History of Women in Computing and Women Leaders in Computing

Part 2: Wikipedia Project – Pages for Notable Women in Computing



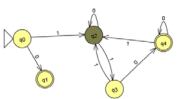
Susan Rodger Duke University

June 9, 2015 Microsoft Research Bellevue, WA



My Background

- Professor of the Practice of Computer Science
- Area: Visualization and Animation, Computer Science Education

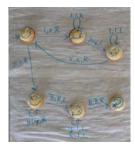


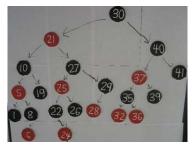
- Passionate about education/diversity
 - SIGCSE Chair
 - CRA-W Board Member





Also known for Edible CS











- Undergraduates
 - Research DREU, CREU
- Graduate Students
 - Graduate Cohort (years 1-3)
 - Discipline Specific Workshops
- Faculty, Government/Industry Labs
 - Career Mentoring Workshops
 - Early and Mid-Career
- Other programs/projects

How Visible are Notable Women in Computer Science?

- Pondered this question in early 2012
- Looked at Wikipedia
 - The internet encyclopedia
 - Who writes those pages?
 - Why did some notables have pages and others not?
- Turing Award Winners
 - Only two women at that time



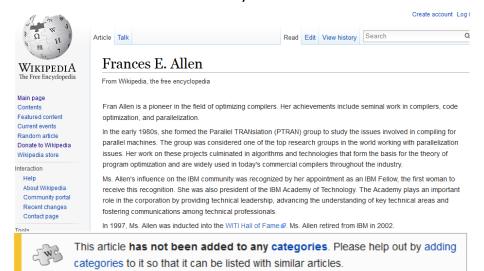
Fran Allen

- School teacher got a job at IBM
- Compilers and Optimization Technology
- IBM Fellow First Women
- Turing Award (2006) First Woman
- The Turing Award was announced on Feb. 21, 2007
- Her Wikipedia page was created on...
 - Feb. 6, 2007
- On Feb 21, 2007 the Turing Award was added to her Wikipedia page.

Here is that first page for Fran Allen



Three days later...



Turing Award Announced and added to her page

In 1997, Ms. Allen was inducted into the WITI Hall of Fame & Ms. Allen retired from IBM in 2002.

Early 2007, she became the first woman to win the the A.M. Turing Award.

Categories: Turing Award laureates

A. M. Turing Award laureates [hide] Alan Perlis (1966) • Maurice Vincent Wilkes (1967) • Richard Hamming (1968) • Marvin Minsky (1969) • James H. Wilkinson (1970) • John McCarthy (1971) • Edsger W. Dijkstra (1972) • Charles Bachman (1973) • Donald Knuth (1974) • Allen Newell / Herbert A. Simon (1975) • Michael O. Rabin / Dana Scott (1976) • John Backus (1977) • Robert W. Floyd (1978) • Kenneth E. Nerson (1979) • Tony Hoare (1980) • Edgar F. Codd (1981) • Stephen Cook (1982) • Ken Thompson / Dennis Ritchie (1983) • Niklaus Wirth (1984) • Richard Karp (1985) • John Hopcroft / Robert Tarjan (1986) • John Cocke (1987) • Ivan Sutherland (1988) • William Kahan (1989) • Fernando J. Corbató (1990) • Robin Milner (1991) • Butler Lampson (1992) • Juris Hartmanis / Richard E. Stearns (1993) • Edward Feigenbaum / Raj Reddy (1994) • Manuel Blum (1995) • Amir Pnueli (1996) • Douglas Engelbart (1997) • Jim Gray (1998) • Fred Brooks (1999) • Andrew Yao (2000) • Ole-Johan Dahl / Kristen Nygaard (2001) • Ron Rivest / Adi Shamir / Leonard Adleman (2002) • Alan Kay (2003) • Vint Cerf / Bob Kahn (2004) • Peter Naur (2005) • Frances E. Allen (2006)



In the next three days

Over 30 edits, added awards, boards

Awards and honors

Allen is a member of the National Academy of Engineering, a fellow of the IEEE, the

Association for Computing Machinery (ACM); and the American Academy of Arts and

Sciences. The is currently on the Computer Science and Telecommunications Board, the

Computer Research Associates (CRA) board and National Science Foundation's CISE

Advisory Board.

