

Diversifying the Faces in Computing

Susan H. Rodger
Duke University



Juniper Networks

June 27, 2023

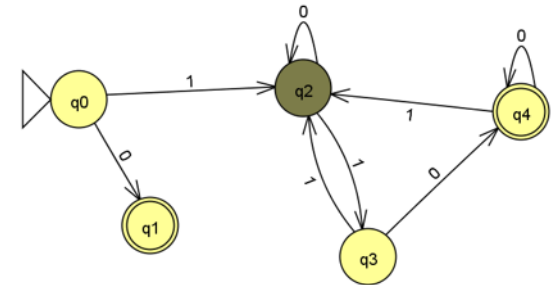
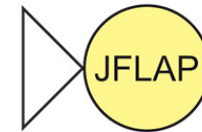
San Jose, CA

Outline

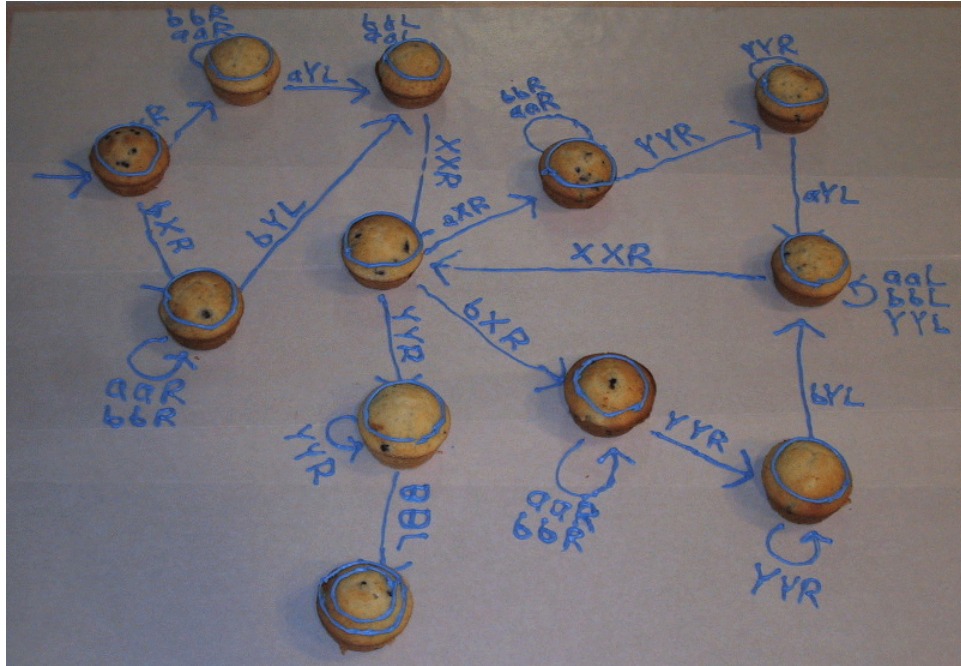
- **About Me and My Journey**
- Diversifying Computing
- Programs for Change
- Recognition and Visibility

About Me

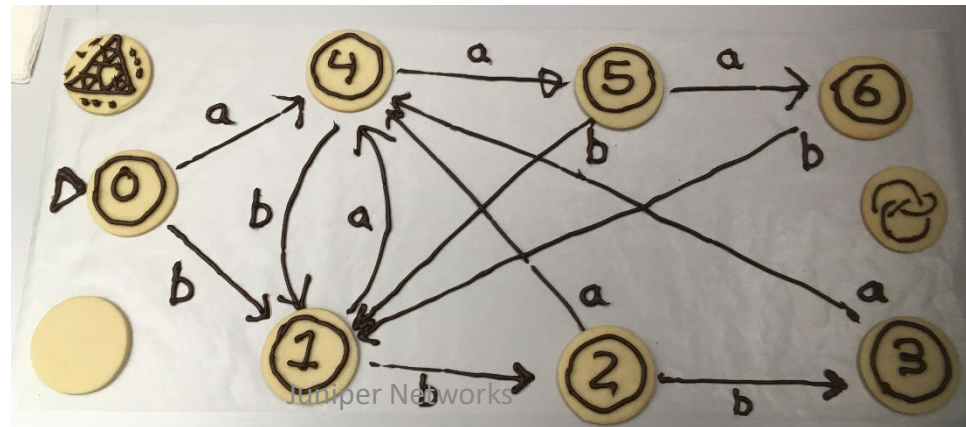
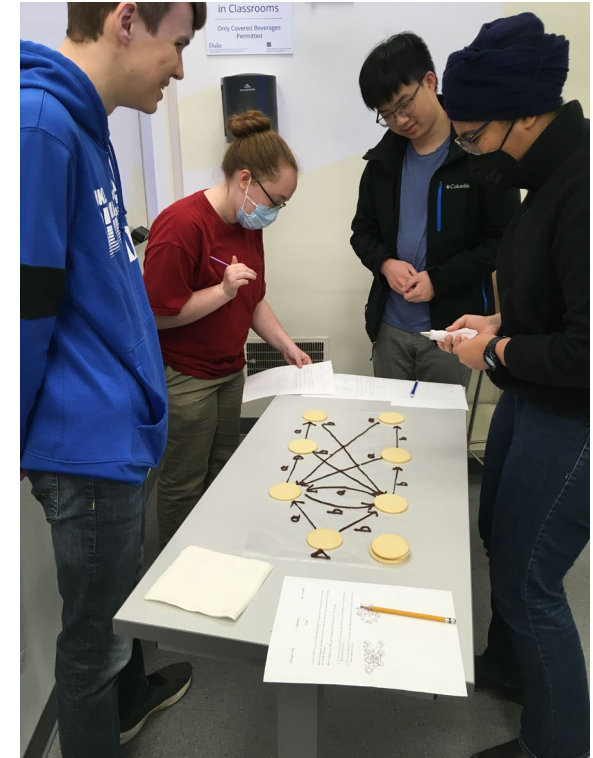
- Professor of the Practice of Computer Science, Duke University, since 1994
 - Teaching primarily
 - Research, write grants, supervise students
- Research Areas:
 - Computer Science Education
 - Visualization and Animation
 - Tools for learning CS
 - JFLAP used worldwide
 - Integrating computing into K-12



