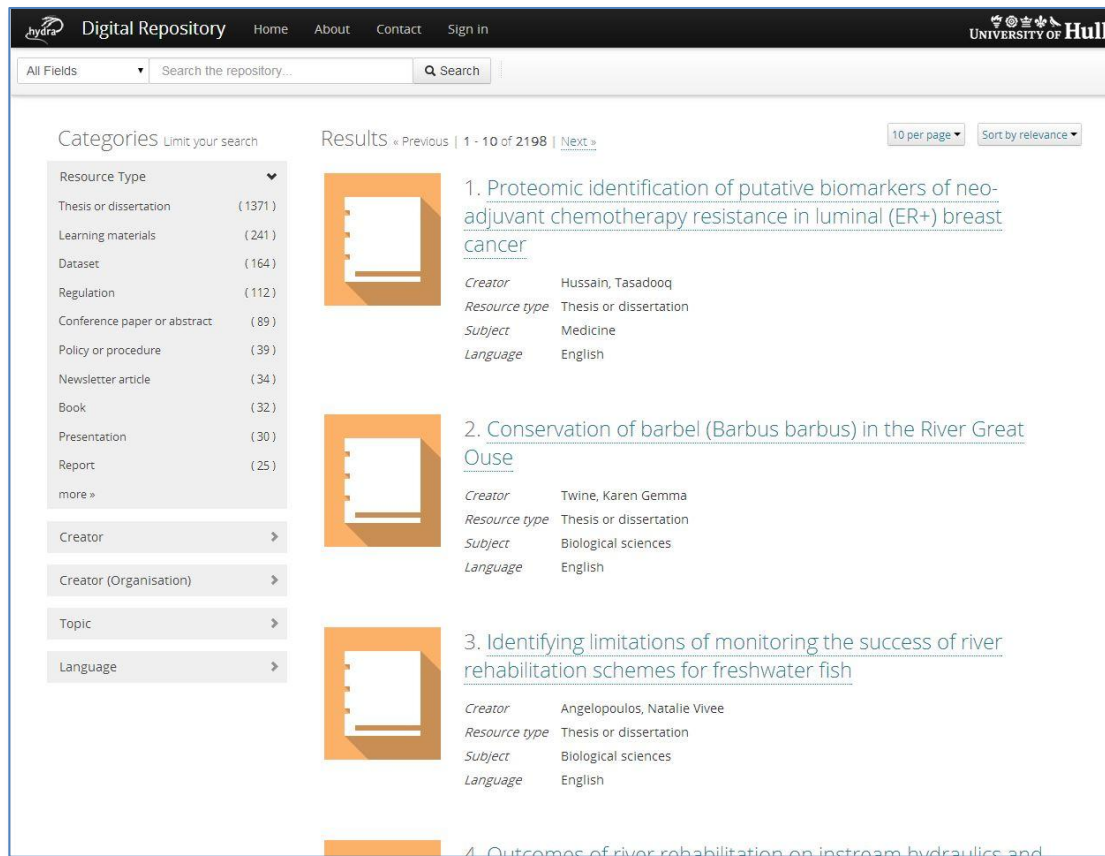
Creator Hussain, Tasadooq
Resource type Thesis or dissertation
Subject Medicine
Language English
- [2. Conservation of barbel \(Barbus barbus\) in the River Great Ouse](#)

Creator Twine, Karen Gemma
Resource type Thesis or dissertation
Subject Biological sciences
Language English
- [3. Identifying limitations of monitoring the success of river rehabilitation schemes for freshwater fish](#)

Creator Angelopoulos, Natalie Vivee
Resource type Thesis or dissertation
Subject Biological sciences
Language English
- [4. Outcomes of river rehabilitation on instream hydraulics and](#)

- If I search hit the “search” button but without a search term, I get a typical search return

Facets for refining a search



Categories Limit your search

- Resource Type
 - Thesis or dissertation (1371)
 - Learning materials (241)
 - Dataset (164)
 - Regulation (112)
 - Conference paper or abstract (89)
 - Policy or procedure (39)
 - Newsletter article (34)
 - Book (32)
 - Presentation (30)
 - Report (25)
 - more »
- Creator >
- Creator (Organisation) >
- Topic >
- Language >

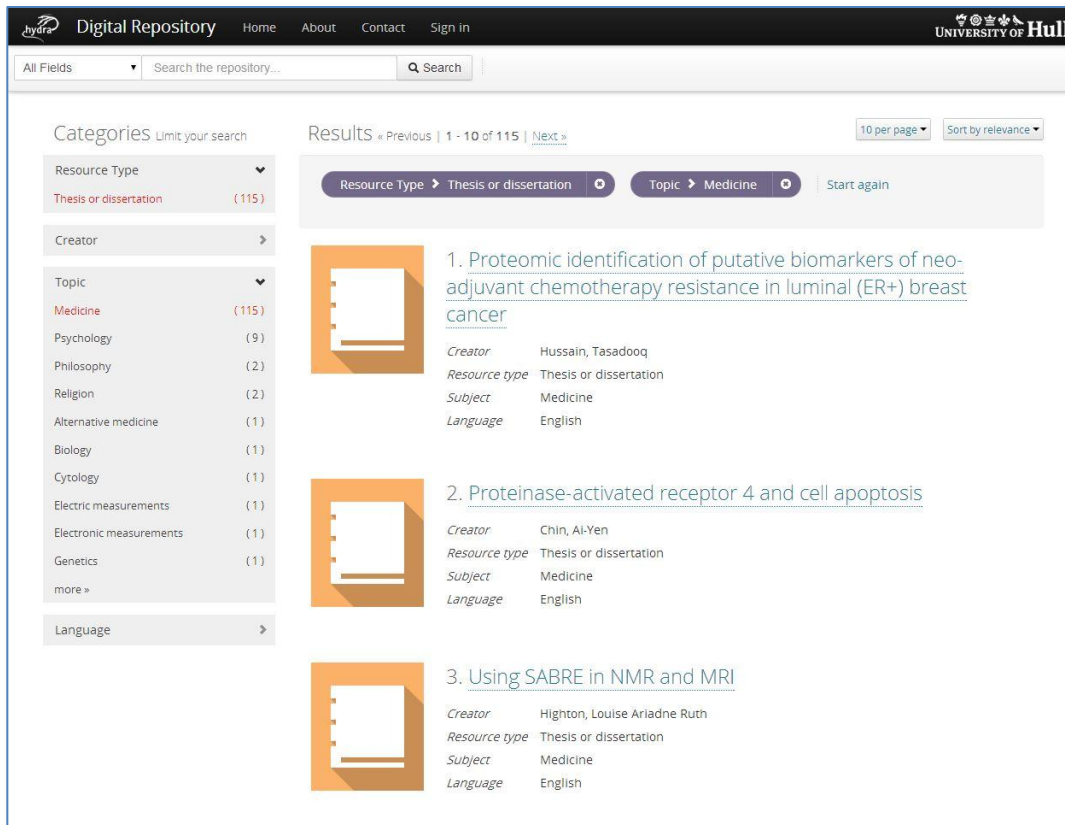
Results < Previous | 1 - 10 of 2198 | Next >

10 per page Sort by relevance

1. [Proteomic identification of putative biomarkers of neo-adjuvant chemotherapy resistance in luminal \(ER+\) breast cancer](#)
 Creator Hussain, Tasadooq
 Resource type Thesis or dissertation
 Subject Medicine
 Language English
2. [Conservation of barbel \(Barbus barbus\) in the River Great Ouse](#)
 Creator Twine, Karen Gemma
 Resource type Thesis or dissertation
 Subject Biological sciences
 Language English
3. [Identifying limitations of monitoring the success of river rehabilitation schemes for freshwater fish](#)
 Creator Angelopoulos, Natalie Vivee
 Resource type Thesis or dissertation
 Subject Biological sciences
 Language English
4. [Outcomes of river rehabilitation on instream hydraulics and...](#)

- With the facets panel open we start to see the range of content
- A search can be refined using combinations of facet selections and/or terms in the search box
- If we choose resource type 'Thesis or dissertation' ...

