## Washington University in St. Louis Washington University Open Scholarship

**University Libraries Presentations** 

**University Libraries** 

11-6-2015

#### Engineering a New Home: Creating a Repository Collection for Faculty AND Building a Larger Digital Presence for the School of Engineering

Lauren Todd Washington University in St Louis

Emily Symonds Stenberg Washington University in St Louis

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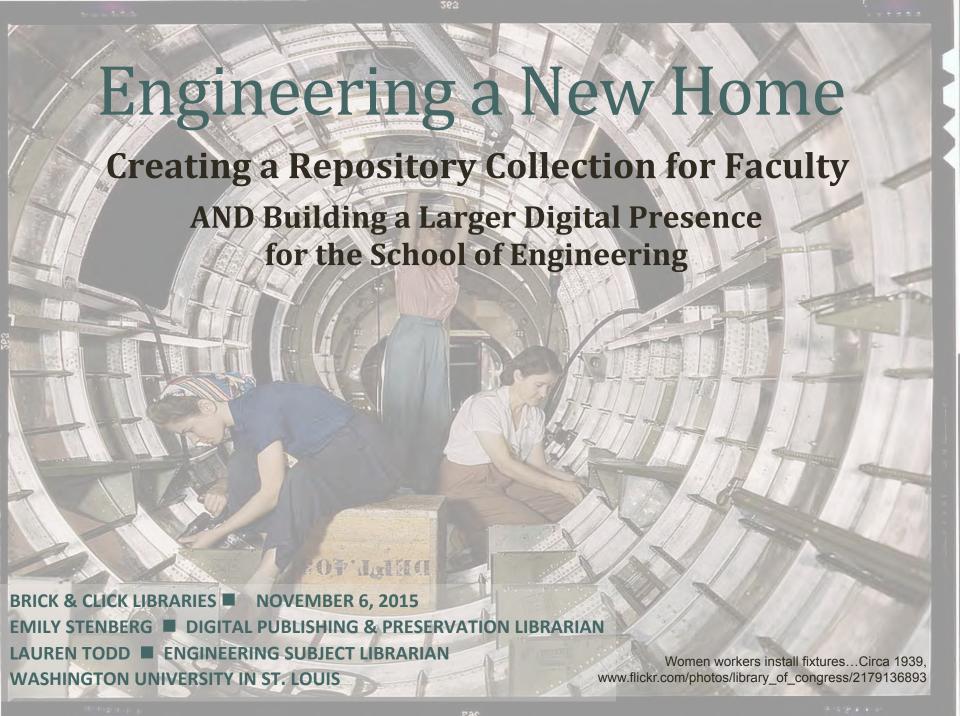
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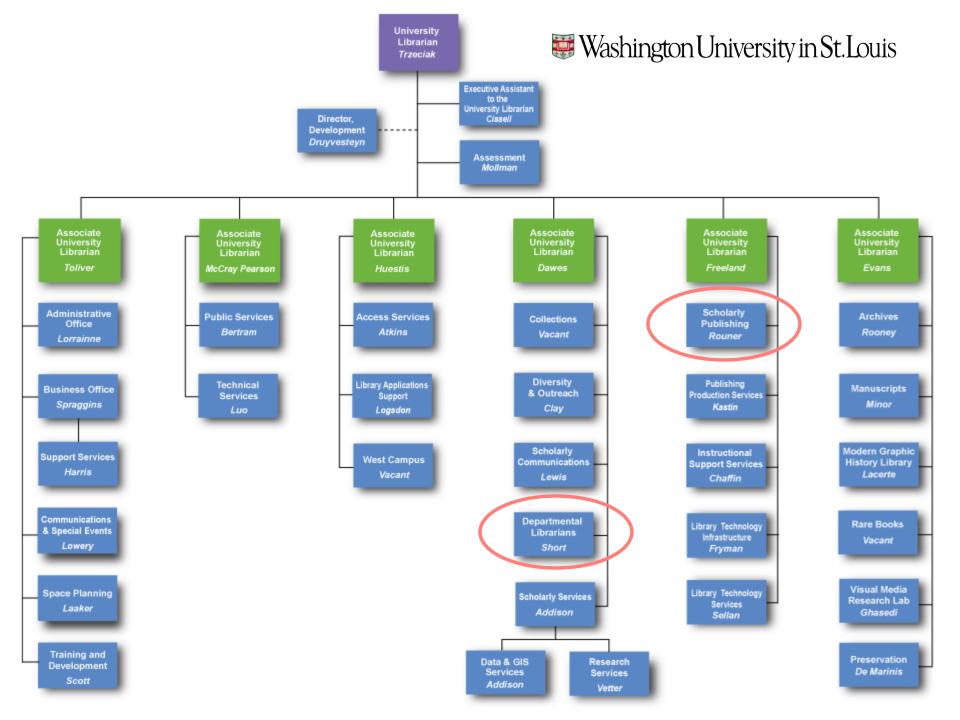
Part of the <u>Cataloging and Metadata Commons</u>, <u>Engineering Commons</u>, <u>Scholarly</u> <u>Communication Commons</u>, and the <u>Scholarly Publishing Commons</u>

#### Recommended Citation

Todd, Lauren and Stenberg, Emily Symonds, "Engineering a New Home: Creating a Repository Collection for Faculty AND Building a Larger Digital Presence for the School of Engineering" (2015). *University Libraries Presentations*. 21. https://openscholarship.wustl.edu/lib\_present/21

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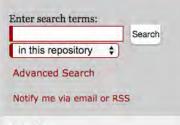




#### WASHINGTON UNIVERSITY OPEN SCHOLARSHIP



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#### Links

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#### Browse

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- · Books, monographs, and catalogs
- · Conferences and symposia
- Data and data sets
- Electronic theses and dissertations
- · Faculty scholarship
- · Journals and peer-reviewed series
- Student scholarship



The Open Scholarship repository is a service of the Washington University in St. Louis libraries to provide free access to the scholarly output of the university. See the About and FAQ pages for links to details on mission, content and contributing.