Hobby: Edible CS



Turing machine
made out of
blueberry muffins
and icing



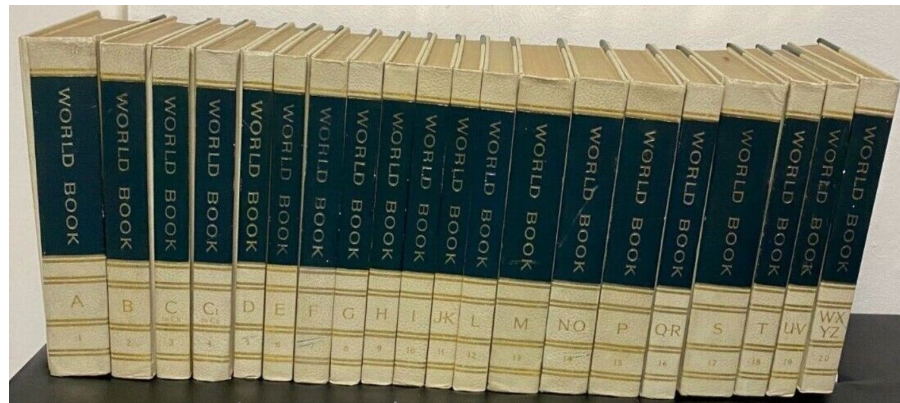
Finite State
Machine
made out of
cookies
and icing

My Journey to Full Professor

- Overcoming Struggles
- Lack of Diversity

Starting way back

- Very shy
- Me and my sisters
- Liked math and puzzles
- No internet
- My World Wide Web



Where to go to College in 1979?

- Lived in Raleigh, NC
- Mother did not finish college
- Father had BS degree in Engineering
- Went to local university

College – North Carolina State University



NC State

- Took programming course first semester
 - PL/1
- Double major - Math, Computer Science
- Systems programmer in University Computing Center

```
Hello2: proc options(main);
        put list ('Hello, world!');
end Hello2;
```

[illegible]

Where to go next?

You should go to Purdue

- No one in my family had a graduate degree
- Assumed I would get a job
- Undergraduate Research Assistant
 - David McAllister, Numerical Analysis



David McAllister

- Question led me to meet my Math Advisor
 - Dana Latch, Math Professor



Dana Latch

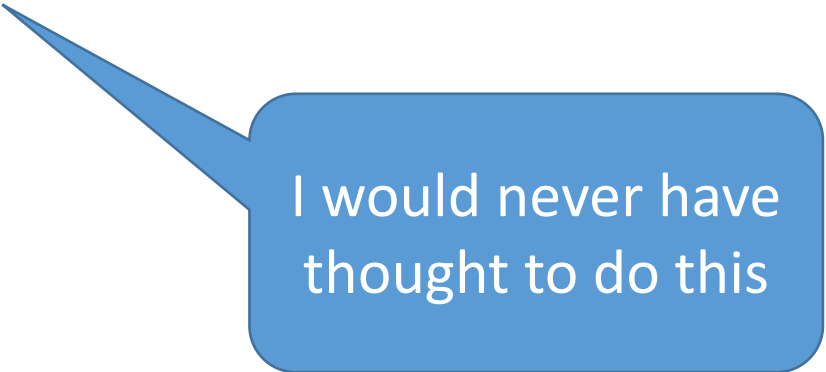
You are going to graduate school, aren't you?

Applied for jobs and PhD programs

- Issue with my GRE score
 - Quantitative - 90%, high GPA
 - But Verbal - low score - 28%
- Prof. Latch referred me to psychologist



Huge
Discrepancy!



I would never have
thought to do this

Applied for jobs and PhD programs

- Issue with my GRE score
 - Quantitative - 90%, high GPA
 - But Verbal - low score - 28%
- Prof. Latch referred me to psychologist
 - Evaluation (Feb 1983):
 - "...Miss Rodger has a learning disability. ... this disability is a subtle one and a discreet one that affects her ability to retain small bits of verbal information."
 - "I believe that deficits in both of these areas are primarily responsible for her low GRE Verbal score..."
 - "present no reason to indicate that Miss Rodger's intellectual capacity would not be sufficient to handle graduate work in the area she will enter."

Huge
Discrepancy!

Sent letter to
graduate schools

Graduate School at Purdue



- Purdue admitted me conditionally
 - Demonstrate proficiency in English Composition

Nailed that
first month!

- Completed PhD in Algorithms 1989

- Advisor: Greg Frederickson

- What was the diversity like?

- Few women there
 - Only female student in some courses
 - One year only female PhD student
 - Only one female faculty member my first year
 - Two female faculty the rest of the time



Greg
Frederickson

Assistant Professor Rensselaer Polytechnic Institute



- 1989-1994
- Continued research in algorithms
- Fell in love with teaching
- Diversity?
 - 1989 - Hired only two women faculty in dept – me and Ellen Walker
 - No other women hired while I was there



Ellen Walker

Assistant Professor of the Practice Duke University



- Since 1994
- Assistant -> Associate -> Professor of the Practice
- Diversity?
 - There was one female faculty there when I came in 1994, Carla Ellis
 - Two women faculty were hired in 1994 – me and Xiaobai Sun
 - 1994 – 3 women faculty – 12%
 - 2008 Ellis retired, Hired Xiaowei Yang
 - 2015 Hired Sudeepa Roy and then more
 - 2023 now have 12 women, 27 men – 30%



Carla Ellis



Xiaobai Sun



Xiaowei Yang

Only 3
women
faculty
for 21
years

That is my journey
What about my disability?

What about My Disability?

- Diagnosed as heading to Graduate School
- Never got accommodations in Graduate School
- Never got any accommodations as a Professor
- It has been hard!
- Takes me longer to do things
 - Writing
 - Organizing thoughts
- November 2021
 - Diagnosed with high-functioning Autism and verbal-based disability
- Been easier to talk about with several organizations