Hydra in Hull search return



Hydra Digital Repository Home About Contact Sign in

All Fields Search the repository... Search

Categories Limit your search

Resource Type (115)
Thesis or dissertation (115)

Creator

Topic (115)
Medicine (115)
Psychology (9)
Philosophy (2)
Religion (2)
Alternative medicine (1)
Biology (1)
Cytology (1)
Electric measurements (1)
Electronic measurements (1)
Genetics (1)
more »

Language

Results Previous | 1 - 10 of 115 | Next »

10 per page Sort by relevance

Resource Type Thesis or dissertation Topic Medicine Start again

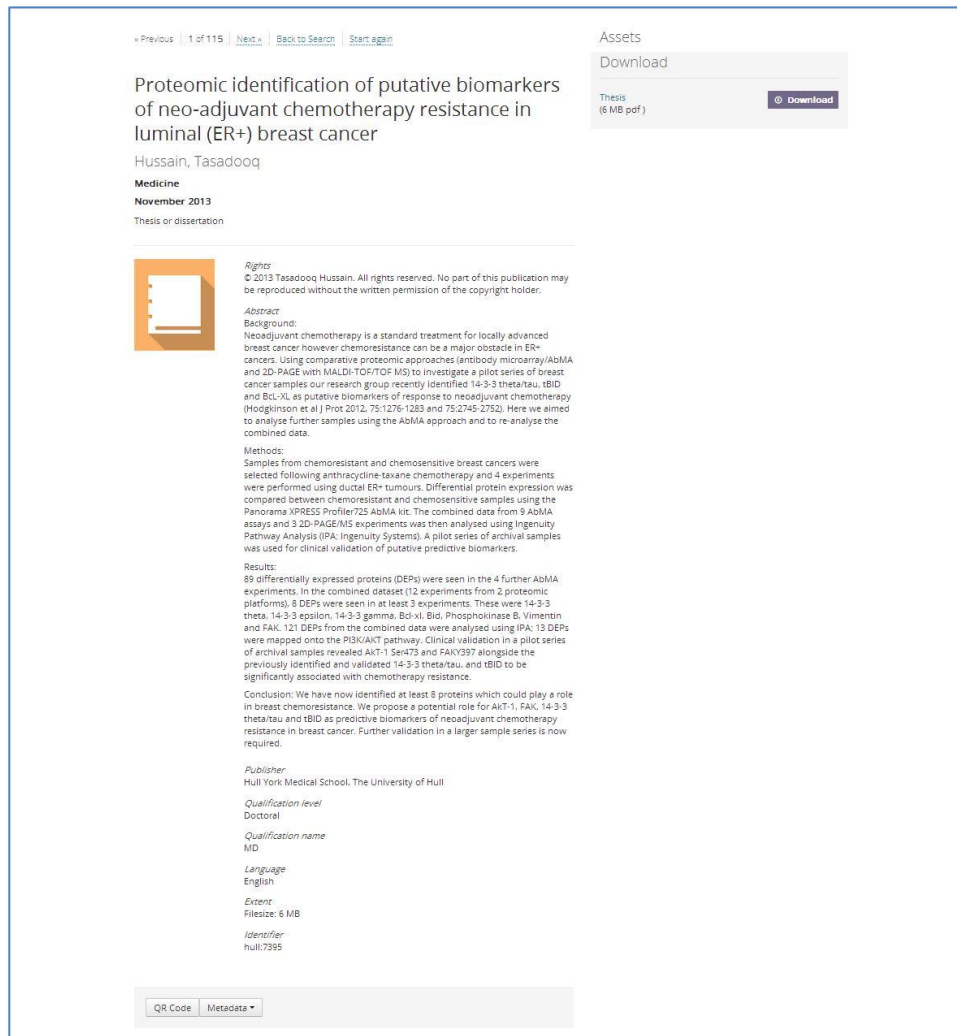
1. [Proteomic identification of putative biomarkers of neo-adjuvant chemotherapy resistance in luminal \(ER+\) breast cancer](#)
 Creator Hussain, Tasadooq
 Resource type Thesis or dissertation
 Subject Medicine
 Language English

2. [Proteinase-activated receptor 4 and cell apoptosis](#)
 Creator Chin, Ai-Yen
 Resource type Thesis or dissertation
 Subject Medicine
 Language English

3. [Using SABRE in NMR and MRI](#)
 Creator Highton, Louise Ariadne Ruth
 Resource type Thesis or dissertation
 Subject Medicine
 Language English

- ...we refine the search return further
- We could refine our search yet more by choosing more facets and/or using the search bar
- Normally the search bar starts a new search – but on a search return page it searches within the result set
- Let's select the first item

Hydra in Hull splash page



[Previous](#) | [1 of 115](#) | [Next](#) | [Back to Search](#) | [Start again](#)

Proteomic identification of putative biomarkers of neo-adjuvant chemotherapy resistance in luminal (ER+) breast cancer

Hussain, Tasadoog

Medicine
November 2013
Thesis or dissertation

Assets

Download

Thesis (6 MB pdf) [Download](#)

Rights
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Abstract
Background: Neoadjuvant chemotherapy is a standard treatment for locally advanced breast cancer however chemoresistance can be a major obstacle in ER+ cancers. Using comparative proteomic approaches (antibody microarray/AbMA and 2D-PAGE with MALDI-TOF/TOF-MS) to investigate a pilot series of breast cancer samples our research group recently identified 14-3-3 theta/tau, tBID and Bcl-XL as putative biomarkers of response to neoadjuvant chemotherapy (Hodgkinson et al J Prot 2012, 75:1276-1283 and 75:2745-2752). Here we aimed to analyse further samples using the AbMA approach and to re-analyse the combined data.

Methods: Samples from chemoresistant and chemosensitive breast cancers were selected following anthracycline-taxane chemotherapy and 4 experiments were performed using ductal ER+ tumours. Differential protein expression was compared between chemoresistant and chemosensitive samples using the Panorama XPRESS Profiler725 AbMA kit. The combined data from 9 AbMA assays and 3 2D-PAGE/MS experiments was then analysed using Ingenuity Pathway Analysis (IPA; Ingenuity Systems). A pilot series of archival samples was used for clinical validation of putative predictive biomarkers.

