national center for women & INFORMATION TECHNOLOGY

Revolutionizing the Face of Technology

NCWIT Summit 2015
Outreach Empower Hour

Wednesday, May 20, 2015

1:45-3:45pm | Rooms E & F

NCWIT Lifetime Partner:

NCWIT Strategic Partners:

NCWIT Investment Partners:

Today's Goals

Equip change leaders with resources and ideas for inclusive, engaging outreach

Share and learn from each other's experiences

Promote cross-Alliance connections between members with common goals

Agenda

1. Introduction

2. How can NCWIT help?
    + NCWIT Resources
    + What are other members doing?

3. What can I do?
    + Roundtable Discussions

4. Where do I go from here?

Outreach should highlight aspects of computing that appeal to a broad range of people

Audiences include:

- Girls and young women
- Women changing careers, returning to school the workforce
- Influencers

Effective outreach:

Provides awareness

Corrects misconceptions by presenting positive images of computing

Provides information on the pathways to computing

Informs influencers, because encouragement is powerful!

Caution

Avoid mythbusting

- Present the positive
- Don’t unintentionally perpetuate stereotypes

Avoid over-reliance on stories

- Clearly separate your personal context from the context of outreach

Positive Messages

Everyone **belongs** in computing

Computing **changes the world**
emphasize social relevance, helping people

Computing involves **teamwork**

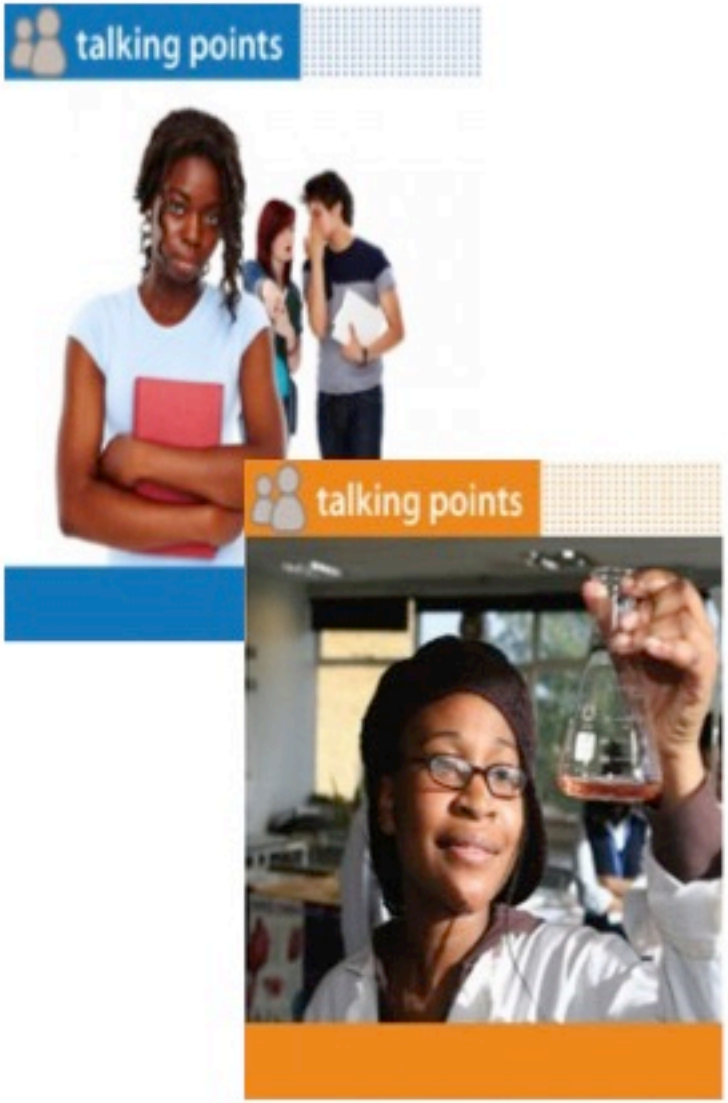
Computing **intersects with many fields and interests**
medicine, biology, music, art, education, business, etc...

Computing provides **high quality jobs**

How can NCWIT Help?

A series of easy-to-use cards that provide the content for informing others or starting discussions to promote the involvement of women in IT.

Talking Points



How to use them:

1) Make a case for CS in High School

2) Discuss institutional barriers to diversity with colleagues

3) Talk to young women about careers in IT

A campaign that brings together policy makers and leaders from education and industry to encourage Latinas and their families to consider careers in technology.