Nice to have names
for my disabilities



Juniper Networks



Outline

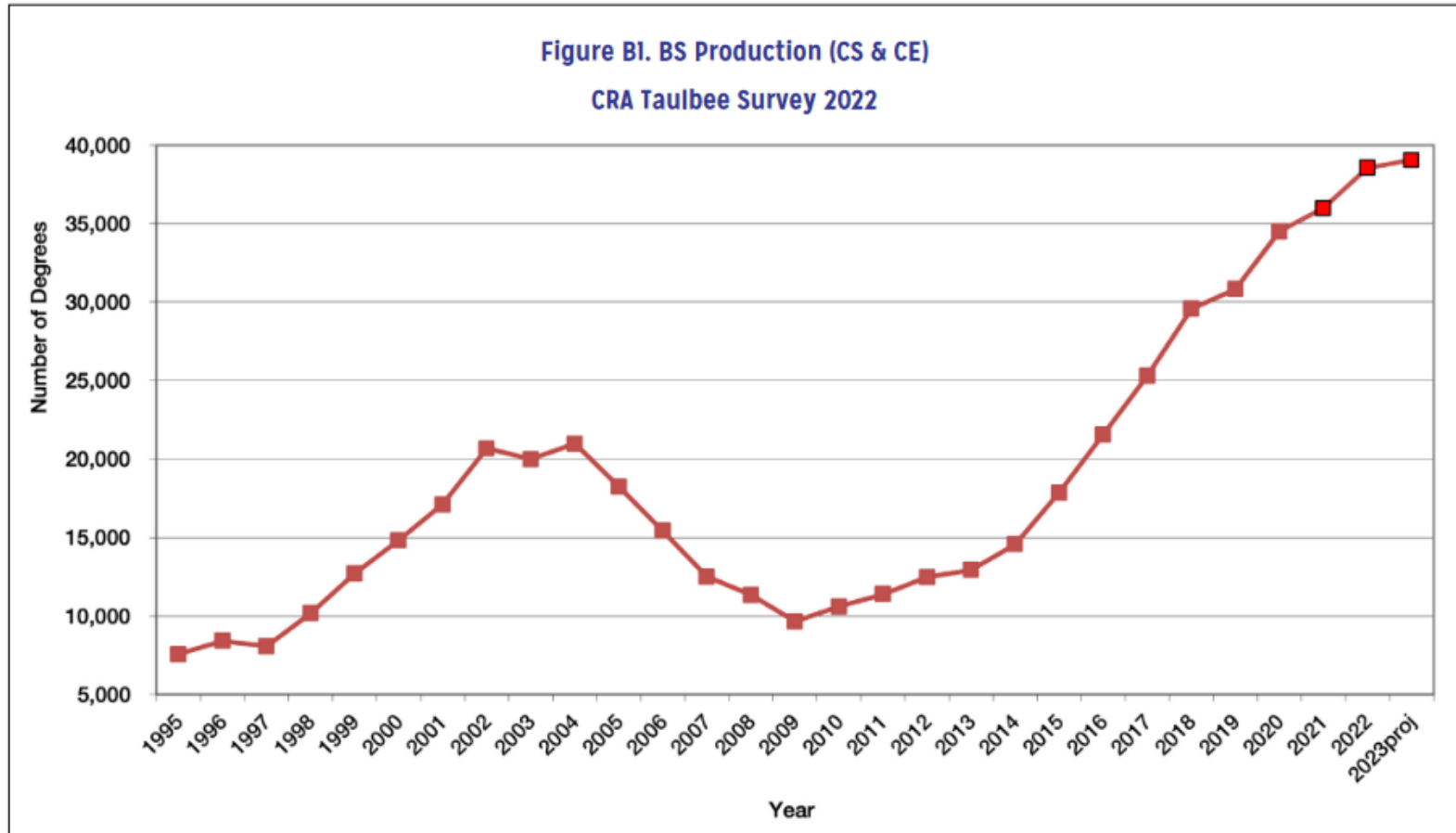
- About Me and My Journey
- **Diversifying Computing**
- Programs for Change
- Recognition and Visibility

How did we get from 12% women CS faculty at Duke for 21 years, to 30%?

- All science depts had 0 to 3 women faculty
 - Created Senior Women in Science in 2004
 - Met with the Dean regularly
 - Got funding to bring in outside women speakers and other initiatives
 - Hired one of the speakers
 - Clare Booth Luce Assistant Professorship – for women only
- Now all science depts have 8+ women faculty

CRA Taulbee Survey 2022

There are a lot of students in CS!



Are there women in CS?



- Computing Research Association (CRA)
 - Taulbee Survey 2020-21
 - 22% female PhD's granted in computing
 - 26% female PhD's current enrollment
 - 31% female MS graduated
 - 23% female BS graduated

We need
to do
better!

Missing underrepresented groups in Computing



- Computing Research Association (CRA)
 - Taulbee Survey 2020-21
 - 1.7% Black/AfA PhD's granted in computing
 - 1.7% Hispanic PhD's granted in computing
 - 1.9% Black/AfA PhD's enrolled
 - 2.1% Hispanic PhD's enrolled
 - 1.9% Black/AfA MS graduated
 - 2.8% Hispanic MS graduated
 - 3.9% Black/AfA BS graduated
 - 9.6% Hispanic BS graduated

These
numbers
are really
dismal!

If they don't know about
computing or see themselves in
computing, they won't choose it
as a field