Results: 89 differentially expressed proteins (DEPs) were seen in the 4 further AbMA experiments. In the combined dataset (12 experiments from 2 proteomic platforms), 8 DEPs were seen in at least 3 experiments. These were 14-3-3 theta, 14-3-3 epsilon, 14-3-3 gamma, Bcl-xl, Bcl, Phospholipase B, Vimentin and FAK. 121 DEPs from the combined data were analysed using IPA. 13 DEPs were mapped onto the PI3K/AKT pathway. Clinical validation in a pilot series of archival samples revealed AKT-1 Ser473 and FAKY397 alongside the previously identified and validated 14-3-3 theta/tau, and tBID to be significantly associated with chemotherapy resistance.

Conclusion: We have now identified at least 8 proteins which could play a role in breast chemoresistance. We propose a potential role for AKT-1, FAK, 14-3-3 theta/tau and tBID as predictive biomarkers of neoadjuvant chemotherapy resistance in breast cancer. Further validation in a larger sample series is now required.

Publisher
Hull York Medical School, The University of Hull

Qualification level
Doctoral

Qualification name
MD

Language
English

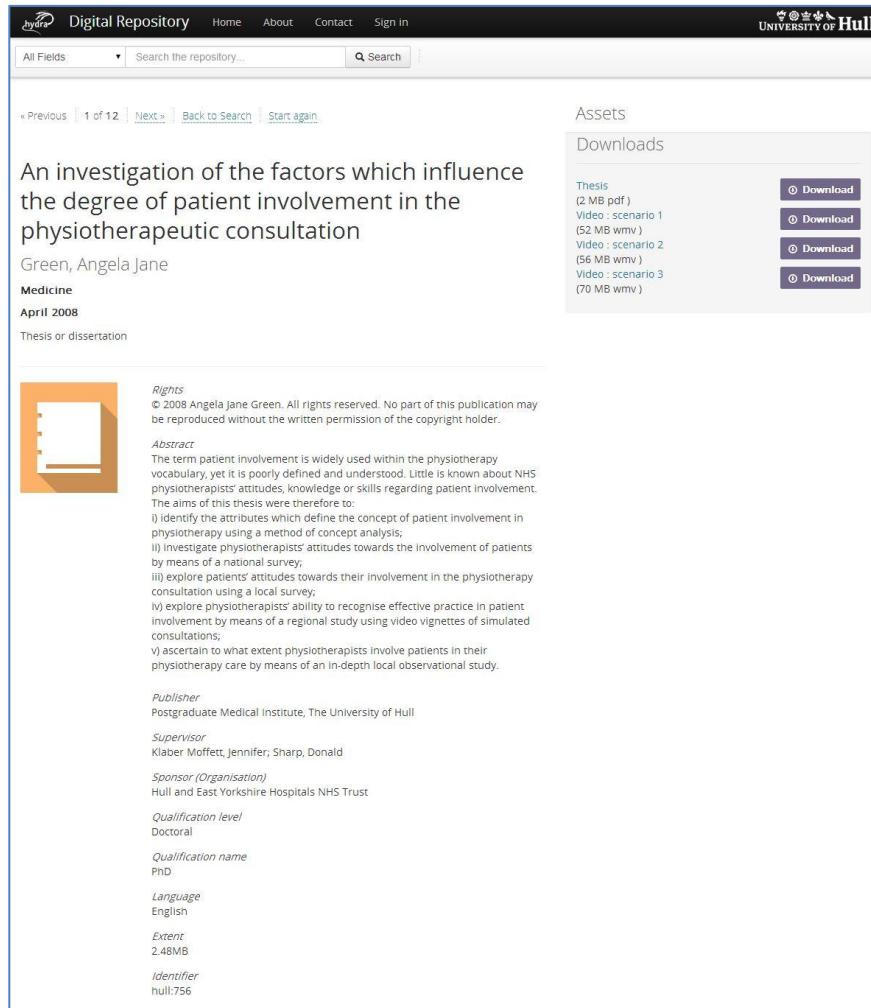
Extent
Filesize: 6 MB

Identifier
hull:7395

QR Code Metadata

- Choosing an item gives us its ‘splash page’.
- Link(s) at the right download the resource(s) – here a single pdf file
- The ‘Metadata’ button at the bottom lets you view metadata in different formats.
- Internally all descriptive metadata is MODS but other formats can be generated on the fly (DC, UKETD_DC etc)

