

Science Communication & Impact

What I think about

Steven B. Roberts

School of Aquatic and Fishery Sciences
University of Washington

robertslab.info
@sr320

Personal Learning Environments

PLE in '*Conventional*' scientific cycle

What we do...

altmetrics

Backstory



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Evolution

Genomics Approaches in Fisheries and Aquatic Sciences

A mini-course focusing on bioinformatic and gene expression analysis techniques

Updated 01/07/07

Lecture 1 - Biology Basics and ESTs AUDIO
(MRC 310 Tuesday, June 13, 5:00pm)

The first class will go over some basics on what bioinformatics and gene expression analysis means. In addition we will discuss a relevant paper (click link below). The powerpoint will also be available.

A handout for the lecture (pdf), six slides / page) can be [downloaded](#). The full size slides are available in PDF format. Email me for a password then [Click here](#).

Paper to discuss - [Molecular characterization and expression of the gene encoding aspartate aminotransferase from the Pacific oyster Crassostrea gigas exposed to environmental stressors](#)

Lecture 2 - Making sense of the ABCs AUDIO
(MRC 310 Tuesday, June 20, 4:00pm)

Brief review of what was cover in previous lecture with focus on some of the topics that were brought up in discussion. For example:
What is sense and antisense?
Fundamentals of RNA vs DNA with all the A,C,G,T, and Ur
PCR: from the basics to sequencing (including future technologies)
cDNA and DNA

Useful Links

- NCE
- TDG
- ENZYME
- MAKING GENOMICS PROJECT
- Subject Lab
- Protocols

A handout for the lecture (pdf, six slides / page) can be [downloaded](#). The full

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Evolution

Home Lecture Syllabus Software Genome Projects Assignments

Favorite Gene

Applied Bioinformatics for Aquatic and Fishery Sciences

This course will explore the rapidly evolving genetic resources available from aquatic organisms and the bioinformatic approaches that can be used to explore, mine, and characterize these resources. The intended audience ranges from field ecologists to bench scientists.

- [Sumblog](#)
- [calendar](#)
- [FAQ](#)
- [message board](#)
- [anonymous email](#)
- [Favorite gene](#)

Instructor: Steven Roberts [contact details](#)
Assistant Professor

Meeting Times and Location
Tuesday 2:30-3:30 PM T2C
Thursday 10:30-12:00 PM 136

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Evolution

FISH510

Page Discussion History Notify Me

Innovations in Molecular Techniques

Fall 2008

Instructor: Steven Roberts [contact](#)

Mondays: 12:45-2:30 [\[R\]](#) 109

Schedule of Topics

Week 1 - Intro	Week1	Intro	Bonus Pages
Week 2 - Gene Discovery (Amanda & Kirsty)	Week2	Discovery	Week2
Week 3 - Bioinformatics (Lisa & Mac)	Week3	Bioinformatics	Week3
Week 4 - Epigenetics (Jennifer & Amanda)	Week4	Epigenetics	Week4
Week 5 - Next Generation Sequencing Technology (Bethany & Lisa)	Week5	NGS	Week5
Week 6 - Molecular Diagnostics (Lisa & Carl) Community Ecology (Lisa & Jennifer)	Week6	NG & CE	Week6
Week 7 - QRT-PCR (Angela & Carl)	Week7	Q-Expression	Week7
Week 8 - Microarrays (Mac & Bethany)	Week8	Microarrays	Week8
Week 9 - Proteomics (John & Kirsty)	Week9	Proteomics	Week9
Week 10 - Metabolomics (John & Angela)	Week10	Metabolomics	Week10

This course will provide students (both field and lab-centric) a forum to discuss innovations in molecular roles in basic scientific research and natural resource management decisions.

Format: Each week we will discuss an application of molecular technology in the aquatic sciences. This discussion will be based responsible for leading the discussion and responsible for the respective wk.

A separate page (see above) will be generated for each week. While the designated presenter will be primarily responsible for com throughout this wk just as in class. The class is open to anyone.

Expectations: Students will contribute to the educational atmosphere by completing reading assignments, contributing ideas, and discussion but this also includes contributions to the site.

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Evolution

FISH546: Aquatic-Bioinformatics

Workspaces Access & Roles Preview

Home [Add content](#) (+)

Syllabus

LOS

Presentations

Slides [Primary means for class communication / networking / participation](#)

Calendar [http://fish546.tumblr.com/](#)

Links

more...

CLC Instructions

Workshop

[Add a new view](#)

FISH546 (Open) Owner
Manage grade book

FISH 546: Bioinformatics for Environmental Sciences
(See below for more details)

This is a course developed for students and scientists that will use computational analysis of molecular sequence data. Computational analysis of these data is a valuable tool to better understand biological processes and to better use resources. Bioinformatics can be considered a tool of growing interest in the areas of aquatic organisms. We have made over thousands of genes (mostly publicly being sequenced). In this course we will primarily focus on the methods for non-model organisms and will spend time on topics in networking within Aquatic, fish, and in other related fields.

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Evolution

FISH510: Applications of New Sequencing Technologies in Aquatic Sciences

MEETING: Tuesdays 2:30-3:30, Winter 2011, FISH109

INFO FOR NEXT TALK:

Tuesday, January 4, 2011
2:30pm NGS Seminar: Roberts - Overview and Background
4:00pm eScience Open-Me

Tuesday, January 11, 2011
2:30pm NGS Seminar

Tuesday, January 18, 2011
2:30pm NGS Seminar: Howe - Big data and SQL/Share

Tuesday, January 25, 2011
2:30pm NGS Seminar

Tuesday, February 1, 2011
2:30pm NGS Seminar

Tuesday, February 8, 2011
2:30pm NGS Seminar: O'Brien - Abalone WGA-Seq

Events occur in the new Pacific Time

What are bioinformatics and about? [\[R\]](#)

gReader's FISH510
DNA tags let us sequence the genome from a single cell.

New methods for next generation sequencing based on DNA tags.

Using bioinformatics to predict the functional impact.

an Transcript: Next-Gen Sequencing Technology

Genotype calling and mapping of multiple variants.

Summits: The Genetic Landscape of the 1000 Genomes

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PLE

"**Personal Learning Environments** are systems that help learners take control of and manage their own learning. This includes providing support for learners to

- set their own learning goals
- manage their learning; managing both content and process
- communicate with others in the process of learning

and thereby achieve learning goals.

A PLE may be composed of one or more subsystems: As such it may be a desktop application, or composed of one or more web-based services."^[1]



PLE

Personal Learning Environments

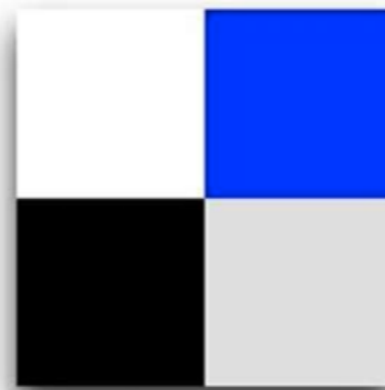


University of Leicester

Do you come here often?
The fleeting nature of
communication in a 140
character world