#### At a Glance

#### Top 10 Downloads

All time

#### Recent Additions

20 most recent additions

#### Paper of the Day

#### The Method of Law

Max Radin

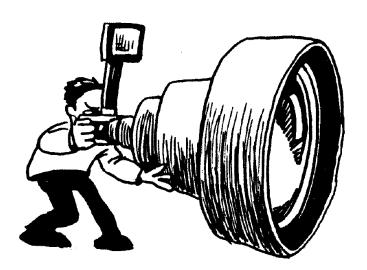
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## Emily at Work

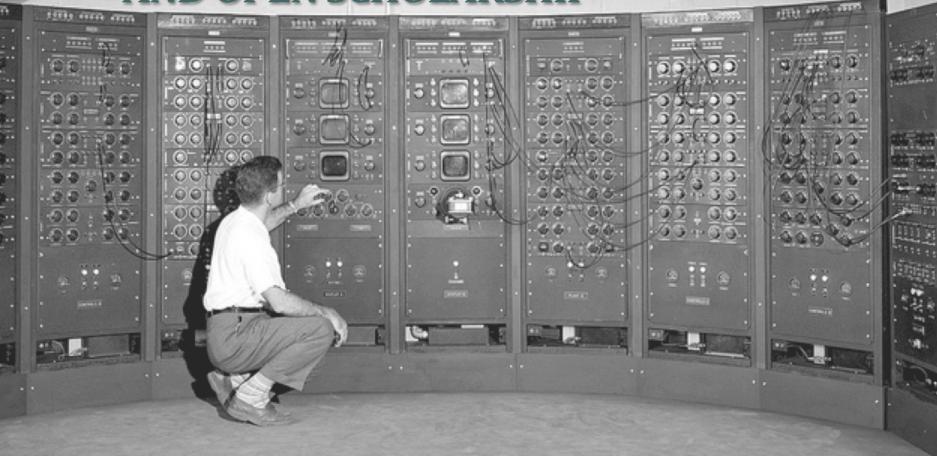


## Snapshot 2013

- Dec. 2013: 1,161 Items / 106,471 Downloads
  - Graduate ETDs = 974
  - Undergraduate Work = 67
  - Faculty Publications = 75<sup>1</sup>
  - Other = 45



# & ENGINEERING DEPARTMENT AND OPEN SCHOLARSHIP



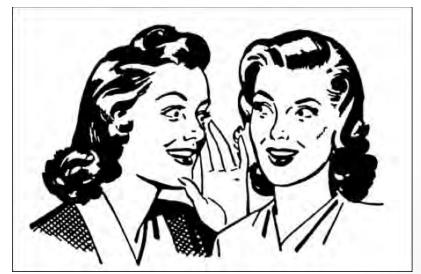
#### Timeline

- April 2014 Head of Chemistry/Engineering Library contacts Emily
- May Emily & Lauren discuss project
- June/July Internal Workshop
   Introduction to Open Scholarship for
   library staff who work with faculty
- August Meet with CSE department
- Through 2015 The Project!

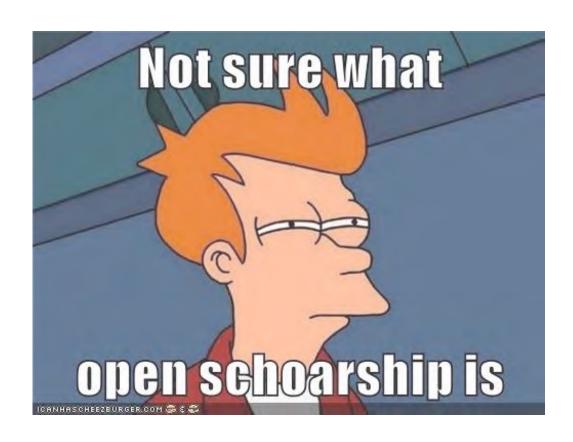
#### Word of Mouth

"The Computer Science & Engineering department is looking for a repository tool for their publications, theses and dissertations. I am recommending to the department chair and project

coordinator that they look into Open Scholarship to see if it might fit their needs."



### Lauren's Reaction



## **Q&A** for CSE Collection

- Whose materials are being submitted?
   Faculty and students, both graduate and undergrad
- What type of content is being submitted?
   Technical reports, theses and dissertations, with the possibility of adding pictures, videos, and other documents later. Journal and conference article reprints, depending on copyright laws.
- Are these print-only or electronic materials?
   These would initially all be .pdf documents, with eventually the possible addition of graphics, video, and audio files as well as possibly archive files of software packages.