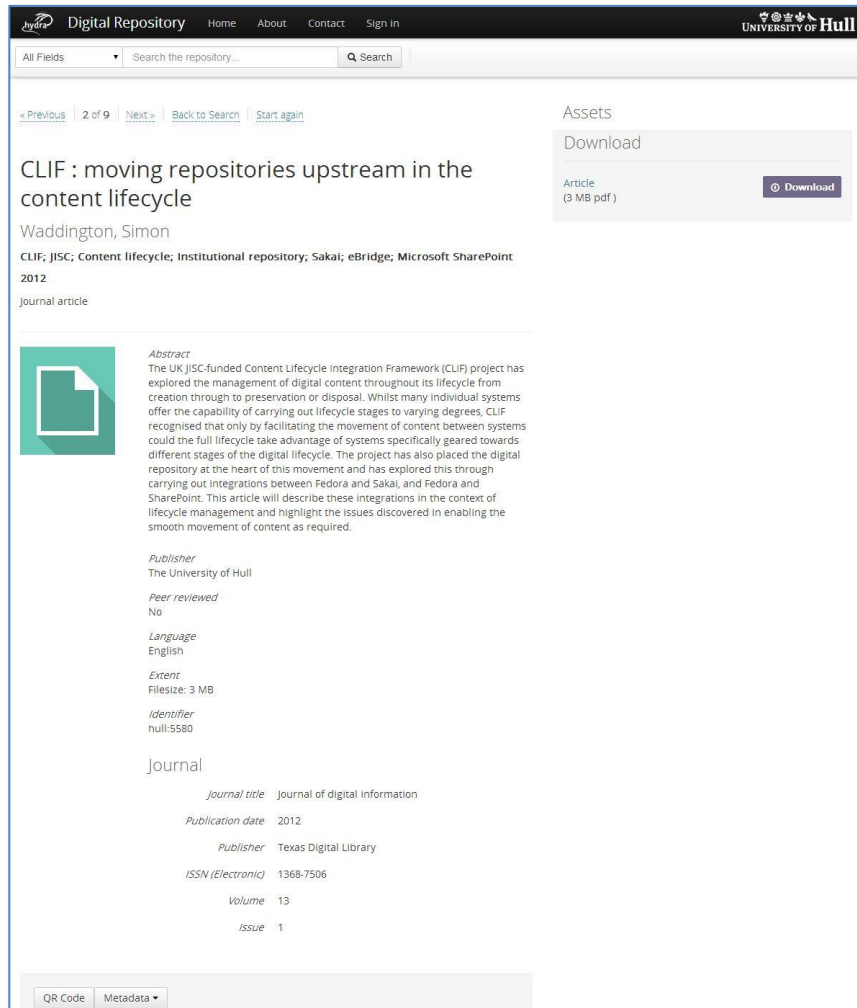
Hydra in Hull splash page



The screenshot shows the Hydra Digital Repository interface. At the top, there is a navigation bar with 'Home', 'About', 'Contact', and 'Sign in' links. A search bar is present with the text 'Search the repository...'. Below the search bar, there are navigation links: '< Previous', '1 of 12', 'Next >', 'Back to Search', and 'Start again'. The main content area features the title 'An investigation of the factors which influence the degree of patient involvement in the physiotherapeutic consultation' by Green, Angela Jane. The subject is 'Medicine' and the date is 'April 2008'. It is identified as a 'Thesis or dissertation'. On the right side, there is an 'Assets' section titled 'Downloads' which lists four items: 'Thesis (2 MB pdf)', 'Video : scenario 1 (52 MB wmv)', 'Video : scenario 2 (56 MB wmv)', and 'Video : scenario 3 (70 MB wmv)'. Each item has a 'Download' button. Below the title, there is a 'Rights' section stating '© 2008 Angela Jane Green. All rights reserved. No part of this publication may be reproduced without the written permission of the copyright holder.' An 'Abstract' section follows, describing the research on patient involvement in physiotherapy. Other sections include 'Publisher' (Postgraduate Medical Institute, The University of Hull), 'Supervisor' (Klaber Moffett, Jennifer, Sharp, Donald), 'Sponsor (Organisation)' (Hull and East Yorkshire Hospitals NHS Trust), 'Qualification level' (Doctoral), 'Qualification name' (PhD), 'Language' (English), 'Extent' (2.48MB), and 'Identifier' (hull:756).

- By way of contrast, here a thesis with a pdf and three associated video files

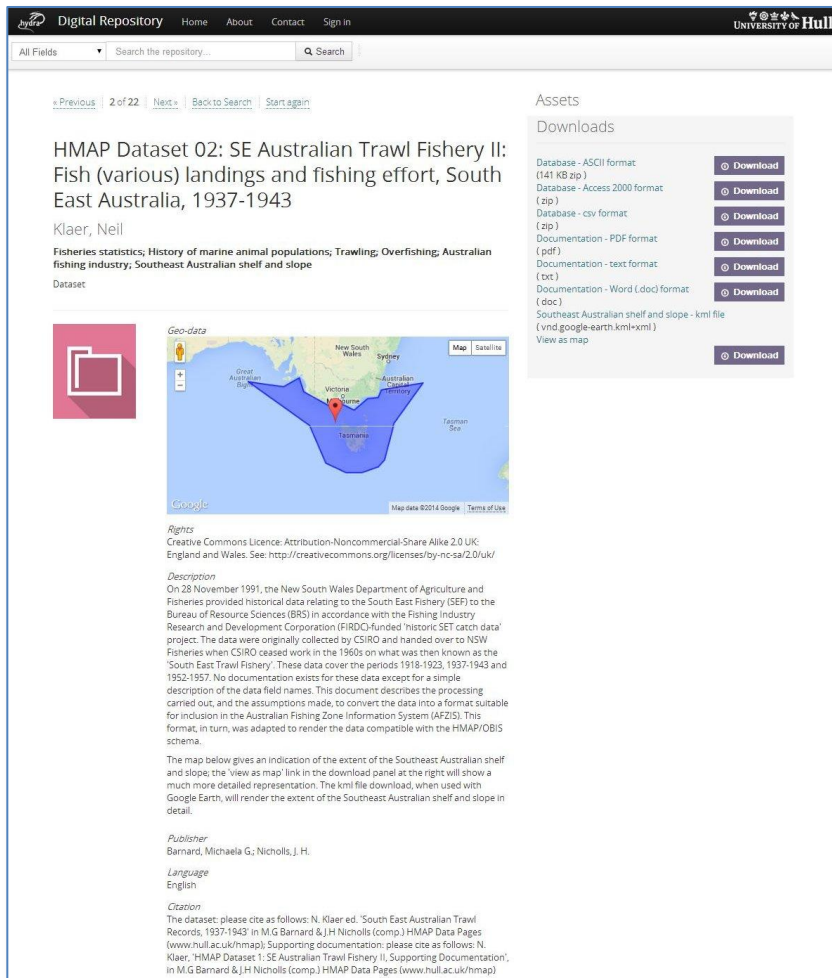
Hydra in Hull splash page



The screenshot shows the Hydra Digital Repository interface. At the top, there is a navigation bar with 'Digital Repository' and 'UNIVERSITY OF Hull' logos, and links for 'Home', 'About', 'Contact', and 'Sign In'. Below this is a search bar with 'All Fields' selected and a search button. The main content area displays the article title 'CLIF: moving repositories upstream in the content lifecycle' by Waddington, Simon, published in 2012. A 'Download' button is visible next to the article title. The abstract text is visible below the title. At the bottom, there is a 'Journal' section with details like 'Journal title: Journal of digital information', 'Publication date: 2012', 'Publisher: Texas Digital Library', 'ISSN (Electronic): 1368-7506', 'Volume: 13', and 'Issue: 1'. A 'QR Code' button is located at the bottom left of the page.

- Splash pages are not ‘one size fits all’ ...
- ...here a splash page for a journal article (note the publication information at the bottom)
- The QR code resolves to the splash page URL

Splash page with 'value added'!

