

Notable Technical Women Project



Katy Dickinson

Founder, Mentoring Standard

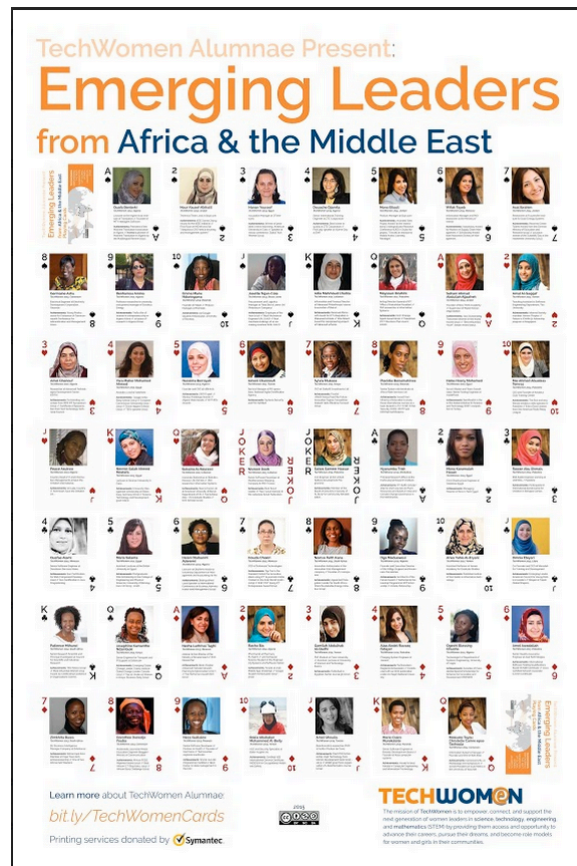
URL: mentoringstandard.com

Email: dickinson@mentoringstandard.com

Microsoft Research, 9 June 2015

Let's start with 108 Role Models...

A role model is a person whose behavior, example, or success can be emulated by others.



Notable Technical Women Project

<http://www.notabletechnicalwomen.org>

<https://www.facebook.com/NotableTechnicalWomen>

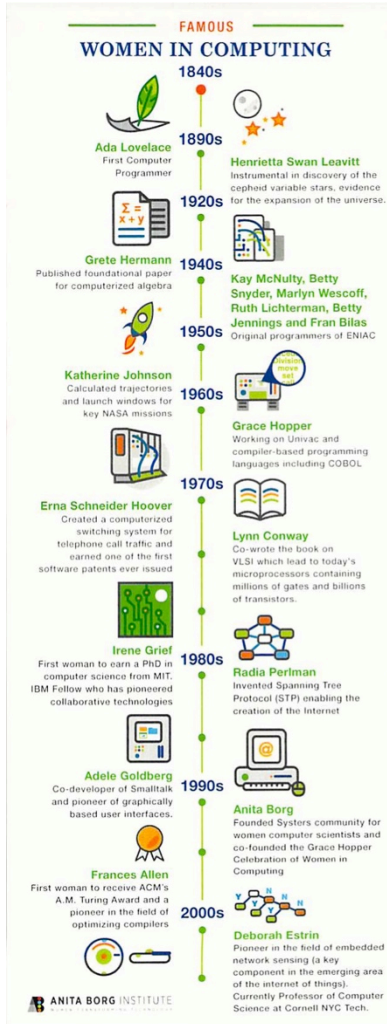
- Women have been leaders in computing from the start, but not enough of our contributions are remembered. **Keep our history.**
- Professor **Susan H. Rodger** (Professor of the Practice, Duke University), **Katy Dickinson** (Founder, Mentoring Standard), and Katy's daughter **Jessica Dickinson Goodman**, collaborated to create the first deck and poster in 2014.
- The project goal is to present remarkable, successful, and diverse technical women as role models. We want girls and women to see a future for themselves in these cards.