Alice programming

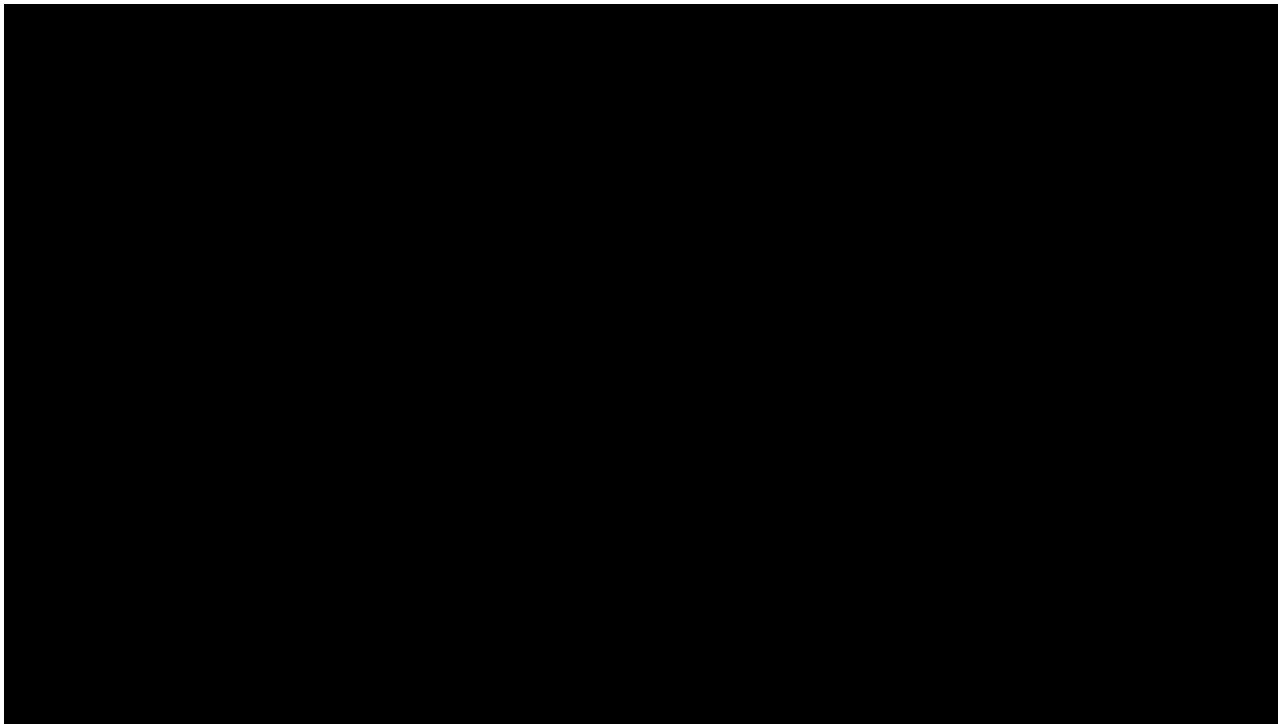
Program 3D objects – drag and drop

- alice.org – by Randy Pausch, CMU

Alice programming

Program 3D objects – drag and drop

- alice.org – by Randy Pausch, CMU



My Alice efforts

- 2002 – added Alice to one section of a course, was favorite part of course!
- 2005 – Created a Non-majors course on Alice programming
 - Course attracts around 50% females
- 2006 – Duke Femmes program
 - Taught Alice to 4th to 6th grade girls
- Realized need to
 - Get into K-12
 - Teach teachers

Adventures in Alice Programming

www.cs.duke.edu/csed/alice/aliceInSchools



- 2-week Teacher workshops
 - Over 500 teachers, middle school, high school, some elementary
 - First week Teach Alice, Practice
 - Second week - Develop Lesson Plans
 - All disciplines: math, science, history, language arts, foreign language, art, music, business
 - Summers 2008-2017
- Main Sites:
 - Duke University, Durham, NC
 - Charleston/Columbia, SC
 - San Jose, CA
 - Lincoln, Nebraska
- THANKS IBM and NSF





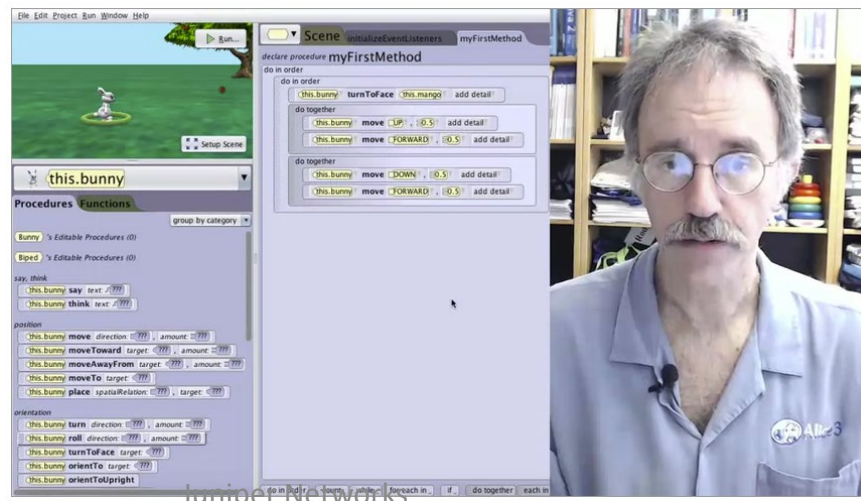


Created online Coursera course

Introduction to Programming and Animation in Alice

Launched in January 2020, with Steve Cooper

Built-in Functions

-  Alice calculates values with built-in functions
-  Height, width, and depth of cow



Outline

- About Me and My Journey
- Diversifying Computing
- **Programs for Change**
- Recognition and Visibility

Grace Hopper Celebration on Women in Computing

- Anita Borg, co-founded GHC conference in 1994 (with Telle Whitney), 500 attendees
- She died in 2003, Brain cancer
- GHC: 1994, 1997, 2000, 2002, 2004, 2006, then annually
- Now run by the Anita Borg Institute
- 2010 (2000 attendees), 2019 (25,000 attendees)
- Mentoring talks, See many people like yourself – Empowering!



Anita Borg



Grace Hopper Celebration on Women in Computing



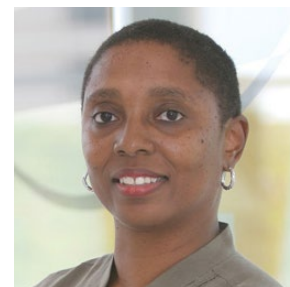
Anita Borg

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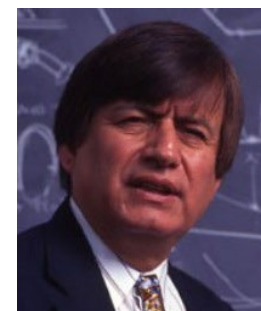


Richard Tapia Celebration of Diversity in Computing

- Founded by Valerie Taylor and others, sponsored by ACM and CMD-IT
- Named after Richard Tapia, Mathematics Professor at Rice, leader in education and outreach
- Connect with common backgrounds, race, ethnicities, disabilities and gender to create communities.



Valerie Taylor



Richard Tapia

Richard Tapia Celebration of Diversity in Computing



Valerie Taylor



Richard Tapia

- Connect with common backgrounds, race, ethnicities, disabilities and gender to create communities.
- Started in 2001, with 164 attendees
- 2001, 2003, 2005, 2007, 2009, 2011, 2013 now annual
- In 2019, 1920 attendees

Computing Research Association – Widening Participation (CRA-WP)

<https://cra.org/cra-wp/>



- Mission: Increasing the success and participation of populations underrepresented in computing research
- Been a Board member since 2009 and currently Co-Chair
- Since 1991, over 30 years!
- Formerly CRA-W (Women)

CRA-WP Programs - Undergraduates

(Computing Research Association Widening Participation)

(Previously CRA-W, for Women)



- DREU – Summer undergraduate Research program with Faculty at another university
- Mentoring at Grace Hopper Conf and Tapia Conferences
- UR2PHD – new research program to increase more women to graduate school (with CRA-E (education))

CRA-WP Programs – Grad Students

(Computing Research Association Widening Participation)

(Previously CRA-W, for Women)