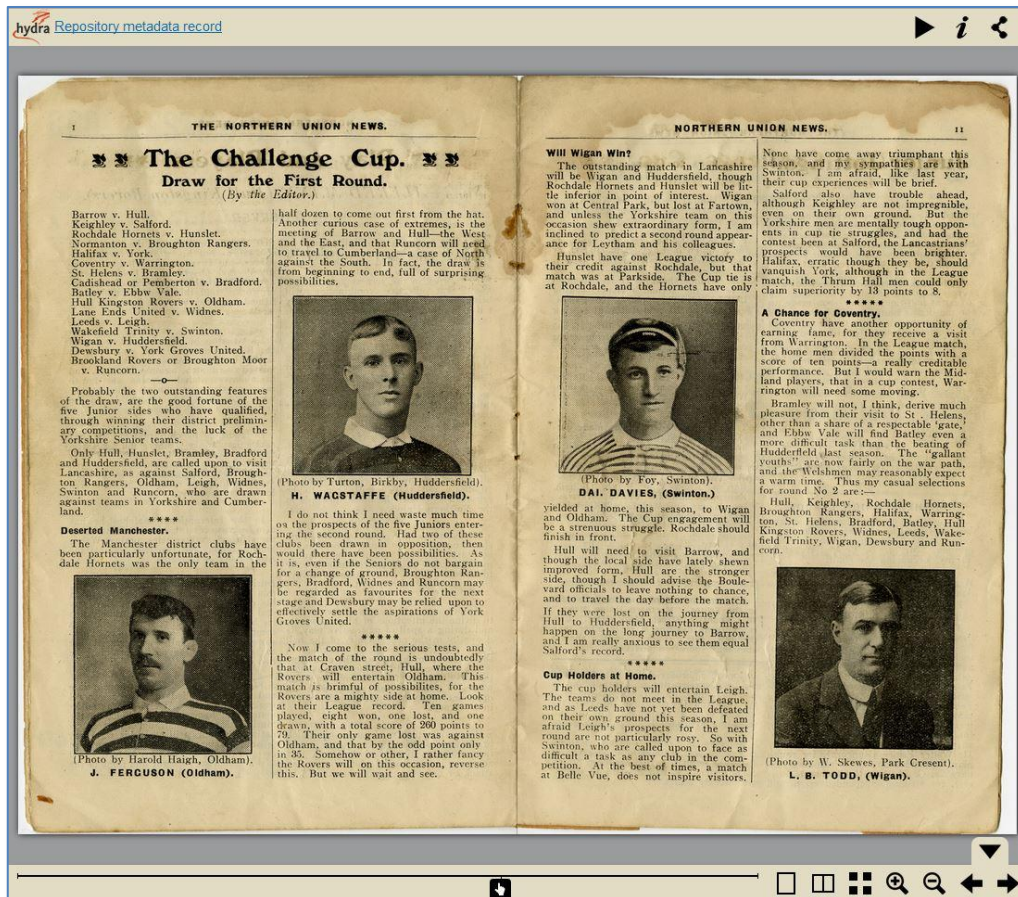


The screenshot shows a digital repository page for a dataset. The header includes the repository name 'Digital Repository' and the University of Hull logo. A search bar is present at the top. The main content area features the dataset title 'HMAP Dataset 02: SE Australian Trawl Fishery II: Fish (various) landings and fishing effort, South East Australia, 1937-1943' and the author 'Klaer, Neil'. Below the title is a map of the Southeast Australian shelf and slope, with a red pin indicating the location. The map is labeled 'Geo-data' and includes a 'Map' button. To the right of the map is a 'Downloads' section with a list of file formats and their corresponding download buttons. The list includes: Database - ASCII format (141 KB zip), Database - Access 2000 format (zip), Database - csv format (zip), Documentation - PDF format (pdf), Documentation - text format (txt), Documentation - Word (.doc) format (doc), and Southeast Australian shelf and slope - kml file (vnd.google-earth.kml+xml). Below the map and downloads section is a 'Rights' section with a Creative Commons license, a 'Description' section with a detailed paragraph about the data, a 'Publisher' section with the name 'Barnard, Michaela G; Nicholls, J. H.', a 'Language' section with 'English', and a 'Citation' section with a detailed citation string.

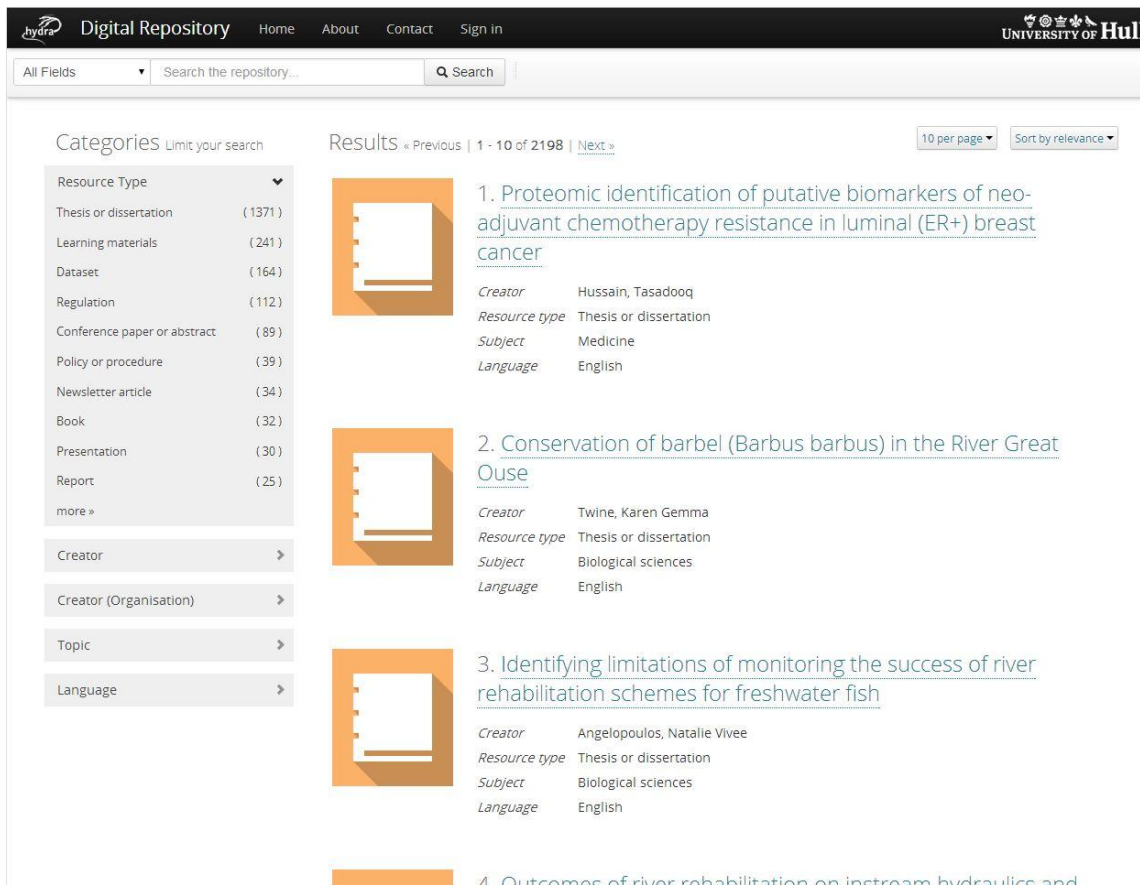
- Here part of a splash page for a dataset containing geographical information
- The geographic coverage is approximately represented in a functional Google map. More accurate mapping is provided by a link and a kml file
- For images (say) the splash page will be different again. More specialist pages being developed as resources allow

Value added services

- We can also pipe content out to other display services – here a book page turner



Hydra in Hull home page




Hydra Digital Repository Home About Contact Sign in UNIVERSITY OF Hull

All Fields Search the repository... Search


Categories Limit your search

- Resource Type
 - Thesis or dissertation (1371)
 - Learning materials (241)
 - Dataset (164)
 - Regulation (112)
 - Conference paper or abstract (89)
 - Policy or procedure (39)
 - Newsletter article (34)
 - Book (32)
 - Presentation (30)
 - Report (25)
 - more »
- Creator >
- Creator (Organisation) >
- Topic >
- Language >


Results « Previous | 1 - 10 of 2198 | Next » 10 per page Sort by relevance

- 


[1. Proteomic identification of putative biomarkers of neo-adjuvant chemotherapy resistance in luminal \(ER+\) breast cancer](#)

Creator Hussain, Tasadooq
Resource type Thesis or dissertation
Subject Medicine
Language English
- 

[2. Conservation of barbel \(*Barbus barbus*\) in the River Great Ouse](#)

Creator Twine, Karen Gemma
Resource type Thesis or dissertation
Subject Biological sciences
Language English
- 