9 June 2015

Copyright Katy Dickinson

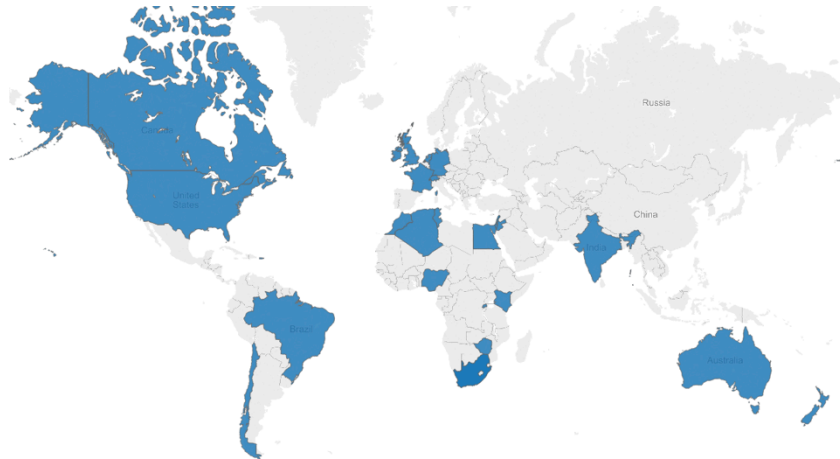
History of a List



- “Award-Winning Career Timelines in Computer Science and Engineering” web resource profiling **6** remarkable contributors, created by the Anita Borg Institute Advisory Board 2008-2010, published on *anitaborg.org* and presented at the Grace Hopper Conference in 2009 & 2010
- “Famous Women in Computer Science” web resource created by the Anita Borg Institute Advisory Board 2009-2012, published on *anitaborg.org* (the first list presented **18** names – based on list from Univ. of Bristol)
- August 2013 – Dr. Susan Rodger (CRA-W) and Katy Dickinson (ABI) combined their projects for a new total of **234** names of remarkable technical women
- “Famous Women in Computing” timeline card with **19** names was distributed at the 2014 and 2015 Women of Vision galas by the Anita Borg Institute
- The current list as **347** names hosted on the Duke Univ. Site:
<http://www.cs.duke.edu/csed/wikipedia/>

Selection & Distribution

- Selection:
Women in the Notable Technical Women deck received multiple, high-level awards from more than one institution. Our deck seeks to portray the true diversity of women in computing both current and historical, showcasing professionals from a variety of nations, backgrounds, gender identities, orientations and abilities.
- Distribution:
 - 1st at Grace Hopper Conference (GHC14) as a research poster
 - 2nd through Kickstarter (raised 5x initial requested funding)
 - Now through *notabletechnicalwomen.org*



All profits go to sending cards and posters to educators around the world. Over 3,000 cards have been distributed.

<- 25+ countries where the decks have gone (that we know of!)