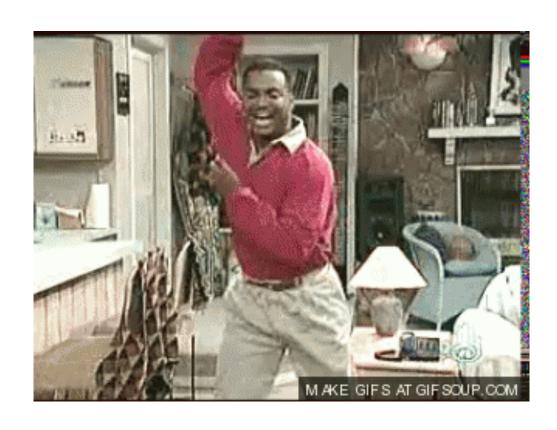
THIS BECAME A MINOR ISSUE. MORE ON THAT LATER.

## **Q&A** for CSE Collection

- What type of access do you want to provide?
   The standard is full, open access. Restriction options are generally available for previously unpublished works.

   This would be open access
- What is your timeline for having the materials available in the repository? Is this a one-time or ongoing project?
   This is an ongoing project, and we would like everything to be available as soon as possible. Ideally, for unpublished technical reports, availability should be mostly immediate.

## Open Scholarship = Perfect Match



# PROJECT TEAM



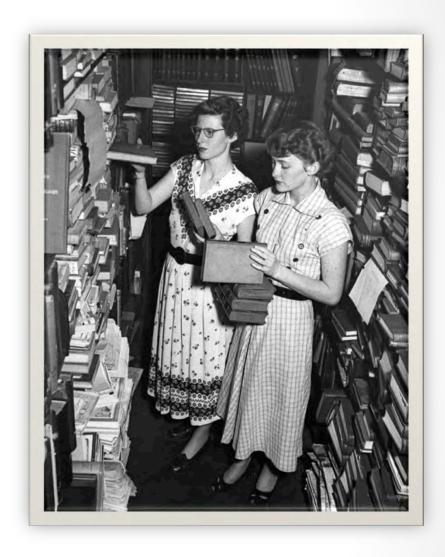
ASSEMBLE

## The Players

Emily Stenberg
Lauren Todd
Librarians

**Consulting Services** 





## The Players: CSE



**Roch Guerin**Department Chair





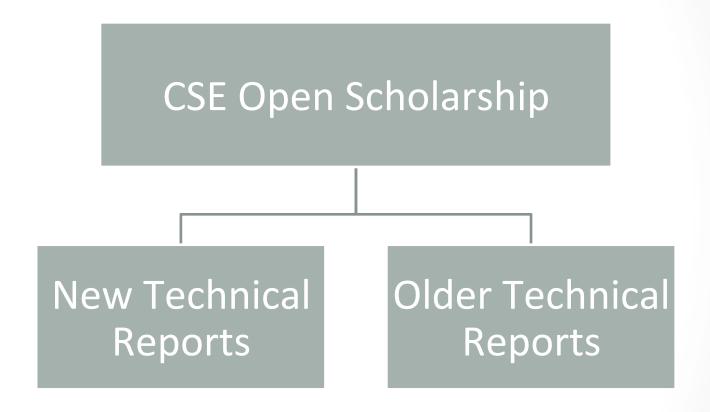


**Lauren Huffman**Project Coordinator

Student Worker X
Excel Coder



### The Process





**Creating the Initial Collection** 

## NEW TECHNICAL REPORTS

#### **Collection Customizations**

- The Submission Form
  - KISS Philosophy
    - From 19 fields to 8!



- Submission Structure
  - One Bucket flows down to smaller buckets

Browse the *Computer Science and Engineering* Collections:

All Computer Science and Engineering Research

Conference and Workshop Papers

Conference Posters

Journal Articles

Reports

#### Display Additional Metadata on Series page

#### A PDF

#### Exploring User-Provided Connectivity

Mohammad H. Afrasiabi and Roch Guerin Technical Report

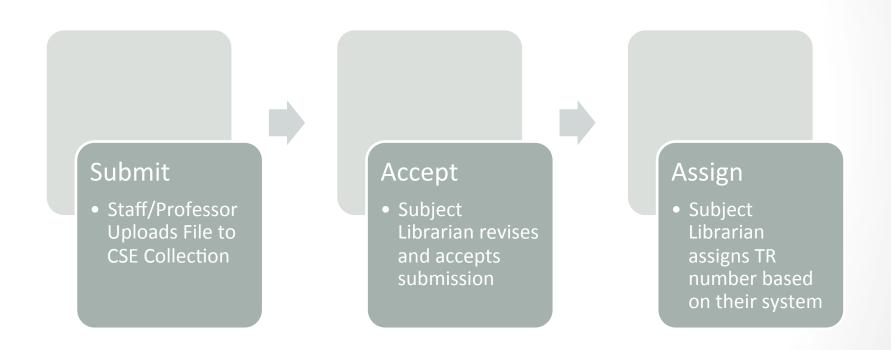
#### Abstract:

Network services often exhibit positive and negative externalities that affect users' adoption decisions. One such service is "user-provided connectivity" or UPC. The service offers an alternative to traditional infrastructure-based communication services by allowing users to share their "home base" connectivity with other users, thereby increasing their access to connectivity. More users mean more connectivity alternatives, *i.e.*, a positive externality, but also greater odds of having to share one's own connectivity, *i.e.*, a negative externality. The tug of war between positive and negative externalities together with the fact that they often... Read More