- Grad Cohort Workshop for Women – Mentoring workshop for women grad students
 - 2-days in person in April annually
- Grad Cohort Workshop for Inclusion, Diversity, Equity, Accessibility and Leadership Skills (IDEALS)
 - 2-days in person in March annually
- CSGrad4US Fellowship
 - Mentorship for a year while you apply to PhD program to go back to school (BS degree in computing before 2021), plus Fellowship to attend (must be US Citizen or perm resident)

CRA-WP Programs – Faculty/Researchers

(Computing Research Association Widening Participation)

(Previously CRA-W, for Women)



- Early Career Mentoring Workshop (CMW)
 - For Postdocs, Assistant Professor or equivalent level in Industry/Gov labs
- Mid-Career Mentoring Workshop (CMW)
 - For Associate professors or equivalent level in Industry/Gov labs
- Both are:
 - 2-day Mentoring workshops with senior leaders
 - For women and underrepresented researchers in computing
 - Nov 2-4, 2023 in Chicago, IL
 - <https://cra.org/cra-wp/mentoring-workshop/>

Apply now by July 10!

National Center for Women and Technology (NCWIT)



- Network of change leaders focused on advancing innovation by correcting underrepresentation in computing
- Three main alliances
 - K12, Academic, Workforce
- Example of Workforce Alliance resource:
 - Resources on recruiting and retaining employees, being inclusive, etc



Recruiting, Retaining, and Advancing a Diverse Technical Workforce: Data Collection and Strategic Planning Guidelines

Published on 01/21/2015 | SKU #6013

Developing a diverse workforce must be treated like any other critical business issue. Use this guide to help you collect important data and develop a strategic plan for increasing the meaningful participation of diverse groups in your organization.

Learn how to implement the "The Action to Catalyze Tech (ACT) Report" recommendations: <https://ncwit.org/CatalyzeTech>.

Access Computing



- Mission: Increasing the participation of people with disabilities in computing fields
- Undergraduates and Graduate students can connect with mentors and professionals.
- Undergraduate research program
- Resources
 - Disability- and Neurodiversity-Focused Employment Websites

National Science Foundation (NSF) BPC and INCLUDES Alliances

- "broad coalitions of academic institutions, K-12 schools, government, industry, professional societies and other not-for profit organizations that design and carry out comprehensive programs addressing underrepresentation in computing disciplines"

NSF Alliances

- Access Computing – people with disabilities
- AIICE – Alliance for Identity Inclusive Computing Education
- CAHSI – Computing Alliance of Hispanic Serving Institutions
- CRA-WP – Computing Research Association Broadening participation
- CSforAll – Resource for CS in K-12 education
- NCWIT – National Center for Women and Technology – create resources, they have a Workforce Alliance
- And many more...



AIICE ALLIANCE FOR IDENTITY
INCLUSIVE COMPUTING EDUCATION



Computing Alliance
of Hispanic-Serving
Institutions
A National INCLUDES Alliance



CRA-WP

Computing Research Association
Widening Participation



Cultural Competence in Computing (3C's) Fellows

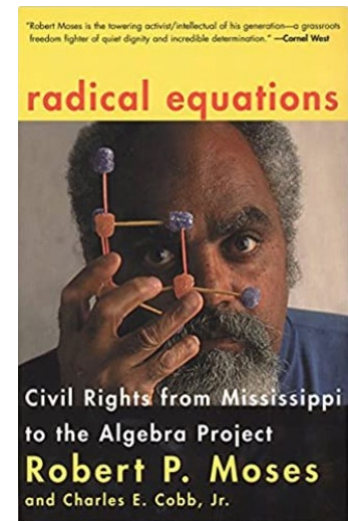
<https://identity.cs.duke.edu/>



- National Program for Computing faculty and professionals
 - To learn more about social science topics (identity, intersectionality, racism, bias and discrimination) and how they impact computing environments
 - To develop some deliverable
- Lot of homework/reading books (6 months)
- Virtual meetings for 6 months of discussion
- My project: developing an online Python Coursera course that is culturally relevant

For Example: Bob Moses – Interactive Techniques for Algebra

- 1960's - Civil Rights Activist
 - Organizer Black voter registration drive in Mississippi
 - Fighting the use of law to oppress the black vote
- 1982 – MacArthur Genius Award
- 80's – Closing the gap with algebra
 - No algebra in 8th grade in his kids' school
 - First step – get all kids to be able to take algebra
 - Second step – How to empower students, start with a train trip
 - Algebra as a gateway to higher level math/science
 - Huge movement! Interactive approach increased pass rates



Strongly recommend
his book

Outline

- About Me and My Journey
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- **Recognition and Visibility**

Recognition

- Nominate those underrepresented in computing for awards
- Example 1, Duke Distinguished Professor
 - No women in science had received the award
 - Once pointed out, they started receiving it
- Example 2, Triangle Distinguished speakers
 - Duke, UNC, NCSU
 - 9 speakers annually, 3 to each university
 - Some years no female speakers

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



[Main page](#)
[Contents](#)
[Featured content](#)
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Frances E. Allen

From Wikipedia, the free encyclopedia

Fran Allen has made outstanding contributions to the field of programming languages for more than forty-five years, and her work has significantly influenced the wider computer science community.

Ms. Allen is a pioneer in the field of optimizing compilers. Her achievements include seminal work in compilers, code optimization, and parallelization. In the early 1980s, she formed the Parallel TRANslation (PTRAN) group to study the issues involved in compiling for parallel machines. The group was considered one of the top research groups in the world working with parallelization issues. Her work on these projects culminated in algorithms and technologies that form the basis for the theory of program optimization and are widely used in today's commercial compilers throughout the industry.

Ms. Allen's influence on the IBM community was recognized by her appointment as an IBM fellow, the first woman to receive this recognition. She was also president of the IBM Academy of Technology. The Academy plays an important role in the corporation by providing technical leadership, advancing the understanding of key technical areas and fostering communications among technical professionals.


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

Her Wikipedia page now

W Frances Allen - Wikipedia

← → ↺ 🏠 🔒 https://en.wikipedia.org/wiki/Frances_Allen 📖 ☆ 📄 ⬇️ 📁 ☰

☰

 **WIKIPEDIA**
The Free Encyclopedia

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Frances Allen

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From Wikipedia, the free encyclopedia

For other people named Frances Allen, see [Frances Allen \(disambiguation\)](#).