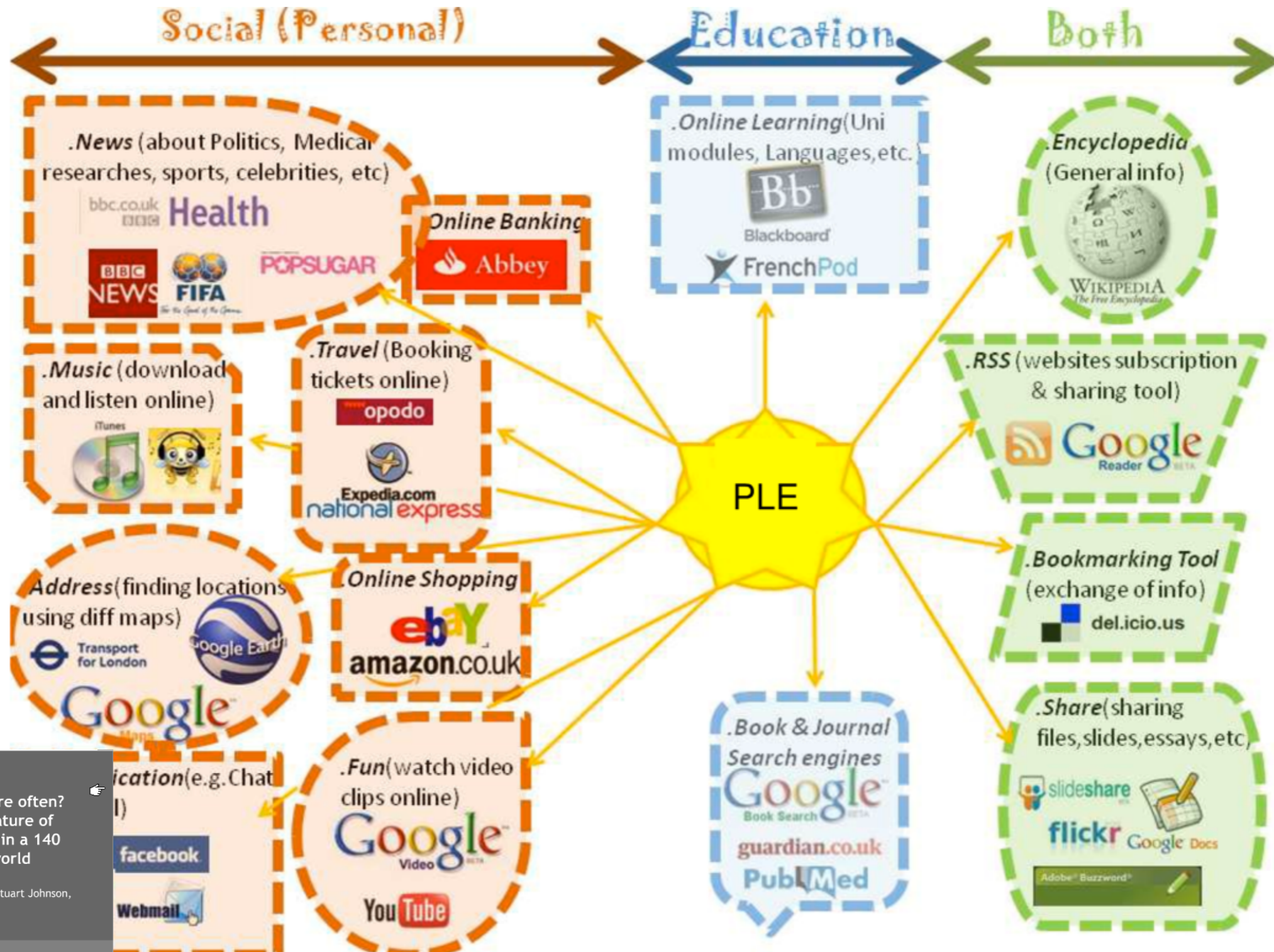
Jo Badge, Alex Moseley, Stuart Johnson,
Alan Cann

www.le.ac.uk



twitter.com/jobadge

PLE



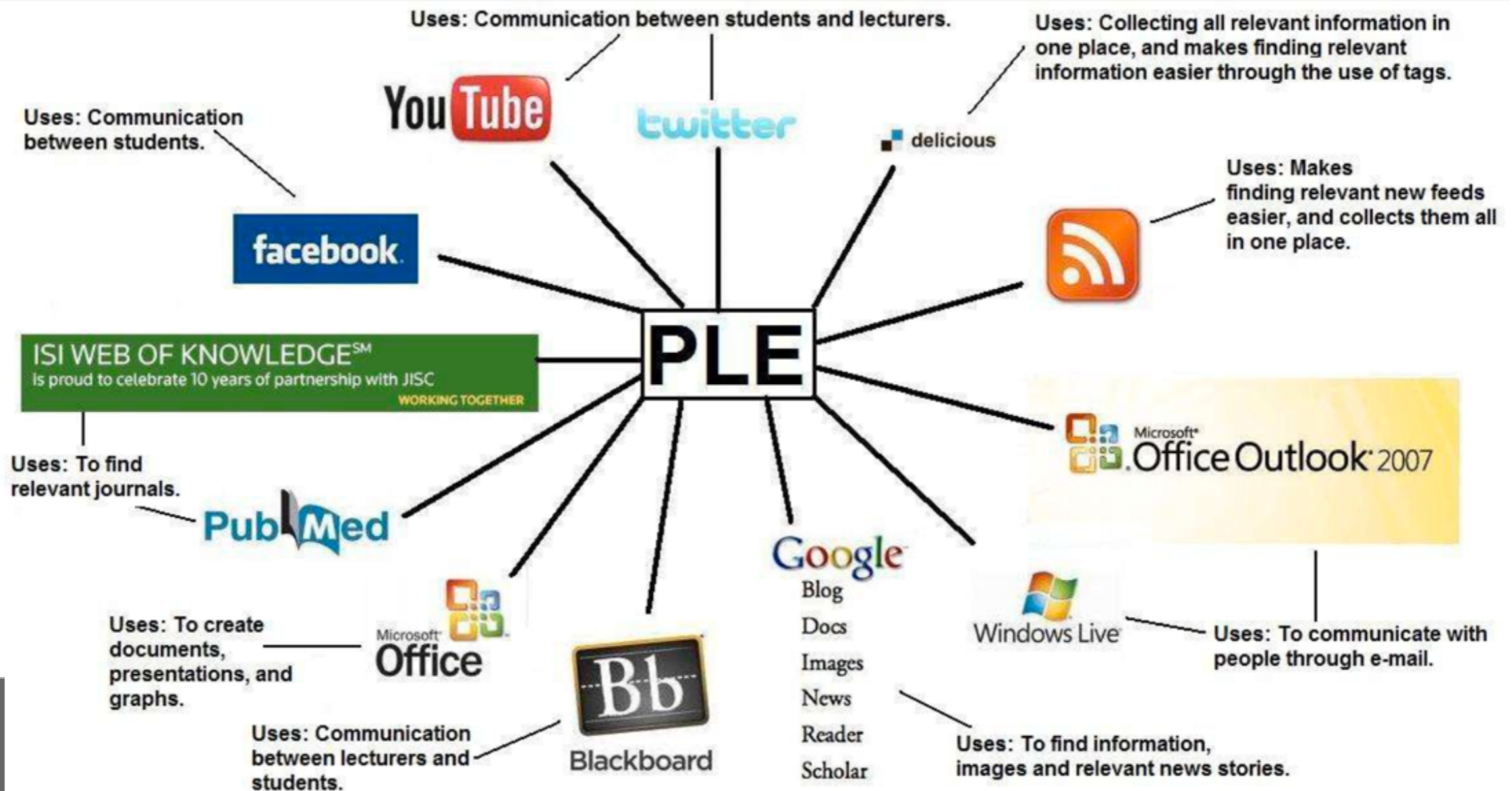
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The fleeting nature of communication in a 140 character world

Jo Badge, Alex Moseley, Stuart Johnson, Alan Cann

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The fleeting nature of
communication in a 140
character world

Jo Badge, Alex Moseley, Stuart Johnson,
Alan Cann

CLE

PLATFORM?

transcriptfun
Class Website

SEPTEMBER 25, 2007

Manual sequence analysis - some common mistakes « Freelancing science

A gene network for navigating the literature

IHOP - Robert Hoffmann

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Bookmarks | Network | Tags | Subscriptions | Inbox

Also see more bookmarks in Popular or Recent.

sr320 Network Type a tag

16 DEC 09 DNA Methylation and Structural and Functional (8): 1602 -- Molecular Biology and Evolution SA
mgavery

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Roberts Lab Wiki

The purpose of this space is to provide an open around the [Roberts Lab](#).