#### Advanced Search Function Features



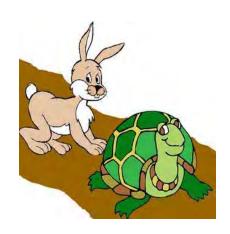
#### The Launch



#### The Tweaks

Too Fast, Too Slow? ReportNumbers

File Format & Cover Page









**Backfilling the collection** 

## **OLD TECHNICAL REPORTS**

## What is this Google Batch thing?



OR



- Workflow using Google Drive, a "getURLS App script," and Excel for semi-automated batch upload
- See <u>engagedscholarship.csuohio.edu/msl\_facpub/105/</u> (Cleveland State University, 2014)

# Batch Uploading Old Reports

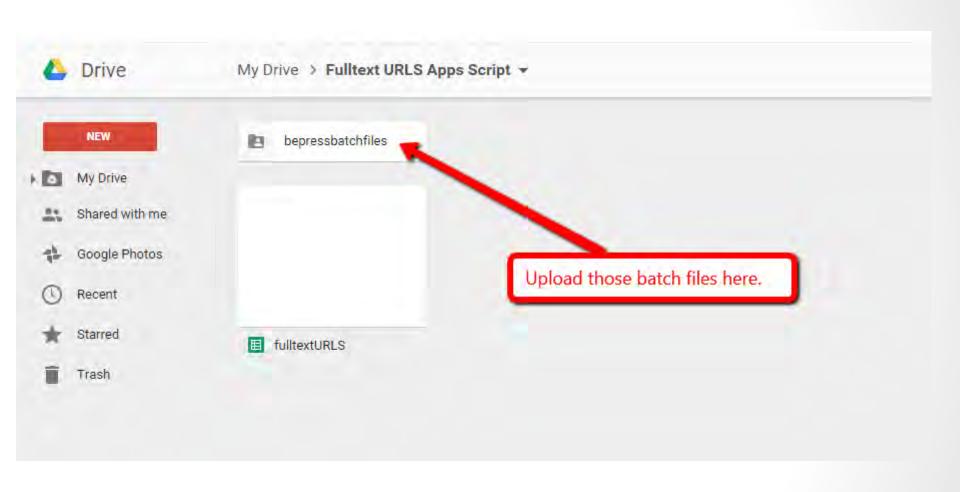
Student Worker Codes in Excel Spreadsheet

CSE Project Manager shares files in Google Docs

Run Script

Subject Librarian uploads to bepress

Success!