Frances Elizabeth Allen (August 4, 1932 – August 4, 2020)^{[2][3]} was an American [computer scientist](#) and pioneer in the field of [optimizing compilers](#).^{[4][5][6]} Allen was the first woman to become an [IBM Fellow](#), and in 2006 became the first woman to win the [Turing Award](#).^[7] Her achievements include seminal work in [compilers](#), [program optimization](#), and [parallelization](#).^[8] She worked for IBM from 1957 to 2002 and subsequently was a Fellow Emerita.^[9]

Early life and education [edit]


Allen grew up on a farm in [Peru, New York](#), near [Lake Champlain](#), as the oldest of six children. Her father was a farmer, and her mother an elementary schoolteacher.^[9] Her early elementary education took place in a one-room school house a mile away from her home, and she later attended a local high school.^[10]

She graduated from The New York State College for Teachers (now part of the [University at Albany, SUNY](#)) with a [Bachelor of Science](#) degree in [mathematics](#) in 1954 and began teaching school in Peru, New York.^[10] After two years, she enrolled at the [University of Michigan](#) and earned a [Master of Science](#) degree in mathematics in 1957.^[11]

Career and research [edit]

Deeply in debt with [student loans](#), she joined [IBM Research](#) in [Poughkeepsie](#), New York, as a programmer in 1957, where she taught incoming employees the basics of [Fortran](#). She planned to return to teaching once her student

Frances Allen



Born

Frances Elizabeth Allen
August 4, 1932
[Peru, New York, U.S.](#)

Died

August 4, 2020 (aged 88)
[Schenectady, New York, U.S.](#)

Nationality

American

Alma mater

[University at Albany](#) (BS)
[University of Michigan](#) (MS)

Spouse

[Jacob T. Schwartz](#)
(m. 1972–1982)

Awards

[ACM Fellow](#) (1994)
[IBM Fellow](#) (1989)
[Ada Lovelace Award](#) (2002)
[Computer Pioneer Award](#) (2004)

What about other Notable Women in Computer Science?

- ACM Fellows
 - Noticed few women, and most did not have a Wikipedia page

Investigate: 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

Wrote a Wikipedia page

- We had no idea what we were doing....
- In April 2012, at a CRA-W Board meeting ...

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...

Checked her page two weeks
later...



► [Print/export](#)

6/27/23

Search



[Join Wikipedia Takes America photo hunts in 10+ cities in September.](#)

Mary Jane Irwin

From Wikipedia, the free encyclopedia



This article has multiple issues. Please help [improve it](#) or discuss these issues on the [talk page](#).

- This **biographical article** needs additional **citations** for **verification**. *(April 2012)*
- A major contributor to this article appears to have a **close connection** with its **subject**. *(April 2012)*
- This article **may contain wording that merely promotes the subject** without imparting verifiable information. *(April 2012)*
- The **neutrality** of this article is **disputed**. *(April 2012)*

Mary Jane Irwin is the [Evan Pugh Professor](#) and A. Robert Noll Chair in Engineering in the Department of Computer Science and Engineering at [Pennsylvania State University](#). She has been on the faculty at Penn State since 1977. She is an international expert in [computer architecture](#). Her research and teaching interests include computer architecture, embedded and mobile computing systems design, power and reliability aware design, and emerging technologies in computing systems. Dr. Irwin received her Ph.D. from the [University of Illinois](#) and an Honorary Doctorate from [Chalmers University, Sweden](#).

Mary Jane Irwin

Residence United States

Nationality American

Fields Computer Science, Com
Architecture, Electronic
Automation

Institutions [Pennsylvania State Univ](#)

Alma University of Illinois

Mary Jane Irwin - Wikipedia, the free encyclopedia - Mozilla Firefox

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en.wikipedia.org/wiki/Mary_Jane_Irwin

W Mary Jane ... x

janie irwin

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Join Wikipedia Takes America photo hunts in 10+ cities in September.

Mary Jane Irwin



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TOOLBOX

Print/export

6/27/23

international expert in [computer architecture](#). Her research and teaching interests include computer architecture, embedded and mobile computing systems design, power and reliability aware design, and emerging technologies in computing systems. Dr. Irwin received her Ph.D. from the [University of Illinois](#) and an Honorary Doctorate from [Chalmers University, Sweden](#).

nationality

American

Fields

Computer Science, Com
Architecture, Electronic
Automation

Institutions

Pennsylvania State Univ

Alma

University of Illinois

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.

Firefox

en.wikipedia.org/wiki/Mary_Lou_Soffa

W Mary Lou Soffa - Wikipedia, the free ...

mary lou soffa

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Mary Lou Soffa

From Wikipedia, the free encyclopedia

Mary Lou Soffa is an American [Computer Scientist](#) noted for her research on [compilers](#) and [program optimization](#).

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Mary Lou Soffa

Fields	Computer Science
Institutions	University of Virginia
Alma mater	University of Pittsburgh, Ohio State University
Notable awards	ACM Fellow (1999) Ken Kennedy Award (2012)
Website	www.cs.virginia.edu/~soffa/

Biography

[edit]

Soffa received a [B.S. in Mathematics](#) from [University of Pittsburgh](#) with honors [magna cum laude](#) and [Phi Beta Kappa](#). She received an [M.S. in Mathematics](#) from [Ohio State University](#) and a [Ph.D in Computer Science](#) from the [University of Pittsburgh](#).

She then joined the Department of Computer Science at the [University of Pittsburgh](#) as an Assistant Professor in 1977. In 1983 she was promoted to Associate Professor and in 1990 to Professor. In 2004 she was named Chair of the Department of [Computer Science](#) at the [University of Virginia](#), and the Owen R. Cheatham Professor of Sciences.

Awards

[edit]

In 2012^[1] she received the [ACM-IEEE-CS Ken Kennedy Award](#) at [SC12](#), the international conference on high-performance computing.