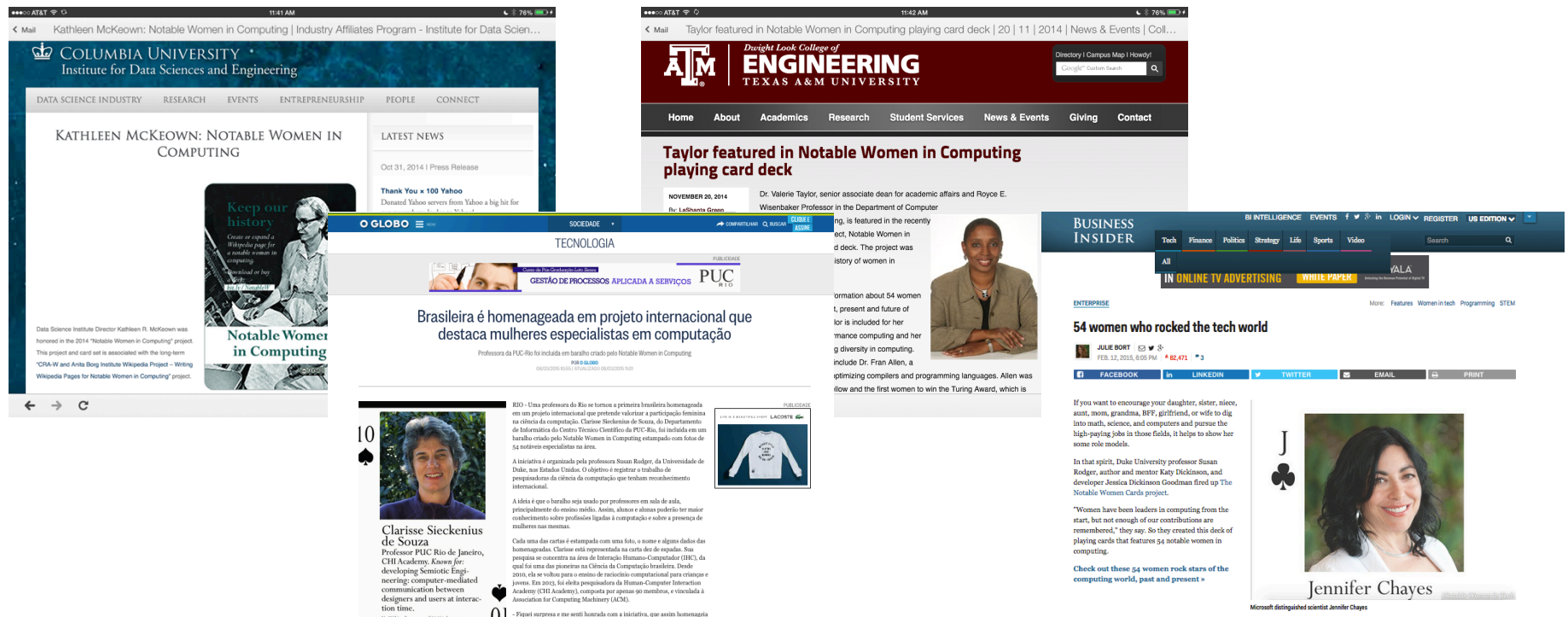
Many Ways to Measure

- The project team gets many requests for special sorting of honorees.
- For example, the US Patent and Trademark Office staff at the May 2015 Maker Faire asked for this (incomplete) list of notable patent holders among the 54 honorees. USPTO was distributing their own deck.
 - Chieko Asakawa (King of Spades) - at least 18
 - Jennifer Chayes (Jack of Clubs) - at least 15
 - Yuqing Gao (Jack of Diamonds) - at least 32
 - Vicki Hanson (Ace of Clubs) - at least 9
 - Mary Lou Jepsen (5 of Clubs) - at least 14
 - Kristina Johnson (4 of Clubs) - at least 42
 - Duy-Loan Le (8 of Hearts) - at least 23
 - Barbara Liskov (King of Hearts) - at least 15
 - Radia Perlman (Ace of Spades) - at least 200
 - Sophie Vandebroek (7 of Diamonds) - at least 14
 - Sophie Wilson (3 of Clubs) - at least 35



Professional Benefits to Honorees

- Since publication in October 2014, the project has been featured in global news about the decks and honorees.
- Honorees often list the deck on their resumes and websites.



9 June 2015

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Technical Pioneers Since 1843