#### My Drive > Fulltext URLS Apps Script > bepressbatchfiles >





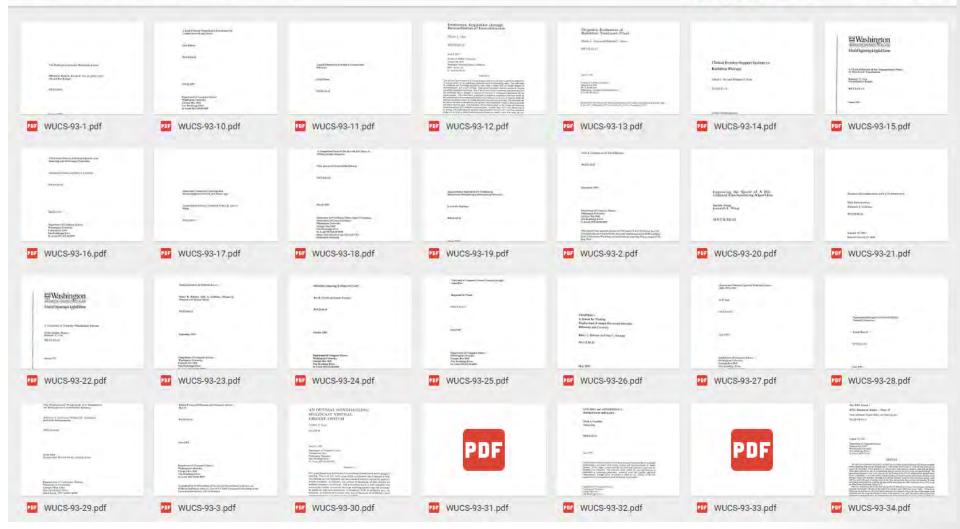


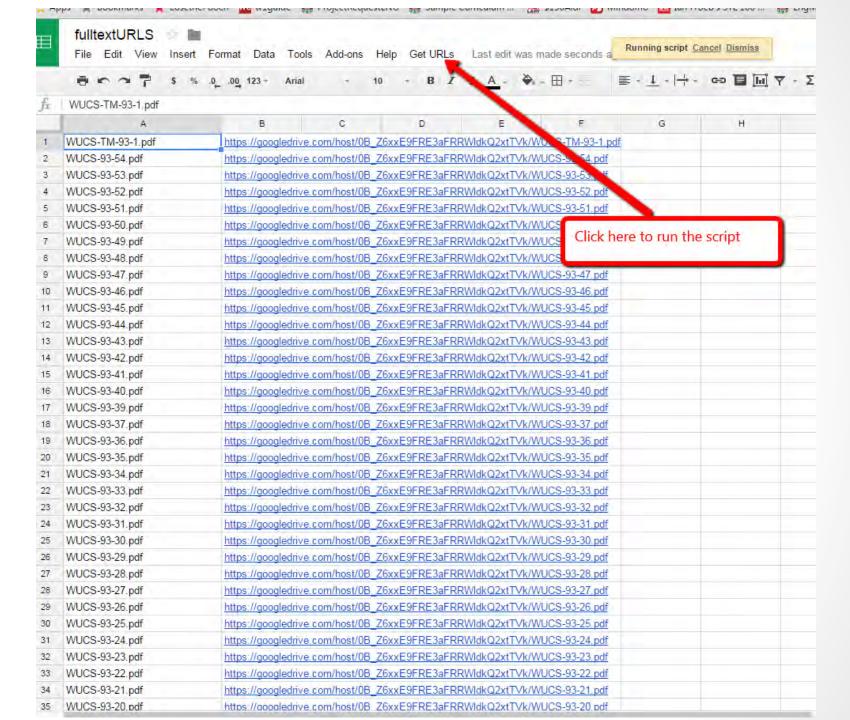




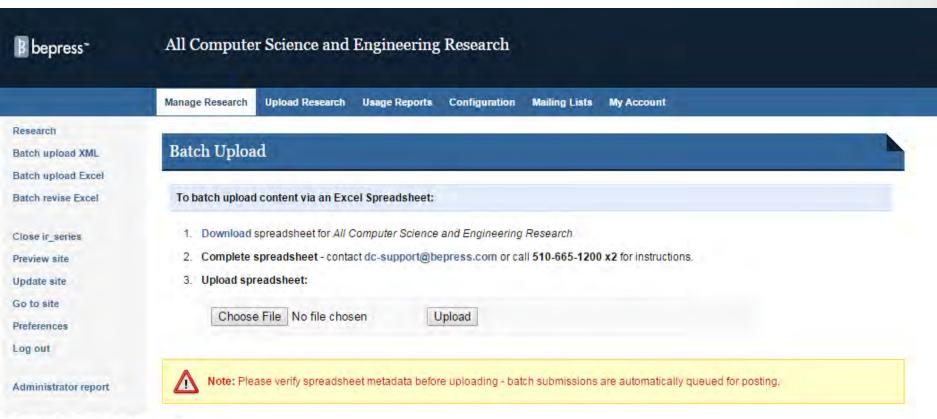








1 title		author1 mame	G author1 mname	author1 Iname	author1 suffix	author1 e author1 institutio	author1 author2 fname	author2 mname	author2 Iname
The Washington University Multimedia System	WUCS-93-1.pdf	William	D.	Richard		Washington	FALSE Jerome	R.	Cox
A Fault Tolerant Connectionist Architecture for Construction	WUCS-93-10.pdf	Gadi		Dinkas		Wachington	FALSE		
Logical Interference in Symmetric Connectionist Networks	WUCS-93-11.pdf	Gaur	B 4 4 10	ene i i		and a second second	FALSE		
Research Proposal: Preference Acquisition through	WUCS-93-12.pdf	Nilesh	Nilesh Paste HERE. Make sure these are in order. Spot check.				FALSE		
Objective Evaluation of Radiation Treatment Plans	WUCS-93-13.pdf	Nilesh	L.				FALSE Michael	G.	Kahn
7 Clinical Decision-Support Systems in Radiation Therapy	WUCS-93-14.pdf	Nilesh		- vanii		VV destribution	FALSE Michael	G	Kahn
A Characterization of the Computational Power of Rule-based	WUCS-93-15.pdf	Kenneth	C.	Cox		Washington	FALSE Gruia-Catalin	17	Roman
9 The N-body Problem: Distributed System Load Balancing and	WUCS-93-16.pdf	Vasudha		Govindan		Washington	FALSE Mark	A.	Franklin
Supervised Competitive Learning with Backpropagation	WUCS-93-17.pdf	Takayuki	Dan	Kimura		Washington	FALSE Thomas	H.	Fuller
1 A Comparison Study of The Pen and The Mouse in Editing	WUCS-93-18.pdf	Ajay		Apte		Washington	FALSE Takayuki	Dan	Kimura
12 Approximation Algorithms for Configuring Hierarchical	WUCS-93-19.pdf	July	Andrew	Fingerhut		Washington	FALSE	Dun	Tambia
13 Teaching a Smarter Learner	WUCS-93-2.pdf	Sally	A.	Goldman		Washington	FALSE H.	David	Mathias
14 Improving the Speed of A Distributed Checkpointing Algorithm		Sachin	7.	Garg		Washington	FALSE Kenneth	F	Wong
15 Dynamic Reconfiguration with I/O Abstraction	WUCS-93-21.pdf	Bala		Swaminathan		Washington	FALSE Kenneth	J.	Goldman
16 A Taxonomy of Program Visualization Systems	WUCS-93-22.pdf	Gruia-Catalin		Roman		Washington	FALSE Kenneth	C.	Cox
17 Asking Questions to Minimize Errors	WUCS-93-23.pdf	Nader	H.	Bshouty		Washington	FALSE Sally	A	Goldman
18 Efficiently Computing {phi}-Nodes On-The-Fly	WUCS-93-24.pdf	Ron	K.	Cytron		Washington	FALSE Jeanne	Α.	Ferrante
19 The Study of Computer Science Concepts through Game	WUCS-93-25.pdf	Benjamin	M.	Weber		Washington	FALSE	_	1 enance
20 TRAINREC: A System for Training Feedforward & Simple	WUCS-93-26.pdf	Barry	L.	Kalman		Washington	FALSE Stan	C.	Minara.
21 Human and Machine Cognition Workshop Papers 1989,	WUCS-93-27.pdf	R.	P.	Loui		Washington	FALSE Stall	U.	Kwasny
22 Segmentation/Recognition of Hand-Written Numeral	WUCS-93-28.pdf	Khalid	P.				FALSE		
	WUCS-93-29.pdf			Sherdil		Washington		D	A - L
23 The Programmers' Playground: I/O Abstraction for	WUCS-93-3.pdf	Kenneth	J. P	Goldman		Washington	FALSE Michael	D.	Anderson
24 A Design for Reasoning with Policies, Prrecedents and	WUCS-93-30.pdf	Ronald	P	Loui		Washington	FALSE Jeff		Norman
25 An Optimal Nonblocking Multicast Virtual Circuit Switch		longthan		Turner		Washington	FALSE		-
Real-time Admission Control Algorithms with Delay and Loss		Apostolos		Dailianas		Washington	FALSE Andreas	D.	Bovopoulos
27 Clocked and Asynchronous Instruction Pipelines	WUCS-93-32.pdf	Mark	A.	Franklin		Washington	FALSE Tienyo		Pan
28 The DIM system: Turn-Taking in Dyadic Telephone Dialogues	VVUCS-93-33.pdf	Umesh		Berry		Washington	FALSE Anne		Johnstone
The DIM system: WOZ Simulation Results - Phase II	WUCS-93-34.pdf	Anne		Johnstone		Washington	FALSE Umesh		Berry
30 A Unified Model for Shared-Memory and Message-Passing	WUCS-93-35.pdf	Kenneth		Goldman		Washington	FALSE Katherine		Yelick
31 Distributed Computing Systems and Checkpointing	WUCS-93-36.pdf	Ken		Wong		Washington	FALSE Mark		Franklin
Reasoning about Synchrony Illustrated on Three Models of	WUCS-93-4.pdf	Gruia-Catalin		Roman		Washington	FALSE Jerome		Plun
33 Clothespins on Timelines: Utilities and The Interval	WUCS-93-5.pdf	R.	P.	Loui		Washington	FALSE Jersey		Chen
34 SYMPHONY: A Hardware, Operating System, and Protocol	WUCS-93-6.pdf	Andreas	D.	Bovopoulos		Washington	FALSE R.		Gopalakrishna
35 Effective Loss of Multiplexed ATM Cell Streams	WUCS-93-8.pdf	Seyyed	M-R	Mahdavian		Washington	FALSE Andreas	D.	Bovopoulos
Representing and Learning Propositional Logic in Symmetric	WUCS-93-9.pdf	Gadi		Pinkas		Washington	FALSE		
7 Learning One-Dimensional Geometric Patterns Under One-	WUCS-94-1.pdf	Paul	W.	Goldberg		Washington	FALSE Sally	A.	Goldman
88 Visual Specification of Interprocess and Intraprocess	WUCS-94-10.pdf	T.	Paul	McCartney		Washington	FALSE Kenneth	J.	Goldman
9 Catching Up With the Networks: Host I/O at Gigabit Rates	WUCS-94-11.pdf	Zubin	D	Dittia		Washington	FALSE Jerome	R.	Cox
0 Rationales and Argument Moves	WUCS-94-12.pdf	R.		Loui		Washington	FALSE Jeff		Norman
1 Congestion Control in ATM Networks	WUCS-94-13.pdf	Apostolos		Dailianas		Washington	FALSE Andreas		Bovopoulos
12 Self-stabilization by Cunter Flushing	WUCS-94-14.pdf	George		Varghese		Washington	FALSE		12000
3 Strategies for the Parallel Training of Simple Recurrent Neural	WUCS-94-15.pdf	Peter	J.	McCann		Washington	FALSE Barry	L	Kalman
14 Trading Packet Headers for Packet Processing	WUCS-94-16.pdf	George		Varghese		Washington	FALSE		
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## Assigning Digital Object Identifiers