Her other notable awards include:

- [ACM Fellow](#) (1999)^[2]
- [Anita Borg Technical Leadership Award](#) in 2011^[3]

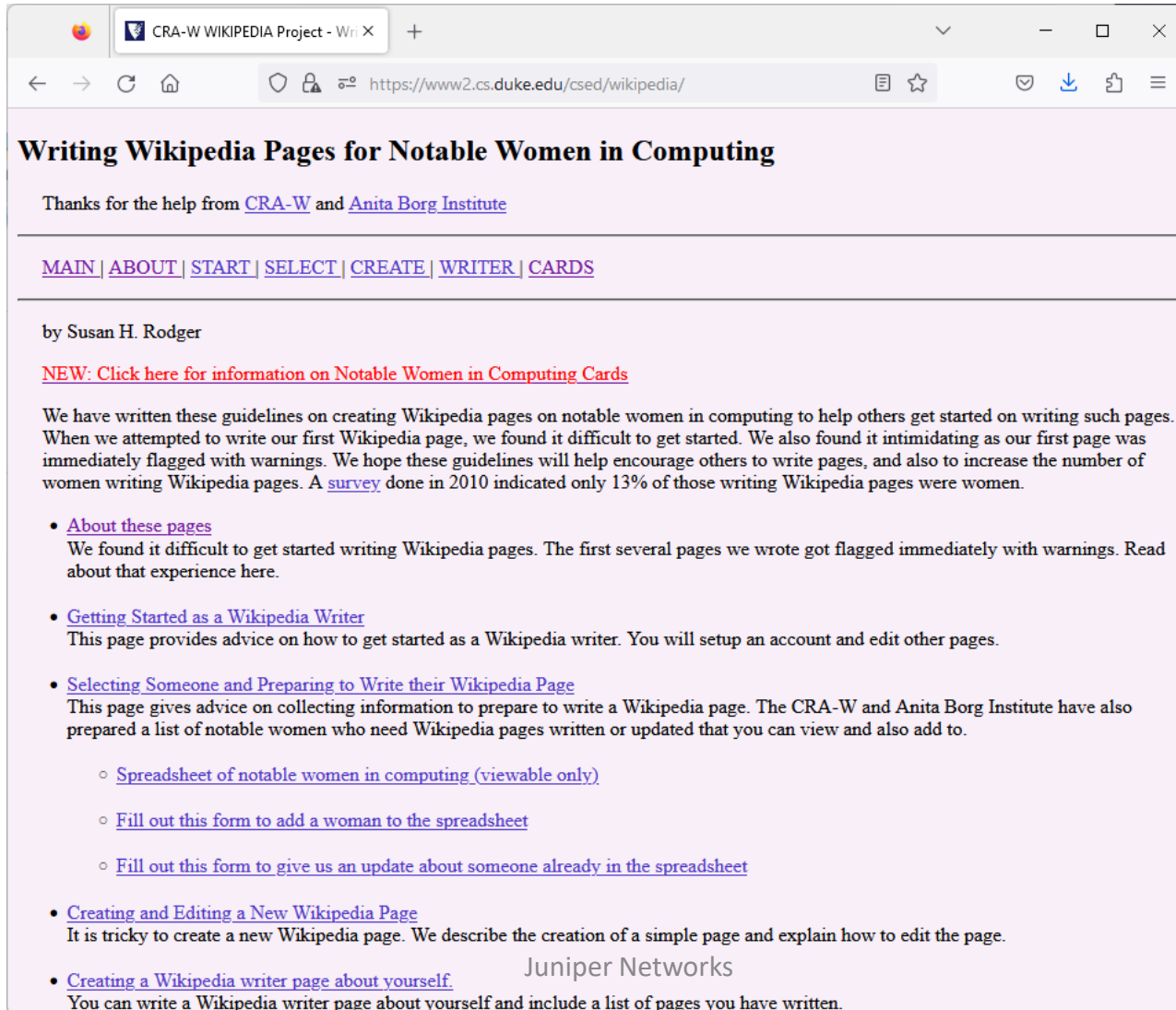
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Wrote a Guide on How to Write Wikipedia Biography

www.cs.duke.edu/csed/wikipedia



The screenshot shows a web browser window with the title 'CRA-W WIKIPEDIA Project - Writing Wikipedia Pages for Notable Women in Computing'. The address bar shows the URL 'https://www2.cs.duke.edu/csed/wikipedia/'. The page content includes a title, a thank you message, a navigation menu, the author's name, a new section link, an introductory paragraph, and a list of links to various guides.

Writing Wikipedia Pages for Notable Women in Computing

Thanks for the help from [CRA-W](#) and [Anita Borg Institute](#)

[MAIN](#) | [ABOUT](#) | [START](#) | [SELECT](#) | [CREATE](#) | [WRITER](#) | [CARDS](#)

by Susan H. Rodger

[NEW: Click here for information on Notable Women in Computing Cards](#)

We have written these guidelines on creating Wikipedia pages on notable women in computing to help others get started on writing such pages. When we attempted to write our first Wikipedia page, we found it difficult to get started. We also found it intimidating as our first page was immediately flagged with warnings. We hope these guidelines will help encourage others to write pages, and also to increase the number of women writing Wikipedia pages. A [survey](#) done in 2010 indicated only 13% of those writing Wikipedia pages were women.

- [About these pages](#)
We found it difficult to get started writing Wikipedia pages. The first several pages we wrote got flagged immediately with warnings. Read about that experience here.
- [Getting Started as a Wikipedia Writer](#)
This page provides advice on how to get started as a Wikipedia writer. You will setup an account and edit other pages.
- [Selecting Someone and Preparing to Write their Wikipedia Page](#)
This page gives advice on collecting information to prepare to write a Wikipedia page. The CRA-W and Anita Borg Institute have also prepared a list of notable women who need Wikipedia pages written or updated that you can view and also add to.
 - [Spreadsheet of notable women in computing \(viewable only\)](#)
 - [Fill out this form to add a woman to the spreadsheet](#)
 - [Fill out this form to give us an update about someone already in the spreadsheet](#)
- [Creating and Editing a New Wikipedia Page](#)
It is tricky to create a new Wikipedia page. We describe the creation of a simple page and explain how to edit the page.
- [Creating a Wikipedia writer page about yourself](#)
You can write a Wikipedia writer page about yourself and include a list of pages you have written.