Lab Resources	External Links
Protocols How-to...	UW Lab Safety Man
Snapshot	UW HTSU (Sanger)
GTD ICE	IDT (UW Interface)
Sites Folders	UW Biochem Stores
Forms	SAFS Admin

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Home All items Starred items Your stuff Shared items Notes Trends Browse for stuff

All items Show: 1000+ new items - all items Mark all as read

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from [uwnews.org](#) | RSS | Environment news re (leilag@u.washington.edu)

Testing hair from Asian monkeys living close to such as lead exposure, to humans and wildlife

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Bioinformatics

Find info on your favorite gene(s)/pathway(s)

See some [great example of some that already have](#).

Resources:

- [NCBI](#)



[Video Tutorial](#). How to quickly use BLAST to find out more about an EST

[Blast tips](#) [via NCBI]

- [genomic_it](#) ([download](#))



[Video Tutorial](#). How to use genomic_it [[Hi-Res](#)]

- [iHOP](#)
- [Panther](#)
- [The Reactome Book](#): a textbook of biological pathways
- [Gene Ontology](#)



[Video Tutorial](#). How to generate GO Pie Charts [[Hi-Res](#)]

- [cGRASP](#) (Salmonids only)
- [KEGG](#)

Identify Intron Location

- [Spidey](#)



[Video Tutorial](#). How to find Intron location in genes [[Hi-Res](#)]

- [Splign](#)

Design Primers

Tools available include

- [NCBI primer Blast](#)
- [Geneious](#)
- IDT
- [BiBiServ GF2](#) (I have not tested) - [sr320](#) Sep 14, 2008 9:47 am

See also: [post on approach for gene discovery in Vt](#)

Align Sequences

- [Geneious](#)
- [Blast](#)
- NCBI BLINK



[Video Tutorial](#): Sequence Alignments using BLINK and



Wikispaces

TODAY

Idea Generation

Data Acquisition
and Analysis

Publication

Idea Generation

Publication

Publication

Data Acquisition
and Analysis

Publication

Publication

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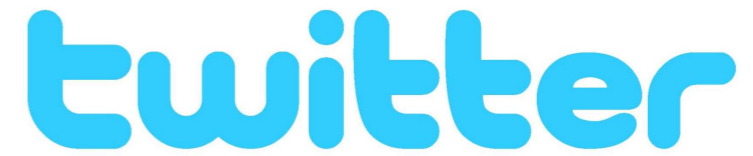
Publication

Data Acquisition and Analysis

Publication

Publication

Publication



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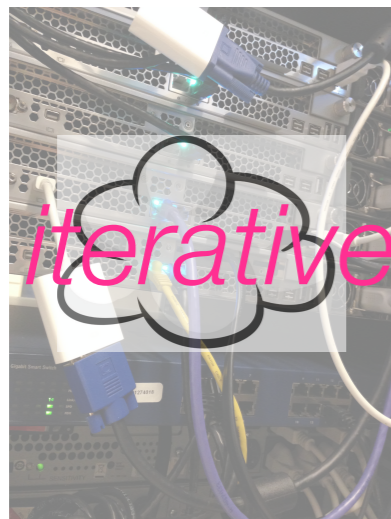
social bookmarking



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Data Acquisition and Analysis Publication
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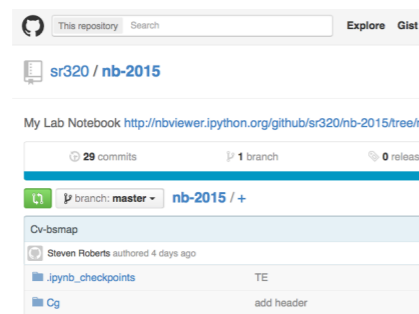


lab notebooks



IP[y]: IPython
Interactive Computing

Open
Notebook
Science



Idea Generation

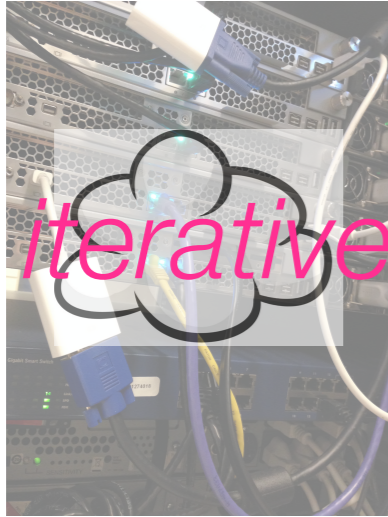
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Data Acquisition

Publication

and Analysis

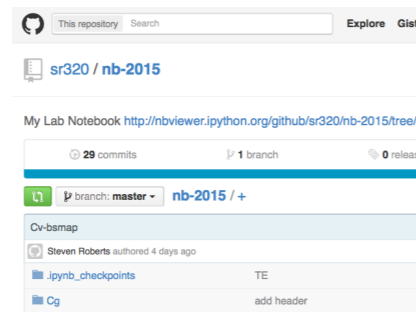
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lab notebooks