- WUSTL DOI system developed by CERL
- Site maintained by Libraries
- EZID license paid for by Libraries
- Assigning to repository content
  - ETDs
  - CSE Reports
- Available for entire university http://libguides.wustl.edu/doi



## **Current Project Status**



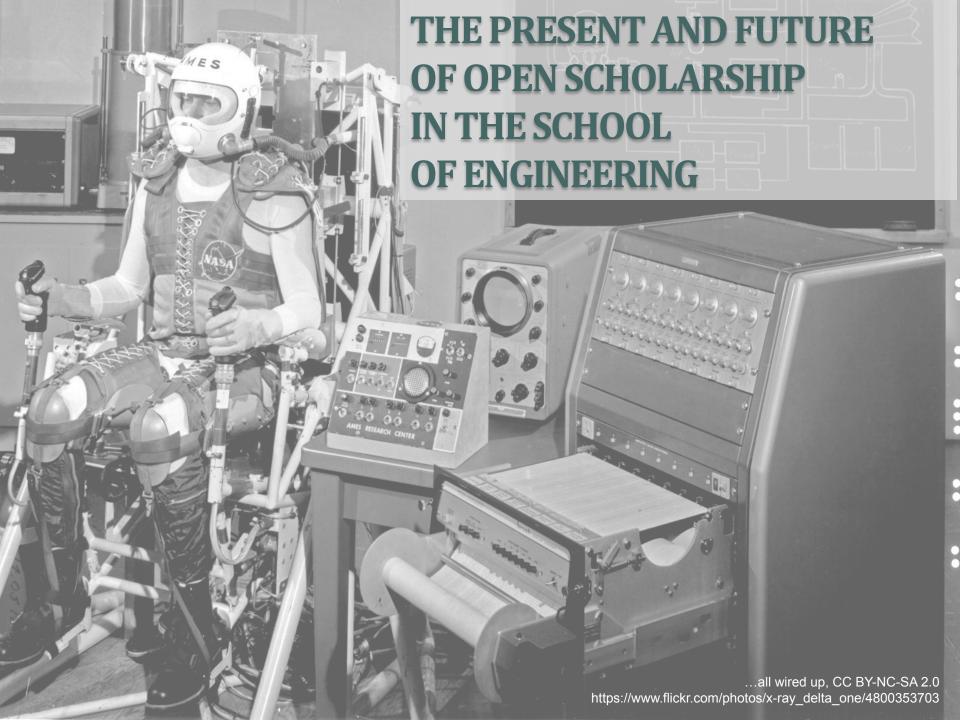
"Your call is important to us. Please stay on the line until your call is no longer important to you."