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|  |  |  |  |  |  |  |  |
| <p>Augusta Ada Lovelace King Mathematician. <i>Known for:</i> being the 1st computer programmer in 1843.</p> <p>http://en.wikipedia.org/wiki/Ada_Lovelace</p> <p><small>"Ada Lovelace portrait" by Alfred Edward Chalon - Science & Society Picture Library, Licensed under Public Domain via Wikimedia Commons - http://bit.ly/1yG2BQ2</small></p> | | <p>Grete Hermann Univ. of Göttingen mathematician. <i>Known for:</i> 1926 foundational paper for computerized algebra.</p> <p>http://en.wikipedia.org/wiki/Grete_Hermann</p> <p><small>"Grete Hermann" by [1]. Licensed under Fair Use in the context of Grete Hermann via Wikipedia - http://bit.ly/1Zd9pH</small></p> | | <p>Katherine Johnson NASA Mathematician. <i>Known for:</i> calculating the trajectory of early space launches.</p> <p>http://en.wikipedia.org/wiki/Katherine_Johnson</p> | | <p>Grace Hopper US Navy Admiral, Distinguished Fellow of the British Computer Society, Computer History Museum Fellow. <i>Known for:</i> inventing the 1st compiler, popularizing term "debugging" for fixing code.</p> <p>http://en.wikipedia.org/wiki/Grace_Hopper</p> <p><small>"Grace Hopper and UNIVAC" by Southon - Flickr, Licensed under CC Attribution 2.0 via Wikimedia Commons - http://bit.ly/1yFtC2D</small></p> | |
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| <p>Betty Snyder ENIAC computer programmer team 1946, WITI Hall of Fame. <i>Known for:</i> being a pioneer in programming the first electronic general-purpose computer.</p> <p><small>No Wikipedia page as of 11/14, but you can change that. Learn more here: http://bit.ly/NotableW</small></p> <p><small>"Beta" - U.S. Army Photo. Licensed under Public Domain via Wikimedia Commons - http://bit.ly/1yGDAF</small></p> | | <p>Jean Bartik ENIAC computer programmer team 1946, WITI Hall of Fame. <i>Known for:</i> being a pioneer in programming the first electronic general-purpose computer.</p> <p>http://en.wikipedia.org/wiki/Jean_Bartik</p> <p><small>"Two women operating ENIAC" by U.S. Army - Image from [2]. Licensed under Public Domain via Wikimedia Commons - http://bit.ly/1yLDOJ</small></p> | | <p>Ruth Lichterman Teitelbaum ENIAC computer programmer team 1946, WITI Hall of Fame. <i>Known for:</i> being a pioneer in programming the first electronic general-purpose computer.</p> <p>http://en.wikipedia.org/wiki/Ruth_Teitelbaum</p> | | <p>Kay McNulty ENIAC computer programmer team 1946, WITI Hall of Fame. <i>Known for:</i> being a pioneer in programming the first electronic general-purpose computer.</p> <p>http://en.wikipedia.org/wiki/Kathleen_Antonelli</p> <p><small>"Kay McNulty maternal biography" - High school graduation portrait. Licensed under Public Domain via Wikimedia Commons - http://bit.ly/1yHuh3H</small></p> | | <p>Marilyn Wescoff ENIAC computer programmer team 1946, WITI Hall of Fame. <i>Known for:</i> being a pioneer in programming the first electronic general-purpose computer.</p> <p><small>No Wikipedia page as of 11/14, but you can change that. Learn more here: http://bit.ly/NotableW</small></p> | | <p>Fran Bilas ENIAC computer programmer team 1946, WITI Hall of Fame. <i>Known for:</i> being a pioneer in programming the first electronic general-purpose computer.</p> <p>http://en.wikipedia.org/wiki/Frances_Spence</p> <p><small>"Two women operating ENIAC" by U.S. Army - Image from [2]. Licensed under Public Domain via Wikimedia Commons - http://bit.ly/1yLDOJ</small></p> | |
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Government Technology Leaders

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Arati Prabhakar
US DARPA Director, IEEE Fellow, Head National Institute of Standards and Technology. *Known for:* promoting economic growth by developing manufacturing tech for semiconductor devices.

http://en.wikipedia.org/wiki/Arati_Prabhakar
"Arati Prabhakar DARPA Aug 2012" by DARPA <http://bit.ly/1GZATM>
Licensed under Public Domain via Wikimedia Commons - <http://bit.ly/18uG6QJ>

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Ellen Ochoa
NASA Astronaut and Johnson Space Center Director, NASA Distinguished Service Medal, San Diego State University Alumna of the Year. *Known for:* being a computer scientist and 1st Hispanic woman in space.

http://en.wikipedia.org/wiki/Ellen_Ochoa
"Ellen Ochoa" by NASA - spaceflight.nasa.gov Licensed under Public Domain via Wikimedia Commons - <http://bit.ly/116744j>

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Kristina Johnson
Undersecretary US Dept. of Energy, IEEE Fellow, ABI Women of Vision, SWE Achievement Award. *Known for:* contributions to optoelectronic processing systems and liquid crystal devices.

http://en.wikipedia.org/wiki/Kristina_M_Johnson

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Hessa Sultan Al Jaber
Qatar ICT Minister, Chair CS Department - Qatar Univ. *Known for:* leadership in Qatar engineering, academics, and politics

https://en.wikipedia.org/wiki/Hessa_Al_Jaber
"Dr Hessa approved photo" by Hessa Sultan Al Jaber - Photomontage 2013/02/20/1007792. Licensed under CC-BY-SA/Share Alike 3.0 via Wikimedia Commons - <http://bit.ly/118G5X0>