IP[y]: IPython
Interactive Computing



Automating a Workflow: Beyond Blast - to GO Slim

The concept is that you can take a fasta file in a working directory and end up with GO slim information all within a single notebook that is automated. Current writing (and overwriting) as scratch file to SQLShare. Assumptions are that you are working in a directory with fasta file named `query.fa`. And blast algorithms a

```
In [13]: #allows plots to be shown inline
%pylab inline

Populating the interactive namespace from numpy and matplotlib

In [4]: #Setting Working Directory
wd="/Volumes/web/whale/fish546/qpx_go_val"
#Setting directory of Blast Databases
dbd="/Volumes/Bay3/Software/ncbi-blast-2.2.29\+/db/"
#Database name
dbn="uniprot_sprot_r2013_12"
#Blast algorithm
ba="blastx"
#Location of SQLShare python tools; you can empty (") if tools are in PATH
spd="/Users/sr320/sqlshare-pythonclient/tools/"

In [5]: cd {wd}

/Volumes/web/whale/fish546/qpx_go_val

In [5]: !{ba} -query query.fa -db {dbd}{dbn} -out {dbn}_{ba}_out.tab -evalue 1E-50 -num_threads 4 -max_hcps_per_
BLAST Database error: No alias or index file found for protein database [/Volumes/Bay3/Software/ncbi-bla
/db/uniprot_sprot_r2013_12] in search path [/Volumes/web/whale/fish546/pipeline_test_dir4::]

In [6]: !head -1 {dbn}_{ba}_out.tab

QPX_transcriptome_v1_Contig_2    sp|P52712|CBPX_ORYSJ    43.75    416    213    12    2095    869
7        3e-98    326

In [17]: #Translate pipes to tab so SPID is in separate column for Joining
!tr '|' '\t' <{dbn}_{ba}_out.tab > {dbn}_{ba}_out2.tab

In [18]: !head -1 {dbn}_{ba}_out2.tab

In [8]: #Uploads formatted blast table to SQLshare; currently has generic name and meant to be temporary: Warning
!python {spd}singleupload.py -d scratchblast_out {dbn}_{ba}_out2.tab

...

In [9]: !python {spd}fetchdata.py -s "SELECT * FROM [sr320@washington.edu].[scratchblast_out]blast Left Join [sr

In [10]: !head -2 {dbn}_join2goslim.txt

...

In [11]: !python {spd}singleupload.py -d scratchjoin_slim {dbn}_join2goslim.txt

processing chunk line 0 to 18037 (0.0718240737915 s elapsed)
pushing uniprot_sprot_r2013_12_join2goslim.txt...
parsing 9A18D989...
finished scratchjoin_slim

In [12]: #Sets GO aspect
!python {spd}fetchdata.py -s "SELECT Distinct Column1 as query, Column3 as SPID, GOSlim_bin FROM [sr320@

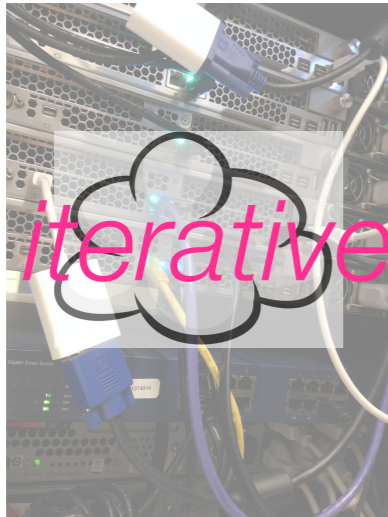
In [13]: !head justslim.txt

...

In [15]: from pandas import *
```

Idea Generation Publication

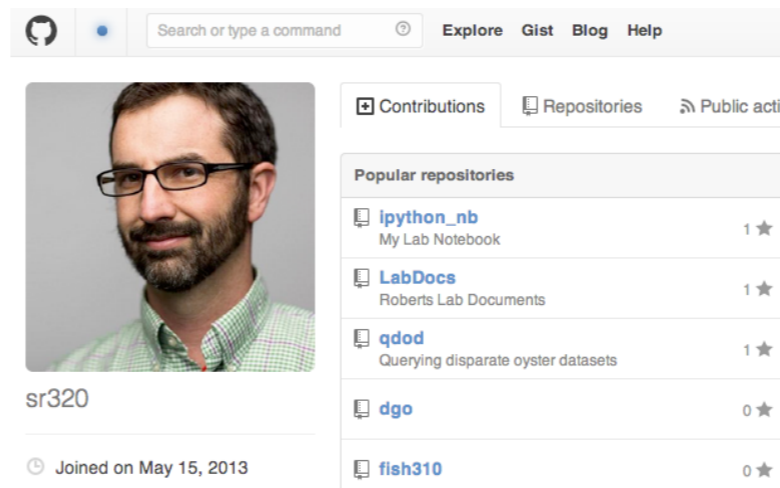
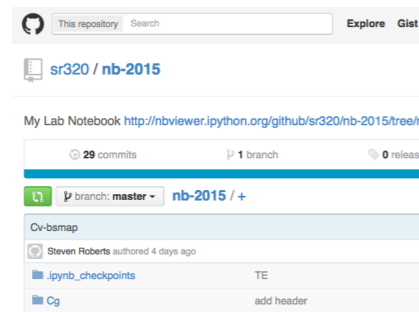
Data Acquisition and Analysis Publication



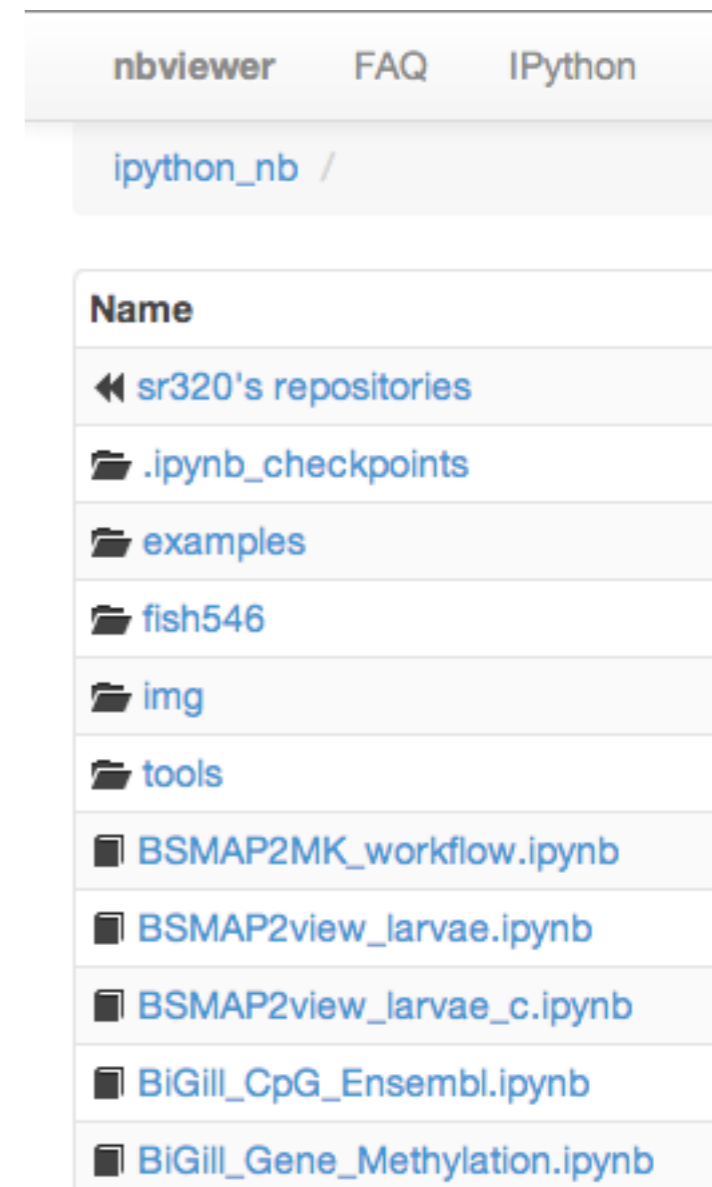
lab notebooks



IP[y]: IPython Interactive Computing



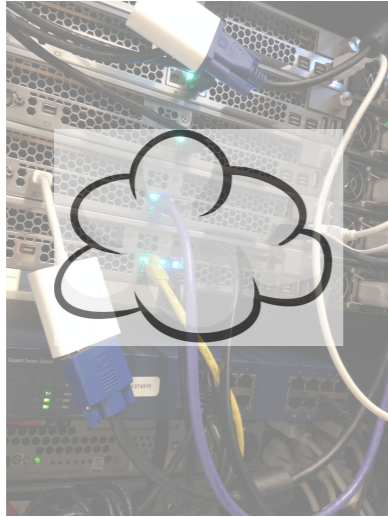
GitHub



Idea Generation Publication

**Data Acquisition
and Analysis** Publication
Publication
Publication

universal challenges



archiving metadata

version control

simple sharing

data management

self-discoverability

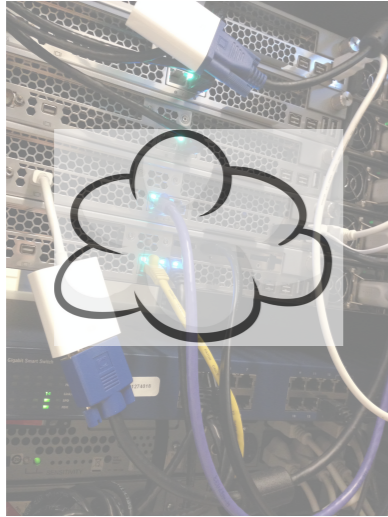
provenance

collaboration

Idea Generation Publication

**Data Acquisition
and Analysis** Publication
Publication
Publication

universal challenges



archiving metadata

version control

simple sharing

data management

self-discoverability

provenance

collaboration

our current ~~solution~~ - analyses on local web server (NAS)

Idea Generation

Publication

Data Acquisition
and Analysis

Publication

Publication

Publication



Authorea

Write science together.