## By the Numbers

- 501 Technical Reports from 1993 to present
- 508 items in CSE collection<sup>1</sup>
- 5579 Total Downloads
- 309 downloads for report posted in Jan. 2015<sup>2</sup>



1 Other items self-submitted by faculty 2 "RT-OpenStack: a Real-Time Cloud Management System," 2014





## MECHANICAL ENGINEERING DESIGN CAPSTONE PROJECT

## **MEMS 411**

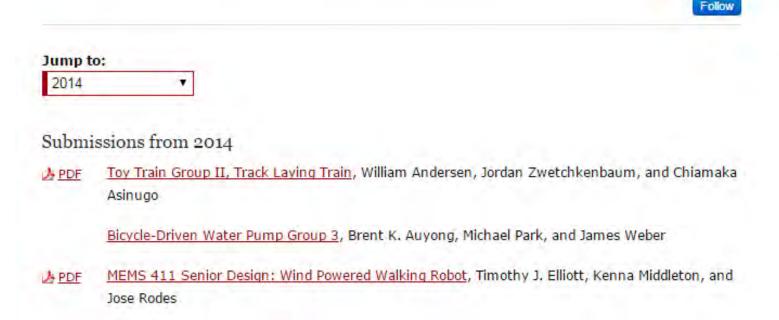
- Groups required to "publish" final project report
  - Post to a blog, other website, Twitter
  - Often deleted after the class
- Instructors wanted a permanent archive of past class projects and work

## Open Scholarship

#### MECHANICAL ENGINEERING DESIGN PROJECT CLASS

#### MEMS 411: Mechanical Engineering Design Project

Small student teams will complete design projects in an environment simulating a research and development setting. First, working individually, students will complete a conceptual design study for three (3) design briefs. These will be presented to the instructors and students for review and selection of favored concepts. Following the group concept selection, small teams (3-4 students) will be formed for each favored project. These teams will produce a preliminary working prototype, an engineering analysis proposal and associated engineering analyses, a final working prototype which will be "documented" in an appropriate manner (e.g. a CAD model), and a publication that will inform other interested parties of its existence.



#### Toy Train Group II, Track Laying Train

William Andersen

Jordan Zwetchkenbaum

Chiamaka Asinugo

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16 DOWNLOADS

Since December 11, 2014

#### **Publication Date**

Fall 12-9-2014

#### Document Type

Final Report

#### Author's School

School of Engineering and Applied Science

#### Author's Department

Mechanical Engineering and Materials Science

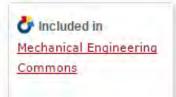
#### Class Name

Mechanical Engineering Design Project (MEMS 411)

#### Recommended Citation

Andersen, William; Zwetchkenbaum, Jordan; and Asinugo, Chiamaka, "Toy Train Group II, Track Laying Train" (2014). Mechanical Engineering Design Project Class. Paper 13.

http://openscholarship.wustl.edu/mems411/13



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#### Bicycle-Driven Water Pump Group 3

Brent K. Auyong, Washington University in St Louis

Michael Park, Washington University in St Louis

James Weber, Washington University in St Louis

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#### **Publication Date**

Fall 12-8-2014

#### Document Type

Final Report

#### Problem Statement

According to a recent study conducted by the NOAA, water shortages are becoming a growing trend and will affect nearly 36 states in the next 5 years. As a result, people are starting to collect excess rainwater and gently used water in large rain collection barrels. In an effort to reuse water, our customer requested a bicycle-powered device to pump water from their rain collection barrel to their garden approximately 50 yards away. This device must be a one-person operation and work without electricity. By reusing water and storing them in collection barrels, the user can save up to \$8.00 a month and up to 55 gallons of water at a time. Our design will also allow our customer to empty a full barrel in 15 minutes and move the water up to a height of 15 feet.

#### Author's School

School of Engineering and Applied Science

#### Author's Department

Mechanical Engineering and Materials Science

#### Class Name

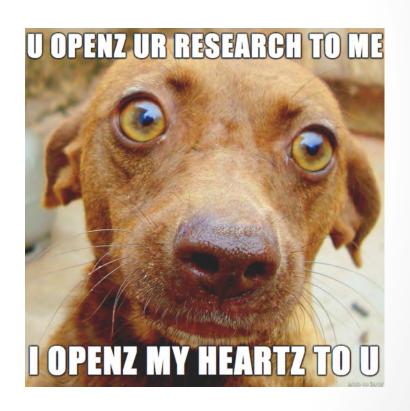
Mechanical Engineering Design Project (MEMS 411)