In 1997, Allen was inducted into the WITI Hall of Fame.^[3] She retired from IBM in 2002 and won the Augusta Ada Lovelace Award that year from the Association for Women in Computing. In 2007, she became the first woman to win the A.M. Turing Award.^[4]

Barbara Liskov

- Turing Award (2008)
- Currently Institute Professor at MIT
- One of the first women to get a PhD in CS in the U.S. (1968) – thesis on chess
- Research
 - Venus operating system
 - Design and Implementation of CLU
 - Argus, high-level language for distributed programs
 - Thor, object oriented database system
- Many awards NAE, AAAS, Fellow ACM
- Had a Wikipedia page since before Turing Award

Wikipedia page created June 15, 2005





39 minutes later



Shafi Goldwasser

• I was in algorithms, followed her career



Page written July 2004



What about other Notable Women in Computer Science?

- ACM Fellows
 - Few women
 - 1994 first year over 130 Fellows
 - 9-12 were women? Less than 10%
 - About 20-50 Fellows per year
 - 2014 47 fellows, 6-8 women
 - Noticed few of Women had Wikipedia pages



Investigate New CRA-W Project

- Write Wikipedia pages for Notable women in Computing
- How hard is it to write a Wikipedia page?
 - Lots of rules you have to follow
- Another area with few women
 - 2013 study 16% of Wikipedia writers are female

Some Rules in Writing Wikipedia Biography pages

- You cannot write your own page!
- Neutral point of view
- Person must be notable
- No original research
 - Must write only facts and reference them
 - Must be verifiable
 - Do not plagiarize write in your own words
- Regard for subject's privacy
 - NOT A TABLOID!

Wrote a Wikipedia page

- We had no idea what we were doing....
- At a CRA-W Board meeting in April 2012
- Who to write?
 - Female Turing Award winners had pages
 - All two of them

Mary Jane Irwin

- Professor at Penn State University
- VLSI Architecture and Automated Design
- Board Level Designs
 - Arithmetic Cube, MGAP, and SPARTA
- Architecture, Logic & Circuit Design Tools
 - ARTIST, PERFLEX, LOGICIAN, DECOMPOSER
- Awards
 - National Academy of Engineering
 - ACM Fellow, IEEE Fellow
- No Wikipedia page!



In writing her Wikipedia page,

Here is what happens when you don't know what you are doing...



Spent some time figuring out basics of how to write a biography page

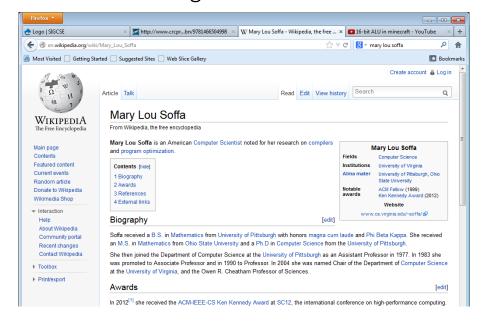
- Checked out other pages
- Did some edits on pages
- Then tried again

Mary Lou Soffa

- Professor at University of Virginia
- Programming languages
- Compiler technology
- Software Engineering
- Ken Kennedy Award, 2012
 - "provided analytical and experimental models for understanding, predicting and verifying the optimization of software"
- ACM Fellow, 1999
- IEEE Fellow, 2012
- Presidential Award for Excellence in Science, Math and Engineering Mentoring, 1999



I think I figured out how to do it.

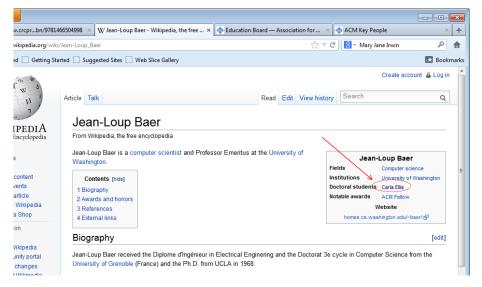


Carla Ellis



- Emeritus Professor Duke University
- Operating Systems
- Energy Management on Mobile Devices
- ACM Fellow

Wrote a page for her advisor Also an ACM Fellow



Another One



Figured out how to add a picture Pictures must be added to Wikimedia and be public



Feeling confident, I do another page Wrote page offline and dropped in



Putting References in

- Simplest way Bare URL:<ref> reference here </ ref>
- Better way Full Citation:

}}</ref>

But still figuring things out There is a format for URL



Page edited and flagged by others quickly

Edited by Smileguy91 in One Minute! Warning added in 3 Minutes!