Authorea is the collaborative platform for research.

bioRxiv beta

THE PREPRINT SERVER FOR BIOLOGY

PeerJ PrePrints - where biology is heading

Search PrePrints Search

Submit a PrePrint for free | Author instructions

Idea Generation

Data Acquisition and Analysis

Publication

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Publication



Authorea

Write science together.

Authorea is the collaborative platform for research.

bioRxiv beta

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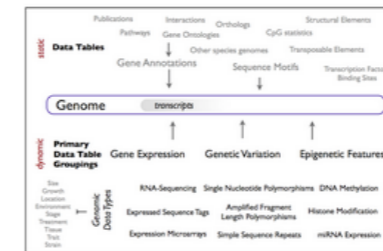
sr320 edited this page on Feb 7 · 23 revisions

This wiki serves as the *primary means for documentation* for project qdod: **querying disparate oyster datasets.**

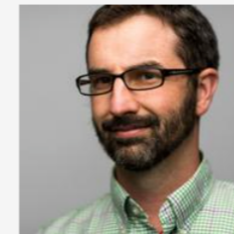
In brief, data in the form of delimited text files is aggregated into [SQLShare](#) where they can be easily queried. The simplest way to start exploring the uses for this system is to interact with SQLShare using the simple web interface. All you need to get started is a Google account. [Please see this page for a beginner's guide to SQLShare.](#)

There is a python client for advanced users.

Below is schematic representation of the different types of datasets.



Reference Genome Sequence files are described on [this page](#).



Steven Roberts

Associate Professor (Marine Biology)
University of Washington



Research statistics

12128 views 112 shares

cites coming soon

Active categories

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- Molecular Biology
- Physiology
- Bioinformatics
- Genetics

Related authors

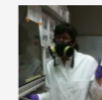
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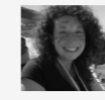
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- Fidalgo Bay
- OysterBay
- temperature data
- iPython
- thraustochytrid
- qpx
- clam
- quahog
- Gene regulation

Working with...

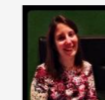
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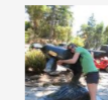
elene dorfmeier



Caroline Storer
Graduate Student



Colleen Burge
Postdoctoral research ass...



Emma Timmins-Schiffman
Postdoctoral Fellow



Claire C

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42 uploads in total - [view all](#)

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Herring Testicular Transcriptome 31545 contigs.fa	dataset	780 views 18 shares
Bay scallop population structure on Cape Cod	fileset	683 views 14 shares

Steven
Roberts



Associate Professor in the School of Aquatic and Fishery Sciences
at the University of Washington.



Open Access

Global Reach

57 Articles

11.6k views

1.1k saves

81 tweet

Show tweets (79)

Sorting by default

Development of Genomic Resources for Pacific Herring through Targeted Transcriptome Pyrosequencing

(2012) Roberts, Hauser, Seeb et al.. *PLoS ONE*

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RNA-Seq Reveals an Integrated Immune Response in Nucleated Erythrocytes

(2011) Morera, Roher, Ribas et al.. *PLoS ONE*

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Is There a Relationship between DNA Methylation and Phenotypic Plasticity in Invertebrates?

(2012) Roberts, Gavery. *Frontiers in Physiology*

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A context dependent role for DNA methylation in bivalves

(2014) Gavery, Roberts. *Briefings in Functional Genomics*

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Predominant intragenic methylation is associated with gene expression characteristics in a bivalve mollusc

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Steven Roberts



Associate Professor in the School of Aquatic and Fishery Sciences at the University of Washington.



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Overview

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webpages (3)



Selected works

Does DNA methylation facilitate phenotypic plasticity in marine invertebrates?

(2014) Slideshare.

view slides

highly viewed

Crassostrea gigas high-throughput bisulfite sequencing (larvae and sperm tissues)

(2014) figshare.

highly viewed

viewed

Key profile metrics

11.6k views on 57 articles

2.6k views on 7 slide decks

1.1k saves on 57 articles

107 views on 3 peer reviews



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Austral Summer Institute Course Wrap-up


Last month I had that opportunity to visit the University of Concepción, and teach a course at the Austral Summer Institute – "Physiological response of marine organisms to environmental change from a..."

[Read More](#)


Peer-Reviewed Publications


see also [preprints](#)

Timmins-Schiffman E, Coffey WD, Hua W, Nunn BL, Dickinson GH and Roberts SB. (2014). [Shotgun proteomics reveals physiological responses to ocean acidification in *Crassostrea gigas*](#) BMC Genomics 2014, 15:951 doi:10.1186/1471-2164-15-951  6


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Olson CE and Roberts SB. (2014). [Genome-wide profiling of DNA methylation and gene expression in *Crassostrea gigas* male gametes](#) Frontiers in Physiology. 5:224. doi: 10.3389/fphys.2014.0022  5


Gavery MR and Roberts SB. (2014) [A context specific role for DNA methylation in bivalves](#) Briefings in Functional Genomics. doi:10.1093/bfpg/elt054 ([pdf](#))  3

Gavery MR and Roberts SB. (2013) [Predominant intragenic methylation in the genome of a bivalve mollusc](#) PeerJ 1:e215. doi:10.7717/peerj.215  6

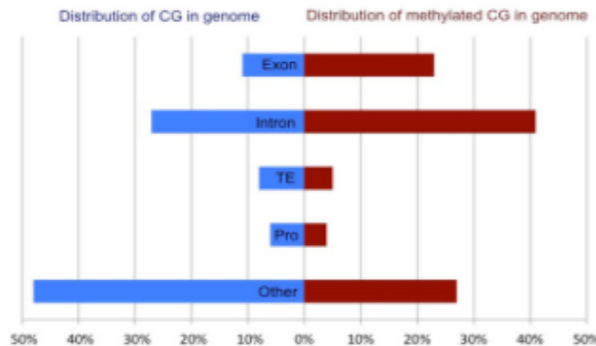
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Garcia-Vedrenne AE, Groner M, Page-Karjian A, Siegmund G-F, Singhal S, Sziklay J and Roberts SB. (2013) [Development of Genomic Resources for a thraustochytrid Pathogen and Investigation of its Role in the Life Cycle of a Bivalve](#) PLoS ONE 8(9): e74196. doi:10.1371/journal.pone.0074196  2


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Burge CA, Mouchka ME, Harvell CD and Roberts SB. (2013) [Immune response of the Caribbean sea fan, *Gorgonia ventalina*, exposed to an *Aplanochytrium* parasite as revealed by transcriptome sequencing](#) Frontiers in Physiology 4:180. doi:10.3389/fphys.2013.00180  15

Timmins-Schiffman EB, Nunn BL, Goodlett DR and Roberts SB. (2013) [Shotgun proteomics as a viable approach for biological discovery in the Pacific oyster](#) Conservation Physiology. doi:10.1093/conphys/cot009  3