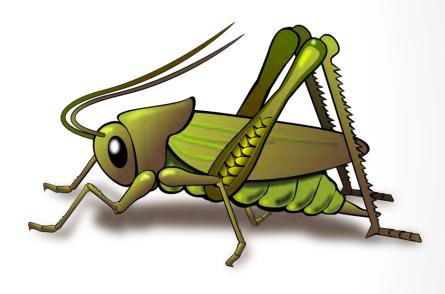
#### Recommended Citation

Auyong, Brent K.; Park, Michael; and Weber, James, "Bicycle-Driven Water Pump Group 3" (2014). Mechanical Engineering Design Project Class. Paper 1. http://openscholarship.wustl.edu/mems411/1

## Changes for 2015 Semester

- No Embargo Option
- Fully explain "Third-Party Search" Option
- "Spirit of Open Scholarship"





## TECHNICAL WRITING FINAL PROJECT COLLECTION

## Good candidate for Open Scholarship:



## Let's Do this!

From: Todd, Lauren

Sent: Wednesday, May 13, 2015 10:20 AM

To: Matteucci, Sandra; Dahlheimer, Seema; SEAS Engineering Communication Center

Cc:

Subject: Best Technical Writing Final Reports for Open Scholarship

The time has come to build our Technical Reports Repository!

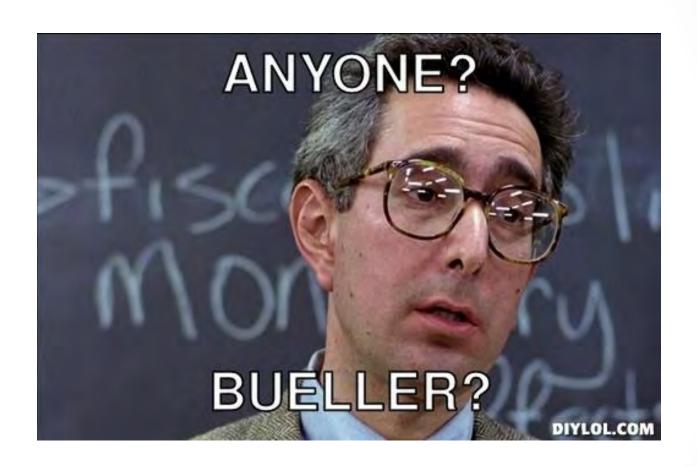
Please email those students with the reports you want to save into the collection. The individuals must submit the projects themselves. Here are the instructions on how they can submit their work. Let me know if you have any questions!

#### Instructions for Students

How to publish your Technical Writing Final Report to Washington University's Open Scholarship

- 1. Go to http://openscholarship.wustl.edu.
- 2. Click on "My Account" and then click "Create New Account." This will allow you to submit your report and edit your revisions.
- 3. After you have created and confirmed your account, go to <a href="http://openscholarship.wustl.edu/engr310/">http://openscholarship.wustl.edu/engr310/</a>
- 4. On the bottom left column, click "Submit Research."
- 5. Read the "Submission Agreement," agree to the terms and click to continue.
- 6. Fill out the required fields in the submission form and attach the main file. Consider the following:
- -Embargo Period: Do you want your research visible only after a period of time?
- -Third-Party Search: Do you want the text of your report to be searchable in Google?
- Additional Files: Do you have any video files, sketches, etc. that you would like attached to the report?
- 7. Click Submit.

You will receive an email confirmation, and when the file is posted, you will be emailed a permalink to the report.





# RETROSPECTIVE (EECE) CHEMICAL ENGINEERING THESES

## To be added to Open Scholarship

- In addition to NOT Instead of Print
  - Copies came from EECE
- Print theses already scanned
  - Individual PDFs
- Not comprehensive
  - Approx. 230 theses from 1972-2007
- First batch RTD project





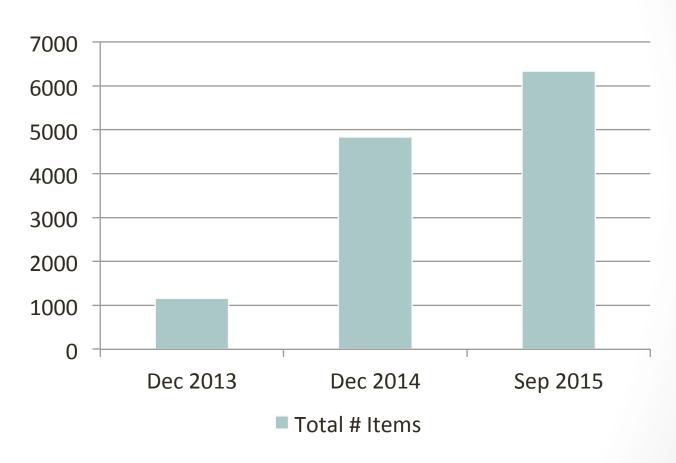
## Snapshot 2015

- Sep. 2015: 6,335 Items / 383,574 Downloads
  - Graduate ETDs = 1,938
  - Undergraduate Work = 2,975<sup>1</sup>
  - Faculty (& Staff) Publications = 912
  - Other = 510
- Sep. 2015 (with Law Content): 13,871 Items / 1,651,864 Downloads

2606 individual pages from 21 undergraduate journal issues

## Then and Now

### **Open Scholarship Content\***



<sup>\*</sup> Does not include Law publications

## Some Broader Takeaways

- Offer services and resources that are needed.
- Be patient. (If you build it...)
- Get out of your silo.
- Share the responsibility.
- Have a plan, but be flexible.
- Replicate success.





Questions? Comments? Concerns?

Thank you!

emily.stenberg@wustl.edu lauren.todd@wustl.edu

Slides will be at http://openscholarship.wustl.edu/lib\_present/21