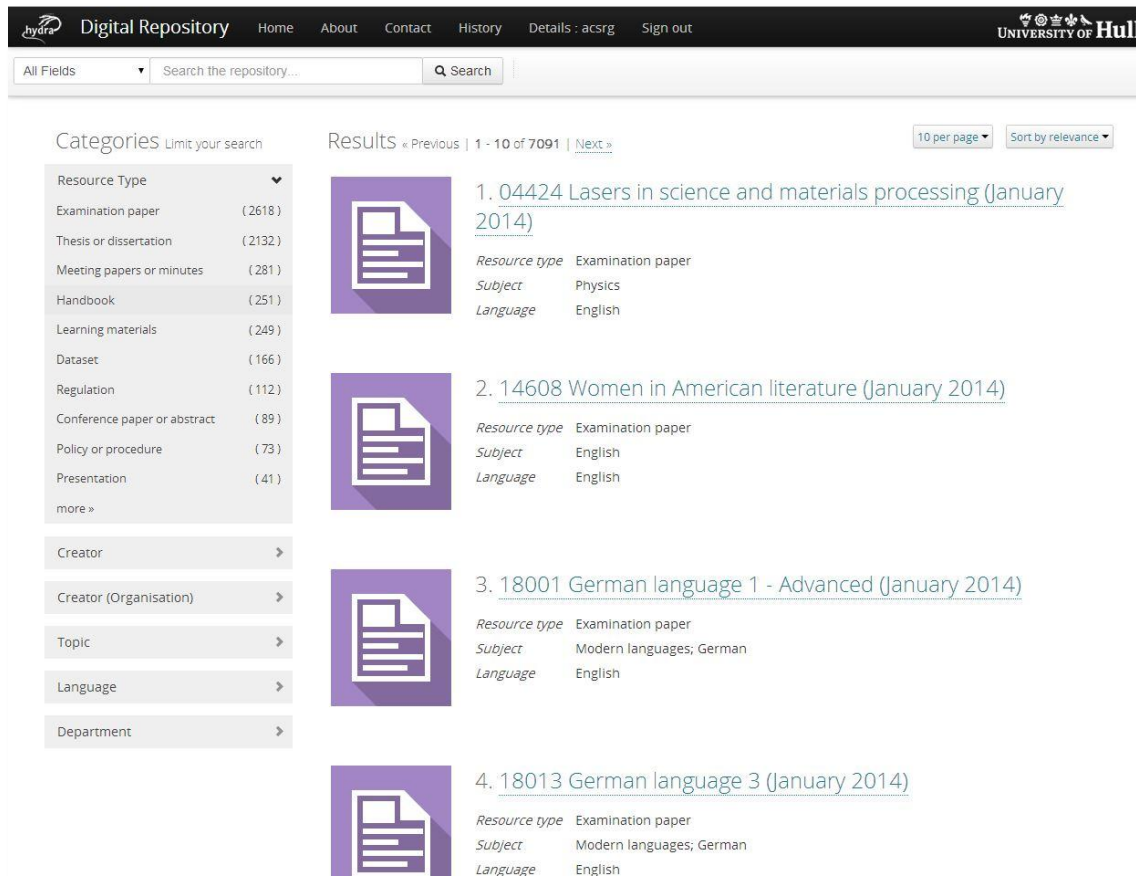
[3. Identifying limitations of monitoring the success of river rehabilitation schemes for freshwater fish](#)

Creator Angelopoulos, Natalie Vivee
Resource type Thesis or dissertation
Subject Biological sciences
Language English
- 

[4. Outcomes of river rehabilitation on instream hydraulics and](#)

- Look again at the ‘resource type’ facet as seen by a member of the public.
- If we log in (using the University’s single login system, CAS)...

Hydra in Hull home page: logged in



Hydra Digital Repository Home About Contact History Details - acsrg Sign out UNIVERSITY OF Hull

All Fields Search the repository... Search

Categories Limit your search

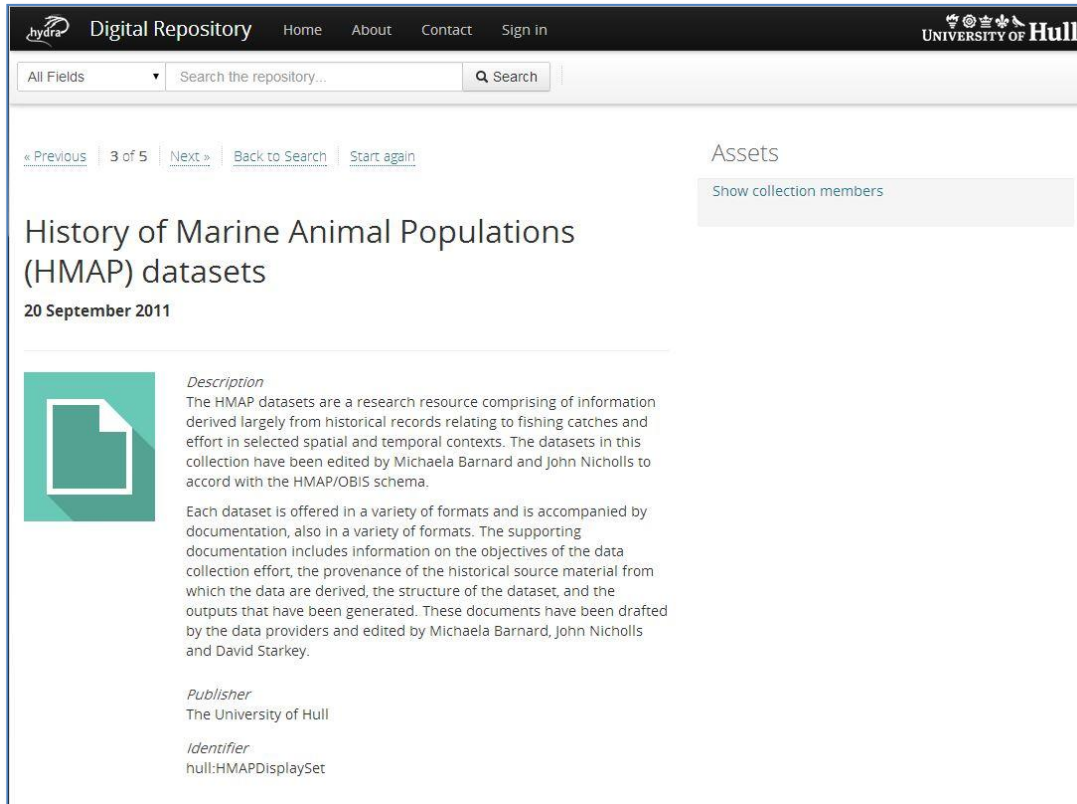
- Resource Type
 - Examination paper (2618)
 - Thesis or dissertation (2132)
 - Meeting papers or minutes (281)
 - Handbook (251)
 - Learning materials (249)
 - Dataset (166)
 - Regulation (112)
 - Conference paper or abstract (89)
 - Policy or procedure (73)
 - Presentation (41)
 - more »
- Creator >
- Creator (Organisation) >
- Topic >
- Language >
- Department >

Results « Previous | 1 - 10 of 7091 | Next » 10 per page Sort by relevance

- 04424 Lasers in science and materials processing (January 2014)
 - Resource type Examination paper
 - Subject Physics
 - Language English
- 14608 Women in American literature (January 2014)
 - Resource type Examination paper
 - Subject English
 - Language English
- 18001 German language 1 - Advanced (January 2014)
 - Resource type Examination paper
 - Subject Modern languages; German
 - Language English
- 18013 German language 3 (January 2014)
 - Resource type Examination paper
 - Subject Modern languages; German
 - Language English

- ... we now see additional content appropriate to our login status (exam papers, minutes etc)
- Facets and search returns use gated discovery. Users are not be shown anything they could not ultimately access. Security can potentially be very granular

Hydra in Hull: collections



The screenshot shows the Hydra interface for the University of Hull Digital Repository. The page title is "History of Marine Animal Populations (HMAP) datasets" with a date of "20 September 2011". A description states: "The HMAP datasets are a research resource comprising of information derived largely from historical records relating to fishing catches and effort in selected spatial and temporal contexts. The datasets in this collection have been edited by Michaela Barnard and John Nicholls to accord with the HMAP/OBIS schema." It also notes that each dataset is offered in a variety of formats and is accompanied by documentation. The publisher is listed as "The University of Hull" and the identifier is "hull:HMAPDisplaySet".