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Peer-Reviewed Publications

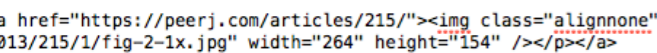
see also [preprints](#)

Timmins-Schiffman E, Coffey WD, Hua W, Nunn BL, Dickinson GH and Roberts SB. (2014). [Shotgun proteomics reveals physiological response to ocean acidification in *Crassostrea gigas*] (<http://www.biomedcentral.com/1471-2164/15/951/>) BMC Genomics 2014, 15:951 doi:10.1186/1471-2164-15-951 6

Olson CE and Roberts SB. (2014). [Genome-wide profiling of DNA methylation and gene expression in *Crassostrea gigas* male gametes] (<http://journal.frontiersin.org/Journal/10.3389/fphys.2014.00224/abstract>) Frontiers in Physiology. 5:224. doi: 10.3389/fphys.2014.00224 5

Gavery MR and Roberts SB. (2014) [A context specific role for DNA methylation in bivalves] (<http://bfg.oxfordjournals.org/content/13/3/217>) Briefings in Functional Genomics. doi:10.1093/bfgp/elt054 ([pdf] (<http://eagle.fish.washington.edu/cnidarian/Briefings%20in%20Functional%20Genomics-2014-Gavery-217-22.pdf>)) 3

Gavery MR and Roberts SB. (2013) [Predominant intragenic methylation is associated with gene expression characteristics in a bivalve mollusc] (<https://peerj.com/articles/215/>) PeerJ 1:e215. doi:10.7717/peerj.215 6



Garcia-Vedrenne AE, Groner M, Page-Karjian A, Siegmund G-F, Singhal S, Sziklay J and Roberts SB. (2013) [Development of Genomic Resources for a thraustochytrid Pathogen and Investigation of Temperature Influences on Gene Expression] (<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0074196>) PLoS ONE 8(9): e74196. doi:10.1371/journal.pone.0074196 2

Storer CS, Quinn TP and Roberts SB. (2013) [Quantitative PCR analysis used to characterize physiological changes in brain tissue of senescent sockeye salmon] (<http://link.springer.com/article/10.1007/s10522-013-9448-1>) Biogerontology. doi:10.1007/s10522-013-9448-1 ([pdf] (<https://dl.dropboxusercontent.com/u/115356/docs/Storer2013.pdf>)) 2

Burge CA, Mouchka ME, Harvell CD and Roberts SB. (2013) [Immune response of the Caribbean sea fan, *Gorgonia ventalina*, exposed to an *Aplanochytrium parasite*, as revealed by transcriptome sequencing] (http://www.frontiersin.org/invertebrate_physiology/10.3389/fphys.2013.00180/abstract) Frontiers in Physiology 4:180. doi:10.3389/fphys.2013.00180 15

Timmins-Schiffman EB, Nunn BL, Goodlett DR and Roberts SB. (2013) [Shotgun proteomics as a viable approach for biological discovery in the Pacific oyster] (<http://conphys.oxfordjournals.org/content/1/1/cot009.full.pdf+html>) Conservation Physiology. doi:10.1093/conphys/cot009 3

Peer-Reviewed Publications

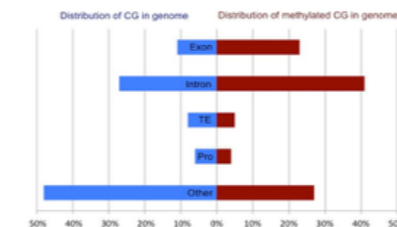
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Timmins-Schiffman E, Coffey WD, Hua W, Nunn BL, Dickinson GH and Roberts SB. (2014). [Shotgun proteomics reveals physiological response to ocean acidification in *Crassostrea gigas*] (<http://www.biomedcentral.com/1471-2164/15/951/>) BMC Genomics 2014, 15:951 doi:10.1186/1471-2164-15-951 6

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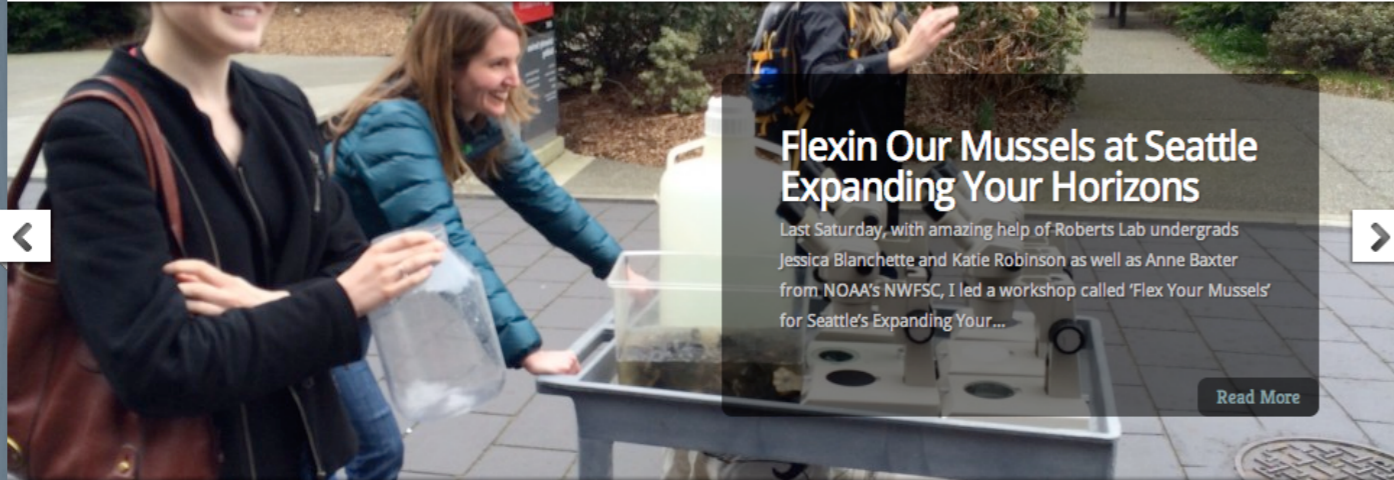


Garcia-Vedrenne AE, Groner M, Page-Karjian A, Siegmund G-F, Singhal S, Sziklay J and Roberts SB. (2013) [Development of Genomic Resources for a thraustochytrid Pathogen and Investigation of Temperature Influences on Gene Expression] (<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0074196>) PLoS ONE 8(9): e74196. doi:10.1371/journal.pone.0074196 2

Storer CS, Quinn TP and Roberts SB. (2013) [Quantitative PCR analysis used to characterize physiological changes in brain tissue of senescent sockeye salmon] (<http://link.springer.com/article/10.1007/s10522-013-9448-1>) Biogerontology. doi:10.1007/s10522-013-9448-1 ([pdf] (<https://dl.dropboxusercontent.com/u/115356/docs/Storer2013.pdf>)) 2

Burge CA, Mouchka ME, Harvell CD and Roberts SB. (2013) [Immune response of the Caribbean sea fan, *Gorgonia ventalina*, exposed to an *Aplanochytrium parasite*, as revealed by transcriptome sequencing] (http://www.frontiersin.org/invertebrate_physiology/10.3389/fphys.2013.00180/abstract) Frontiers in Physiology 4:180. doi:10.3389/fphys.2013.00180 15

Timmins-Schiffman EB, Nunn BL, Goodlett DR and Roberts SB. (2013) [Shotgun proteomics as a viable approach for biological discovery in the Pacific oyster] (<http://conphys.oxfordjournals.org/content/1/1/cot009.full.pdf+html>) Conservation Physiology. doi:10.1093/conphys/cot009 3



Flexin Our Mussels at Seattle Expanding Your Horizons

Last Saturday, with amazing help of Roberts Lab undergrads Jessica Blanchette and Katie Robinson as well as Anne Baxter from NOAA's NWFSC, I led a workshop called 'Flex Your Mussels' for Seattle's Expanding Your...