Do people create new pages?

- James Bonk
 - Duke Chemistry Professor for 53 years
 - Famous for the flat tire story
 - The University Medal at Duke University
 - Died March 15, 2013
 - No Wikipedia page
 - Lots of Newspaper articles
 - Waited three days, then created his page.
 - Others started editing the page

Mary Jean Harrold



- CS Professor at Georgia Tech
- Software Engineering
- Foundational research on static analysis and testing of software
- In 2007, ACM named her top software engineering researcher in the world
- ACM Fellow, IEEE Fellow
- Died of cancer, Sept 19, 2013
- Wrote Wikipedia page Sept 21, 2013

James Bonk – "Bonkistry"



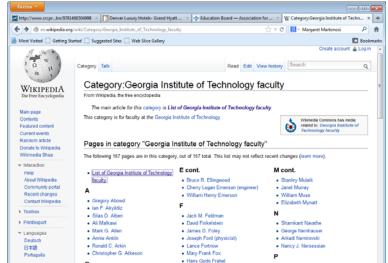


Susan Horwitz



- CS Professor at Univ of Wisconsin
- Area of programming languages, software engineering
- Known for program slicing and data-flow analysis
- Several best paper awards and teaching awards
- Chair of AP CS, Peer Led Team Learning with Computer Science
- Created Wikipedia page March 29, 2014
- Died June 11, 2014 of stomach cancer

How do others get Wikipedia pages written? – grad students





Wrote a Guide on How to Write Wikipedia Biography www.cs.duke.edu/csed/wikipedia



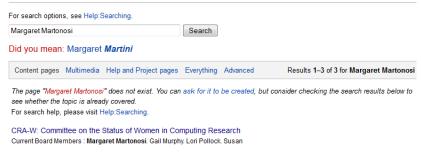
Our Wikipedia Guide

- Shorter and more focused then Wikipedia Guide
- Getting Started
 - Get an account
 - Edit some pages
- Select someone to write about
 - Make sure they don't already have a page

Creating a new Wikipedia page

- Copy our template to get started
- Make it a short simple page
 - Education, few awards, links to a few papers
- Search for the name you want the title of the page to be, click to create that page

Search results



Our Database of Notable Women in CS

- Over 300 women
- Why notable
- Status of their Wikipedia page
- Forms for adding women and updating status

| | Title/Position | Web page | Prestigious Award or why notable | Wikipedia page? |
|----|---------------------------------------------------|----------------------------------|-----------------------------------------------|---------------------------|
| | Professor of Human-Computer Interaction, CS | http://www.daimi.au.dk/~bodke | Member, CHI Academy | no page |
| | Founder | http://anitaborg.org/about/histo | WITI Hall of Fame, Fellow ACM, EFF Pioneer | has a page |
| at | Professor | http://polaris.gseis.ucla.edu/cb | ACM Fellow | has a page, needs work |

Creating a new Wikipedia Page (cont.)

- To put in a picture Search in Wikimedia commons, or ask them to put in a picture.
- Write facts and try to find sources to confirm those facts
 - News release announcing ACM Fellows
 - Don't cut and paste from webpages!
- Link from other pages to their page
- Use standard format for references
 - Our guide has several examples

Create a Writer page in Wikipedia

- List Wikipedia pages you have written (and link to them)
- See https://en.wikipedia.org/wiki/User:Shrodger
- Written over 20 pages



- Professor at Princeton
- Computer Architecture
- Mobile Computing, power-efficient systems
- Wattch power modelling tool
- ZebraNet
- ACM Fellow, IEEE Fellow
- Technical Leadership ABIE Award Winner





Nancy Amato

- Professor
- Texas A&M University
- Motion planning and Robotics
- Computational biology
- Parallel and Distributed Computing
- IEEE Fellow, AAAS Fellow
- CRA A. Nico Habermann Award



Still get Warning messages

Most recent is



This article's introduction may be too long for the overall article length. Please help by moving some material from it into the body of the article. For more information please read the layout guide and Wikipedia's lead section guidelines. (July 2014)





Fixed Mary Jane Irwin's Page



To Share These Achievements....

- August 2014, with Katy Dickinson and Jessica Dickinson Goodman....
- Created Notable Women in Computing cards



Vicki Hanson Had no Wikipedia page, now does