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Entrepreneurs and Innovators

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Lila Ibrahim
Chief Business Officer
Coursera, Purdue Univ.-Out-
standing Electrical and
Computer Engineer. *Known for:* leadership in offering free
online courses, as a venture
capitalist, social entrepreneur.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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Helen Greiner
CEO of CyPhy Works, ABI
Women of Vision, WITI Hall
of Fame. *Known for:* robotics
entrepreneurship, developing
robots like the iRobot
Roomba for consumer and
military markets.

http://en.wikipedia.org/wiki/Helen_Greiner

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Mary Lou Jepsen
Google X Head of the Display
Division, ABI Women of
Vision, WITI Hall of Fame.
Known for: being a remarkable
innovator-entrepreneur and
creating the One Laptop Per
Child technology.

http://en.wikipedia.org/wiki/Mary_Lou_Jepsen
"Mary Lou Jepsen" © 2008 2009 by Ed Schepel. Licensed under CC BY-SA. (Share Alike 2.0 via Wikimedia Commons - <http://bit.ly/1pjd4d1>)

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Anita Borg
Founder Anita Borg Institute
and Grace Hopper Celebration
of Women in Computing,
WITI Hall of Fame, ACM
Fellow, EFF Pioneer. *Known for:* contributions to fault
tolerant computing and
support of women in comput-
ing.

http://en.wikipedia.org/wiki/Anita_Borg

♦Q

JOKER



Mitchell Baker
Exec. Chair Mozilla, ABI
Women of Vision, Internet
Hall of Fame. *Known for:*
leading open source programs
for 20 years, supporting the
dream of an open, inclusive
and free Internet.

http://en.wikipedia.org/wiki/Mitchell_Baker

REKOK

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Qiheng Hu
Founder, China Internet
Network Information Center,
Internet Hall of Fame,
Research Professor - Chinese
Academy of Sciences. *Known for:* leading the project team
that brought the Internet to
mainland China.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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Chieko Asakawa
IBM Fellow, ABI Women of
Vision, Japan Medal of Honor
with Purple Ribbon. *Known for:* accessibility research and
development, and for leader-
ship in the visually impaired
technical community.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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Sophie Wilson
Designer Acorn Microcom-
puter, Broadcom Director IC
Design, Computer History
Museum Fellow, Fellow of the
Royal Society. *Known for:*
computer hardware design and
for leadership in the transgen-
der technical community.

http://en.wikipedia.org/wiki/Sophie_Wilson

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Remarkable Leaders

J O K E R



Maria Klawe
Harvey Mudd College President, Canadian Information Processing Society founding Fellow, ACM Fellow. *Known for:* technical, educational and disciplinary leadership; rapidly increasing the participation of women in computing.

R E K O J

http://en.wikipedia.org/wiki/Maria_Klawe

4



Padmasree Warrior
Cisco CTO, Distinguished Alumni Award from IIT Delhi. *Known for:* being CTO at 2 major tech companies in succession and aligning development and corporate strategy.

http://en.wikipedia.org/wiki/Padmasree_Warrior

"Padmasree Warrior" by Jay - Own work. Licensed under CC Attribution 2.5 via Wikimedia Commons - <http://bit.ly/1qpf8Nz>

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Denice Denton
UC Santa Cruz Chancellor, AAAS Fellow, IEEE Fellow. *Known for:* leadership in engineering education, advocacy for women in science and technology, being the first openly gay UC Chancellor.

http://en.wikipedia.org/wiki/Denice_Denton

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Genevieve Bell
Intel Director of Interaction and Experience Research, ABI Women of Vision, WITI Hall of Fame. *Known for:* combining anthropology and technology to explore social and cultural aspects of ubiquitous computing.

http://en.wikipedia.org/wiki/Genevieve_Bell

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Cristina Amon
Univ. of Toronto Dean-Faculty of Applied Science & Engineering, IEEE Fellow, Spanish Royal Academy. *Known for:* contributions to thermal management techniques for wearable computers and portable electronics.

http://en.wikipedia.org/wiki/Cristina_Amon

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Sophie Vandebroek
CTO Xerox, IEEE Fellow, WITI Hall of Fame, Royal Flemish Academy for Arts & Sciences Member. *Known for:* leadership in developing document systems.