Read More

Research

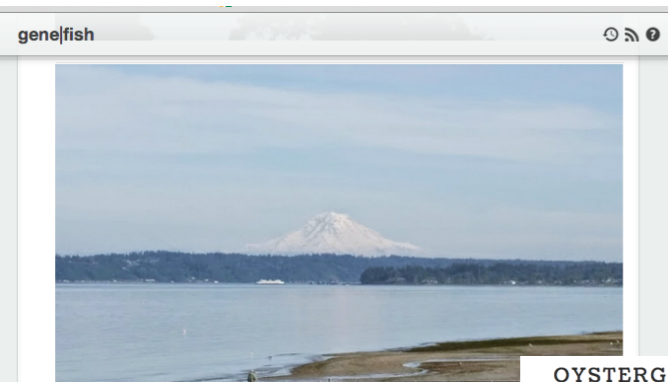
Research in our lab focuses on characterizing physiological responses of

Open Science

We practice open science with lab members maintaining online electronic lab

News and Notes

- Congrats to Claire Olson - recipient of College travel award! [5/14]



OYSTERGEN.ES

PACIFIC OLYMPIA



Exploring the biology of oysters, a few hundred base pairs at a time.

About this Site

This site is intended to serve as a portal for sharing research data, resources, and information as it pertains to active research efforts that intersect the fields of shellfish genomics and environmental science. The site currently highlights two species, a photo album and a blog.

qdod 2.0

As part of an ongoing effort to make it easier to Query Disparate Oyster Datasets we have published a new set of documentation for the project. In brief, data in the form of delimited text files is aggregated into SQLShare where they can be easily queried.

is developed to serve as a portal for information on active research on ocean acidification within the School of Aquatic and Fishery Sciences at the University of Washington. Project highlights are provided below with occasional posts found in the adjacent column. In general most of our research focuses on how changing ocean conditions impact marine invertebrates.

PROJECT: OCEAN ACIDIFICATION AND EMERGING DISEASES IN THE PACIFIC NORTHWEST

The goal of this project is to characterize the factors that threaten the aquaculture industry and wild shellfish. The primary approaches include a series of laboratory experiments and environmental sampling. The research effort has been developed to test the following hypothesis: Environmental stressors (elevated temperature and carbon dioxide) will enhance disease expression and reduce larval bivalve survival. More specifically we are testing the impact of single and multiple biotic and abiotic

Ocean Acidification

Research Notes from the School of Aquatic and Fishery Sciences

OM POST FRIEDMAN LAB ROBERTS LAB PRESENTATIONS OUTREACH



SEARCH

SEARCH [input] Search

FUNDING

- Washington Sea Grant
- NMMA Salmon-Kennedy Grant Program
- 104% \$5,175 Successful Funded Award
- CloudFlare Computer
- 65 Project Funders @ Rockfishlab
- School of Aquatic and Fishery

LINK

Shotgun proteomics reveals physiological response to ocean acidification in Crassostrea gigas | Ocean acidification.

Comments Off

Posted on May 20, 2014 in Link
Tagged emma, proteomics, research
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IMAGE

Set-up



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Lab Notebooks

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home

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This wiki has been developed as a resource for lab personnel and students to access information and publish research activities using an [open notebook science](#) based system. All lab notebooks can be accessed via the side menu. The Roberts Lab is in the [School of Aquatic and Fishery Sciences](#) within the [College of Environment](#) at the [University of Washington](#). More information can be found concerning [research](#), [personnel](#), and [outreach](#) on the [Roberts Lab Official Webpage](#).

Laboratory Reference Material

- [Data and Resource Sharing Plan](#)
- [Laboratory Protocols](#)
- [Emergency Contact Information](#)
- [UW Lab Safety Manual](#)
- [Code Repository](#)
- [UW Biosafety Manual](#)
- [Chemical Inventory](#)

Lab Activity and Communication

- [Lab Meetings](#)
- [IPUS: Information for Prospective Undergraduate Students](#)
- [Lab Calendar](#)

Data Repositories

- [The Eagle](#)
- [CLC Genomics Server](#) (password protected)
- [Primer Database](#)
- [NGS Library Info](#)
- [crassostreome](#)



Open Science Philosophy

Transparency with limited effort

will try just about anything

Biology

Environment

Molecular

Data Analysis

eScience

iPlant Galaxy

Notebooks

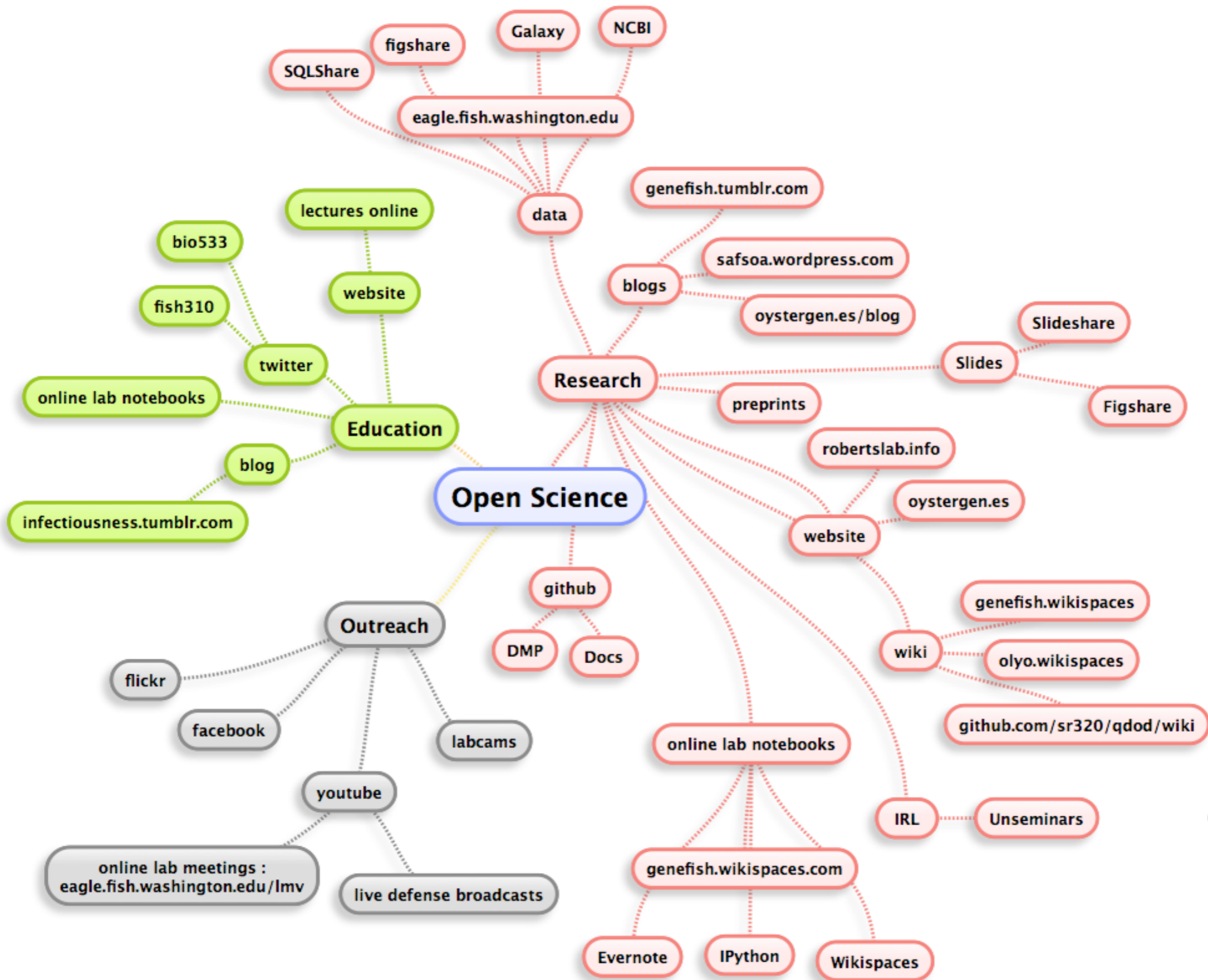
Rationale

Platforms

Open Science

Data

everything else...