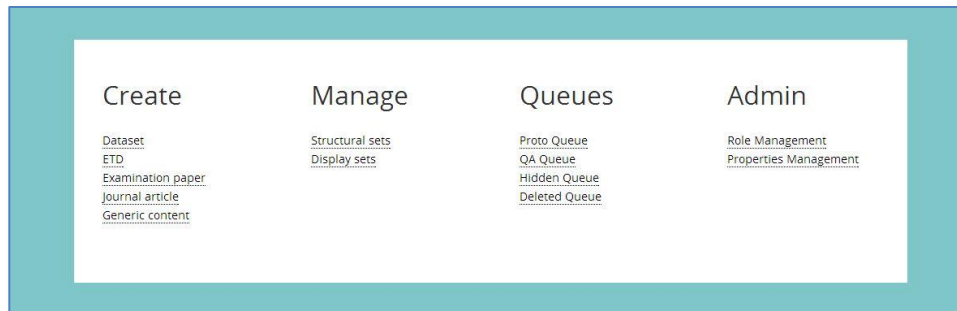
- Hull's Hydra head supports 'collections': objects with a common theme grouped together under a page explaining a context.
- Collections ('display sets') can be
 - temporary or permanent
 - flat or tiered (collections within collections)

Create, update delete

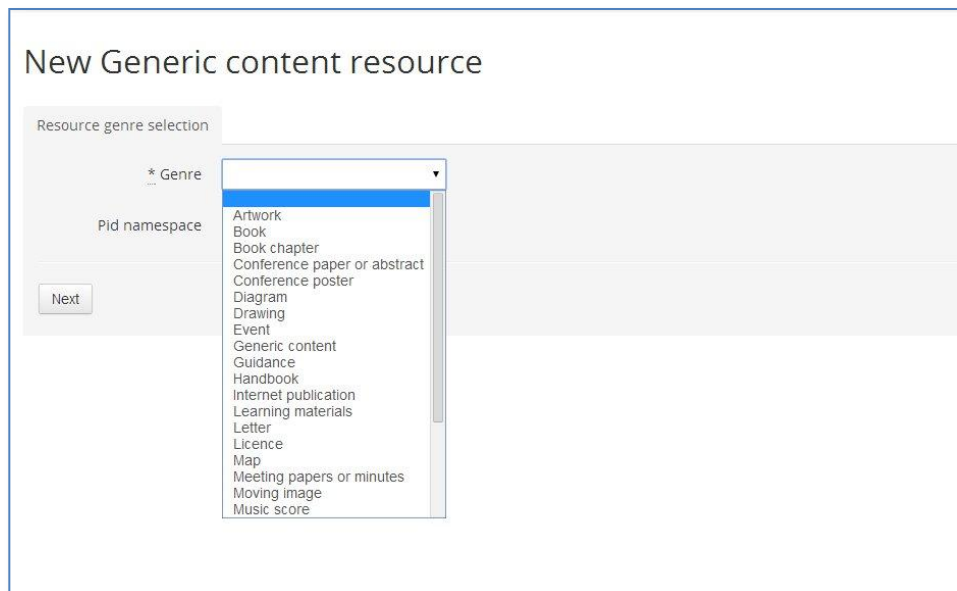


- Generally, creating content through the Hydra head is a three-stage workflow:
 1. A contributor creates an object with appropriate metadata in their own 'proto-queue'
 - At this stage it is private to them and can be properly deleted
 2. They then pass it to the QA queue from where it is checked and allocated appropriate permissions by placing it in a 'structural set'
 - Once it is in QA the contributor loses all rights to the object. It can be deleted by the QA team (although it isn't actually purged from Fedora) or, more often, temporarily hidden (copyright challenge, etc)
 3. After QA the object is published into the repository for use

Hydra in Hull 'create/edit' process



- The 'create' process offers a template customised to content type (or a generic form if a customised page has not yet been created)



- Once created it is passed to the QA queue for someone else to check before being moved to the repository proper

Hydra in Hull 'create/edit' [2]

Cats: cuddly or killers? A philosophical argument Show resource

Add & edit content

Description **Qualifications** Identifiers Set membership Admin Additional metadata

Personal author, and contributors

* Person name

Publication

* Title

Rights

Abstract

* Subject topic

* Language text

* Language code

Institutional contributors

Organisation name

* Publisher

* Date issued

- This is part of an edit form
- Broken up into tabs to reduce scrolling

Hydra in Hull 'create/edit' [3]

Cats: cuddly or killers? A philosophical argument Show resource

Add & edit content

Content

#	Label	Link	Remove
<input type="text" value="1"/>	<input type="text" value="Thesis"/>	understanding-premis.pdf	<input type="button" value="✘"/>
<input type="text" value="2"/>	<input type="text" value="Accompanying image"/>	dmvSign.gif	<input type="button" value="✘"/>

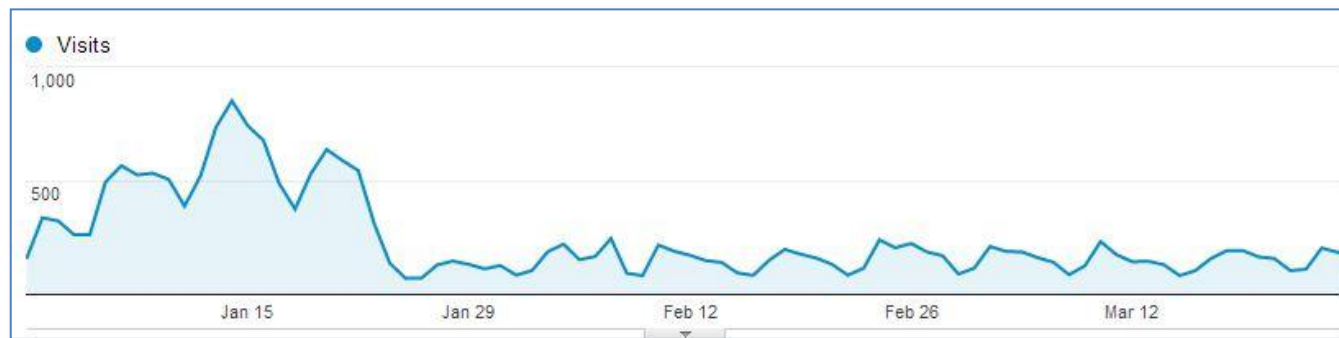
Upload new file
Add a new file to the resource.