No Wikipedia page as of 11/14, but you can change that. Learn more here: bit.ly/NotableW

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Jennifer Chayes
Microsoft Research Distinguished Scientist, ACM Fellow, ABI Women of Vision. *Known for:* contributions to the foundations of dynamic random networks.

http://en.wikipedia.org/wiki/Jennifer_Tour_Chayes

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Highly Honored Experts

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Radia Perlman
ACM SIGCOMM and Usenix Association Awards, Internet Hall of Fame, 1st ABI Women of Vision Innovation Award. *Known for:* contributions to network routing and security protocols.

http://en.wikipedia.org/wiki/Radia_Perlman




J 



Shafrira Goldwasser
Turing Award, Professor at MIT and Weizmann Institute of Science, ACM-W Athena Lecturer. *Known for:* foundational work in cryptography.

http://en.wikipedia.org/wiki/Shafrira_Goldwasser



K 



Barbara Liskov
MIT Professor, Turing Award, ACM Fellow, SWE Achievement Award. *Known for:* contributions to programming language and system design.

http://en.wikipedia.org/wiki/Barbara_Liskov
*Barbara Liskov MIT computer scientist 2010 by Kenneth C. Debel. Licensed under CC Attribution Share Alike 3.0 via Wikimedia Commons - http://bit.ly/1qB03ag




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Betsy Ancker-Johnson
Fellow AAAS, IEEE Fellow, Member NAE, Fellow Am Physical Soc. *Known for:* 1st observation of microwave emission without the presence of an external field (1967).

http://en.wikipedia.org/wiki/Betsy_Ancker-Johnson





7 




Jean Sammet
IBM Researcher, 1st woman ACM President, ACM Fellow, Computer History Museum Fellow. *Known for:* advancing the art and science of computer programming languages.

http://en.wikipedia.org/wiki/Jean_E_Sammet




9 



Irene Greif
IBM User Experience Group, ACM Fellow, AAAS Fellow, former Lotus Research 1992. *Known for:* pioneering the field of Computer Supported Cooperative Work.

http://en.wikipedia.org/wiki/Irene_Greif



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Frances Allen
IBM Fellow Emerita, Turing Award, Computer History Museum Fellow, IEEE Fellow. *Known for:* contributions to programming language compilers.

http://en.wikipedia.org/wiki/Frances_E_Allen
*Alan mg 2528-3730R-3 by Rana. Licensed under CC Attribution Share Alike 3.0 via Wikimedia Commons - http://bit.ly/1qB03ag



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Duy-Loan Le
Senior Fellow-Texas Instruments, Golden Torch Award for Exemplary Citizenship in the Vietnamese American community. *Known for:* contributions to Digital Signal Processor microelectronics tech, and as 1st woman and 1st Asian TI Senior Fellow.

http://en.wikipedia.org/wiki/Lê_Duy_Loan



Researchers & Academic Stars

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Valerie Taylor
Professor Texas A&M Univ.,
IEEE Fellow. *Known for:* contri-
butions to performance
enhancement of parallel com-
puting applications.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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Tova Milo
Professor Tel Aviv Univ., ACM
Fellow. *Known for:* contribu-
tions to database theory and
business process management.

http://en.wikipedia.org/wiki/Tova_Milo

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**Kathleen
McKeown**
Professor Columbia Univ.,
ACM and AAAI Fellow,
Founding Fellow Association
for Computational Linguistics.
Known for: contributions to
natural language processing.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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**Clarisse Sieckenius
de Souza**
Professor PUC Rio de Janeiro,
CHI Academy. *Known for:*
developing Semiotic Engi-
neering: computer-mediated
communication between
designers and users at interac-
tion time.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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Vicki Hanson
RIT Distinguished Professor,
Professor Univ. of Dundee,
ACM Fellow, SIGCHI Social
Impact Award, ABI Women of
Vision, Fellow Royal Society
of Edinburgh. *Known for:* con-
tributions to computing tech
for people with disabilities.

http://en.wikipedia.org/wiki/Vicki_L._Hanson

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Jennifer Widom
Professor Stanford Univ.,
ACM Fellow, AAAS Member,
NAE Member. *Known for:* con-
tributions to database systems.