Biology

Environment

Molecular

Data Analysis

eScience

iPlant Galaxy

Notebooks

Rationale

Platforms

Open Science

Data

everything else...

BioCode's Notes

Computational Proteomics & Bioinformatics

- Home
- Software & Tools
- Programming Tips
- Core Manuscript
- Polls
- E

Wednesday, 19 February 2014

In the ERA of science communication, Why you need Twitter, Professional Blog and ImpactStory?

Yasset Perez-Riverol on Wednesday, February 19, 2014

Certification & Reward

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GitHub **Figshare** **ProteomeXchange**

Data Repositories **ArrayExpress** **CPAN & CRAN**

Data

Dissemination

Biology

Environment

Molecular

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eScience

iPlant Galaxy

Notebooks

Rationale

Platforms

Open Science

Data

everything else...

metrics

FigShare

Steven Roberts @sr320 · May 8

Stein: "#reproducibility is just a synonym for actually right" #uwrepro modular.math.washington.edu

3 3

Twitter

Steven Roberts @sr320 · May 8

Stark: "key to reproducibility is in the training" #uwrepro

3

Steven Roberts @sr320 · May 8

Freire: noWorkflow -supporting infrastructure to run scientific experiments w/o workflow management system github.com/gems-uff/nowor... #uwrepro

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dataset	758 views	18 shares
fileset	671 views	14 shares
dataset	464 views	5 shares
paper	433 views	1 shares
paper	331 views	9 shares

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#TBT #wayback	--
Who is doing Science today?	17
Who is doing Science today?	16
Roberts Lab shared a link.	38



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Subject areas

- Aquaculture, Fisheries and Fish Science
- Marine Biology
- Molecular Biology

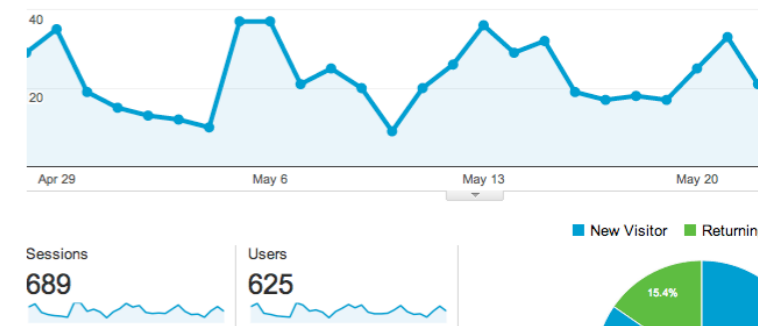
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metrics

FigShare

Steven Roberts @sr320 · May 8

Stein: "#reproducibility is just a synonym for actually right" #uwrepro modular.math.washington.edu

3 3

Twitter

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Stark: "key to reproducibility is in the training" #uwrepro

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Freire: noWorkflow -supporting infrastructure to run scientific experiments w/o workflow management system github.com/gems-uff/nowor... #uwrepro

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View summary

Open Access

Bronze level award

Steven has made 33% of 61 listed articles free for anyone to read.

ImpactStory

dataset	4923 views	16 shares
dataset	758 views	18 shares
fileset	671 views	14 shares
dataset	464 views	5 shares
paper	433 views	1 shares
paper	331 views	9 shares

changes behavior, for the better.

Post	
Roberts Lab shared	
#TBT #wayback	--
Who is doing Science today?	17
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viewed +1 | viewed +14

Web Analytics

Facebook

Subject areas

Aquaculture, Fisheries and Fish Science

Marine Biology

Molecular Biology

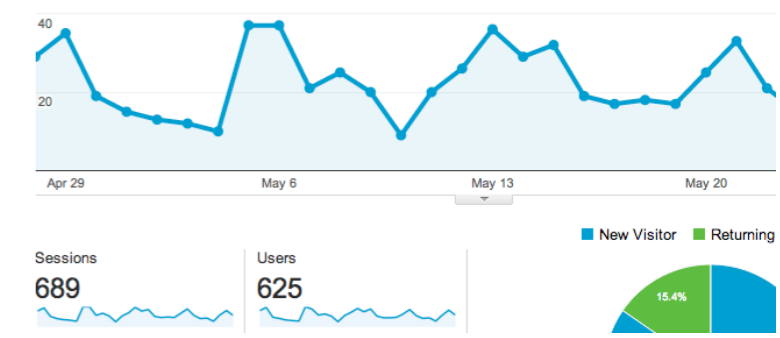
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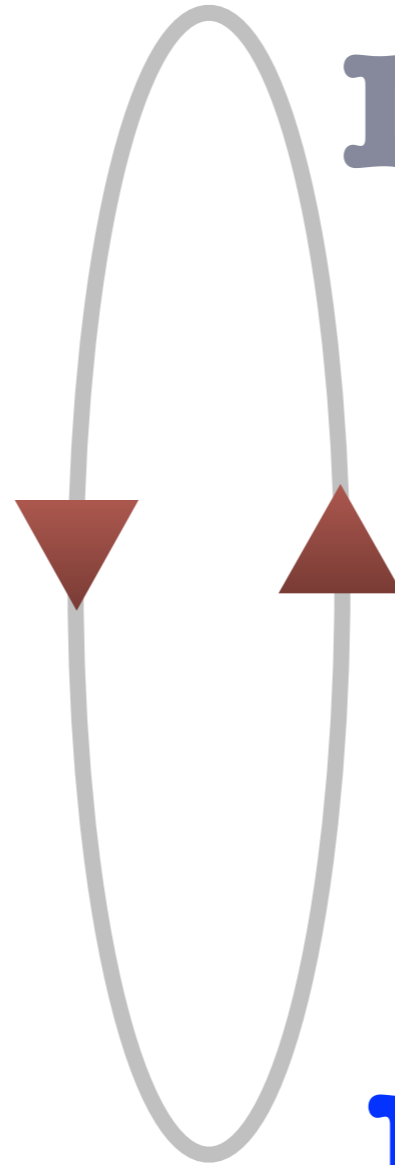
news-oceanacidification-icc.org 18



Open Science

Getting Information

Idea Generation Publication
 Publication
Data Acquisition Publication
and Analysis Publication



The stated mission of the University of Washington is “the advancement, *dissemination* and preservation of knowledge.”

Sharing Information

Any metric to inform on efficiency is valuable

Lots of stuff

My recommendations

baby steps...?

thanks!

Steven Roberts

sr320@uw.edu

robertslab.info

@sr320