No file chosen

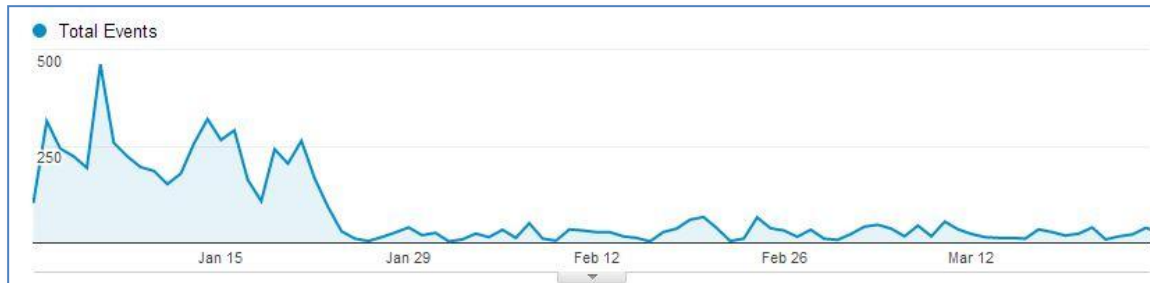
- Once created, all create/edit pages have a similar section to deal with content.
- Items for download can be sequenced...
- ...and individually labelled

Take up: visits

- Users (both end-users and administrators) are enthusiastic. Usage is steady with surges during examination seasons
 - (Guess when examinations are...?)



Take up: downloads



The majority of downloads are currently

- past undergraduate examination papers (somewhat seasonal)
- ETDs

Jan – Mar 2014

1.	57025 Engineering management (January 2013)	113 (1.68%)
2.	57025 Engineering management (January 2012)	92 (1.37%)
3.	26355 Financial management (January 2013)	87 (1.30%)
4.	26163 Empirical economics (January 2013)	64 (0.95%)
5.	26326 Financial reporting (January 2013)	64 (0.95%)
6.	26302 Managing people (January 2013)	57 (0.85%)
7.	57028 Fundamentals of engineering (January 2013)	53 (0.79%)
8.	57015 Control and stress (January 2013)	52 (0.77%)
9.	26346 European business in a global context (January 2013)	50 (0.74%)

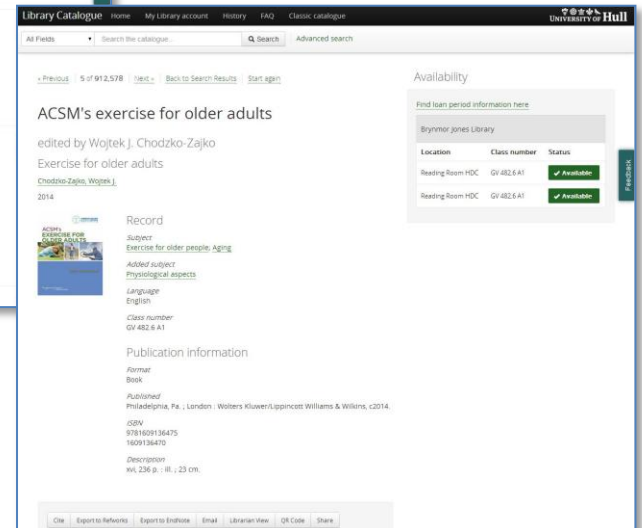
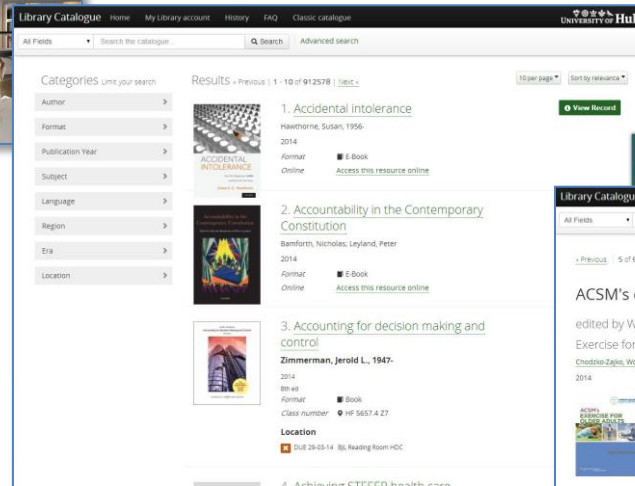
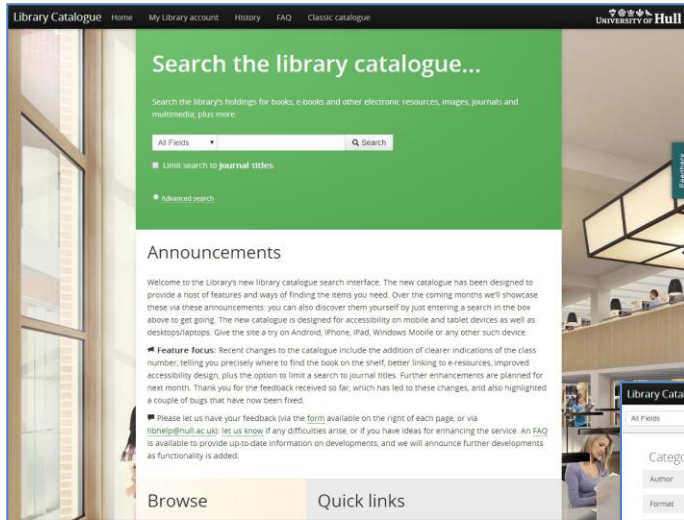
The downloads with five digit module numbers are exam papers

Feb – Mar 2014

1.	HMAP Dataset 16: Peru, South-east Pacific	20 (1.40%)
2.	Closure of the Hull and/or Scarborough campuses due to adverse weather conditions	18 (1.26%)
3.	03520 Engineering mathematics II (May 2013)	13 (0.94%)
4.	26303 Marketing (May 2013)	12 (0.84%)
5.	26324 Strategic management accounting (May 2013)	12 (0.84%)
6.	Regulation of blood platelet function by nitric oxide	11 (0.77%)
7.	The influence of oxidised low density lipoproteins on platelet activation	11 (0.77%)
8.	03520 Engineering mathematics II (June 2011)	10 (0.70%)
9.	26335 Taxation (May 2013)	10 (0.70%)
10.	An inductive investigation into relationships between geographically co-located actors : the contribution of relationship marketing to regional competitiveness	10 (0.70%)

Integration and embedding

- Blacklight now also the University's primary Library Catalogue search



Clear 'family resemblance' with Hydra in Hull

As a Hydra partner?

- Many improvements and additions fed back to the core Hydra code for community use
 - message driven, full-text indexing
 - support for structural, display and OAI-PMH harvesting sets
 - support for simple, compound and complex objects in the same IR
 - etc
- We hope to serve as a reference site and to provide support for other possible adopters (especially UK and Europe more widely)
- Advocacy of open source (especially community source) work
 - Currently Ruby on Rails is not widely adopted in UK HEIs as a development platform: it deserves more attention

Contacts and links

Project Director: Chris Awre (c.awre@hull.ac.uk)

Project Manager: Richard Green (r.green@hull.ac.uk)

Developer lead: Simon Lamb (s.lamb@hull.ac.uk)

Repository site: hydra.hull.ac.uk

Hydra website: projecthydra.org

(includes screencasts from Hull and many others)

(Library catalogue site: blacklight.hull.ac.uk)