Our Wikipedia Guide

www.cs.duke.edu/csed/wikipedia

- Shorter and more focused than Wikipedia Guide
- Getting Started
 - Get an account
 - Edit some pages
- Select someone to write about
 - Make sure they don't already have a page
 - Use our template and fill it in

Our Database of Notable Women in CS

www.cs.duke.edu/csed/wikipedia

- 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/history	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

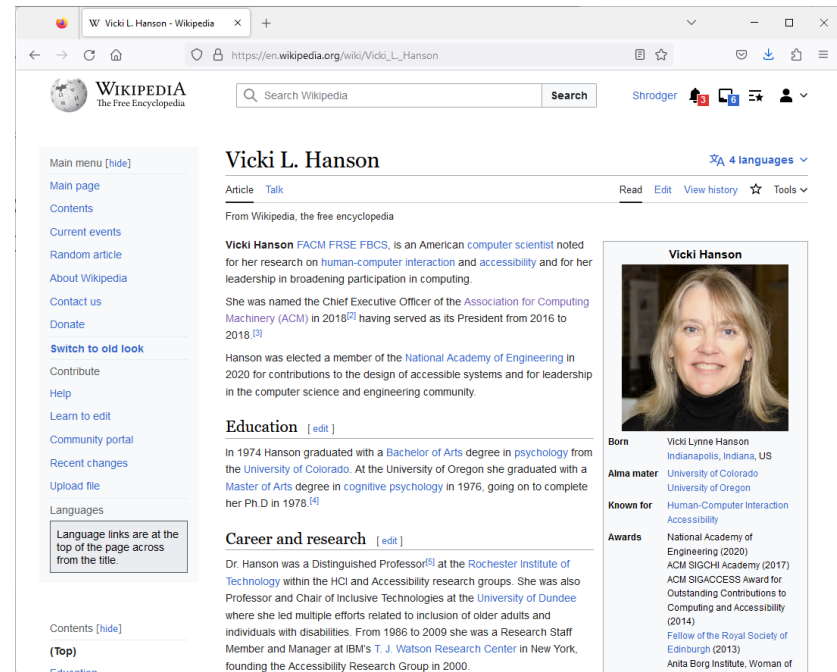
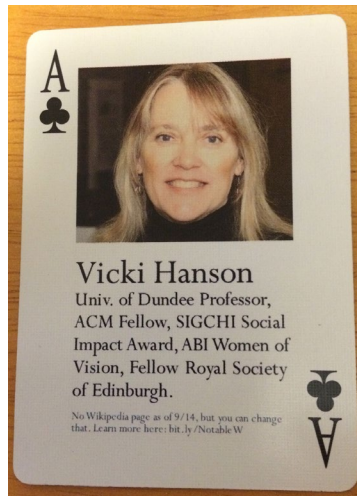
To Share These Achievements....
www.cs.duke.edu/csed/wikipedia

- August 2014, with Katy Dickinson and Jessica Dickinson Goodman....
- Created Notable Women in Computing playing cards
 - 54 cards
- You can
 - Print a deck
 - Print a poster



Vicki Hanson

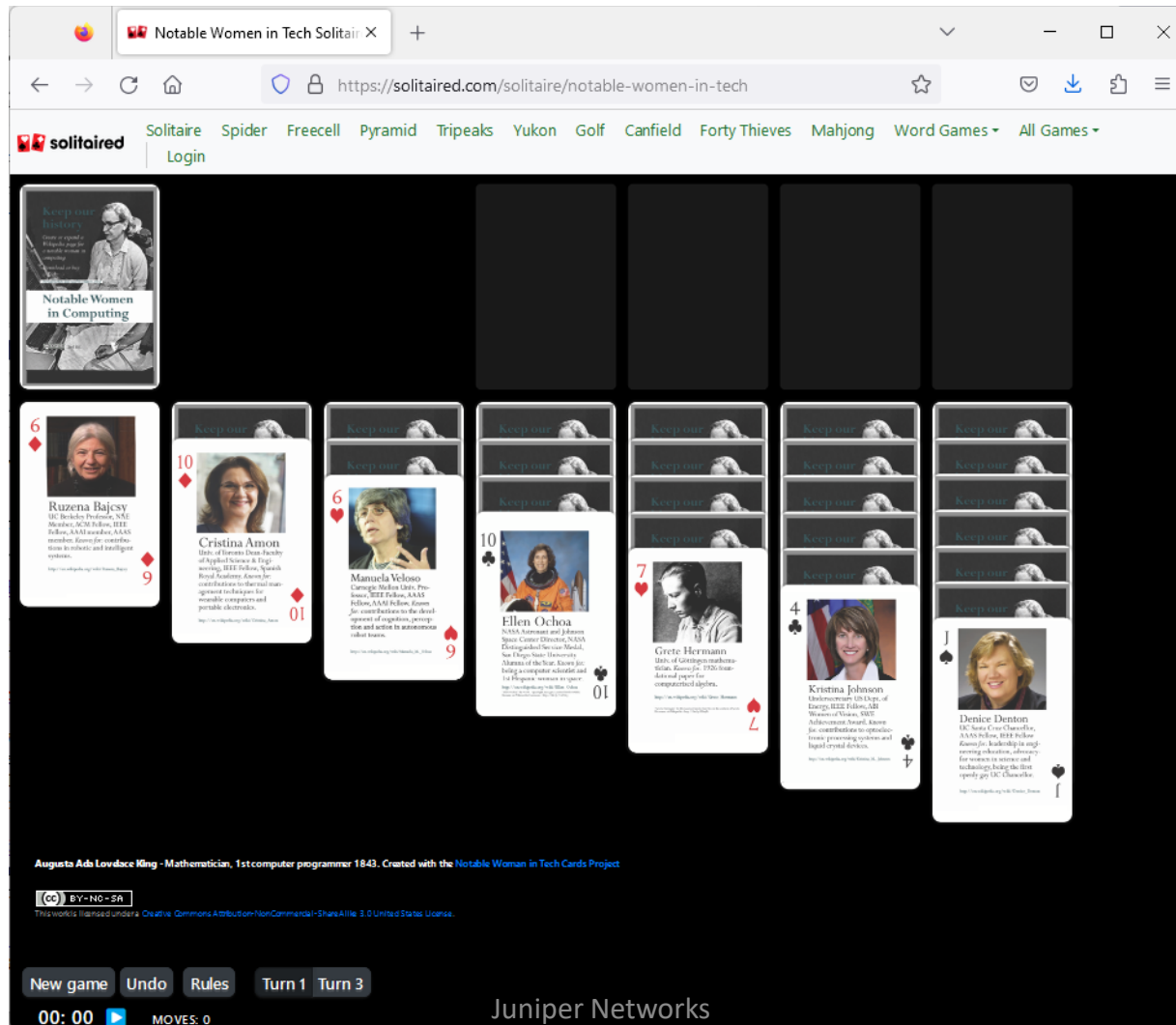
Had no Wikipedia page, now does



- 4th edition of deck (2019), same women, but updated as everyone now has a Wikipedia page

Play Solitaire online with NWC cards

<https://solitaired.com/solitaire/notable-women-in-tech>



What can you do to get more underrepresented people into computing?

- Make Change Happen
 - Create those conversations
 - Point out discrepancies
 - There is recognizing problems, and there is action!
- Mentorship and Guidance
- Recognize Achievements

Thank you!