http://en.wikipedia.org/wiki/Jennifer_Widom

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Ruzena Bajcsy
UC Berkeley Professor, NAE
Member, ACM Fellow, IEEE
Fellow, AAAI member, AAAS
member. *Known for:* contribu-
tions in robotic and intelligent
systems.

http://en.wikipedia.org/wiki/Ruzena_Bajcsy

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Laurie Hendren
Professor McGill Univ., ACM
Fellow, Fellow of the Royal
Society of Canada. *Known for:*
contributions to programming
languages.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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Linda Petzold
Professor UC Santa Barbara,
ACM Fellow, AAAS Fellow,
NAE Member. *Known for:* con-
tributions to computational
science.

No Wikipedia page as of 11/14, but you can
change that. Learn more here: bit.ly/NotableW

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More Researchers & Academic Stars

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Lixia Zhang
UCLA Professor, ACM Fellow, IEEE Fellow. *Known for:* contributions to protocol designs for packet switched networks.

No Wikipedia page as of 11/14, but you can change that. Learn more here: bit.ly/NotableW

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Mary Jane Irwin
Pennsylvania State Univ. Professor, ACM Fellow, IEEE Fellow, ACM-W Athena Lecturer. *Known for:* contributions in computer arithmetic and digital signal processing architectures.

http://en.wikipedia.org/wiki/Mary_Jane_Irwin

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Yuqing Gao
IBM Senior Manager, ABI Women of Vision, IEEE Fellow. *Known for:* contributions to speech recognition and speech-to-speech translation.

No Wikipedia page as of 11/14, but you can change that. Learn more here: bit.ly/NotableW

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Anuradha Annaswamy
MIT Senior Research Scientist, IEEE Fellow, Hay Medal, Indian Institute of Science. *Known for:* contributions to adaptive control theory and neural networks.

No Wikipedia page as of 11/14, but you can change that. Learn more here: bit.ly/NotableW

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Manuela Veloso
Carnegie Mellon Univ. Professor, IEEE Fellow, AAAS Fellow, AAAI Fellow. *Known for:* contributions to the development of cognition, perception and action in autonomous robot teams.

http://en.wikipedia.org/wiki/Manuela_M_Veloso

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Susan Graham
UC Berkeley Distinguished Professor, ACM Fellow, NAE Member, AAAS Fellow. *Known for:* foundational compilation algorithms and programming tools.

http://en.wikipedia.org/wiki/Susan_L_Graham

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Susan Landau
Professor at Worcester Polytechnic Institute, ACM Fellow, AAAS Fellow, ABI Women of Vision. *Known for:* public policy leadership in security and privacy.

http://en.wikipedia.org/wiki/Susan_Landau

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Deborah Estrin
Professor Cornell NYC Tech, ACM, AAAS and IEEE Fellow, ABI Women of Vision, ACM-W Athena Lecturer. *Known for:* contributions to Internet protocols.

http://en.wikipedia.org/wiki/Deborah_Estrin

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About

Katy Dickinson is the Founder of Mentoring Standard. She has designed and managed successful mentoring programs in the Americas, Africa, the Middle East, Europe, and Asia. She has held senior executive roles at Everwise, People to People, MentorCloud, Huawei, and Sun Microsystems. At Sun, she created and managed the global Engineering mentoring programs for ten years.

Katy Dickinson was the Process Architect for the first class of the U.S. State Department's TechWomen mentoring program. She was a Member of the Anita Borg Institute Advisory Board, and a Lecturer for the University of California at Berkeley Engineering class on entrepreneurship for many years. She is an author, speaker, and popular blogger on ***Katysblog.wordpress.com***



2014 Photo by Saul Bromberger for TechWomen



High quality mentoring changes lives. Until now there has been no clear way to measure mentoring and program effectiveness in an objective, comparable system, and there has been very little data published by mentoring programs. **Mentoring Standard** is a new venture from experts with deep experience in building successful international mentoring programs. **Mentoring Standard** has the vision to create an international norm and assessment of quality and achievement for both mentors and mentoring programs, with an associated system and process for accreditation and certification. ***Mentoringstandard.com***