Latinas in Technology

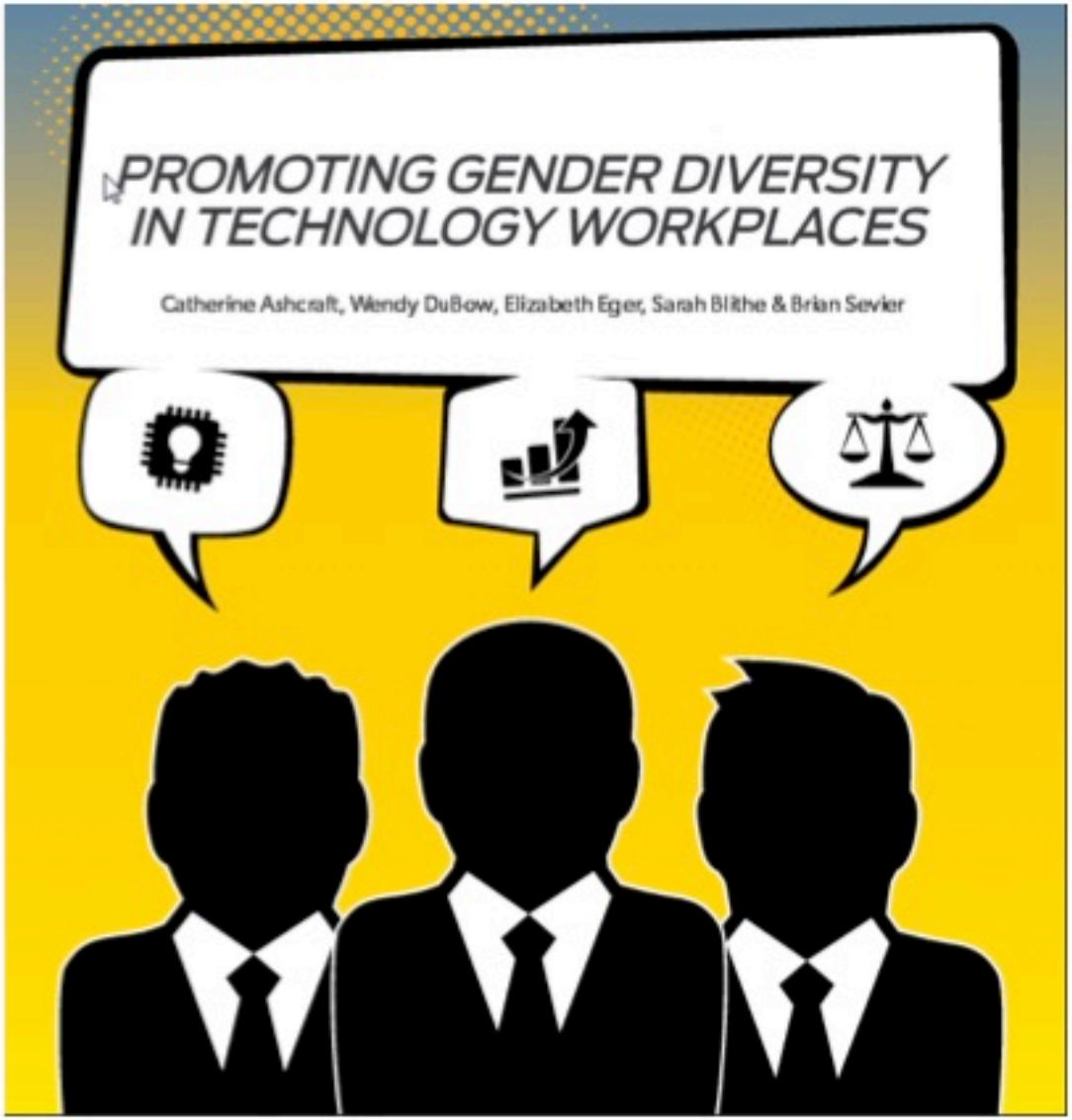
How to use it:

1) Fact sheets about the current state of girls' participation in technology

2) Talking points about undergraduate courses and careers in computing

3) Videos and profiles of successful Latinas in technology

4) Links to computing activities and recruitment programs for young women


PROMOTING GENDER DIVERSITY
IN TECHNOLOGY WORKPLACES
Catherine Ashcraft, Wendy DuBow, Elizabeth Eger, Sarah Blithe & Brian Sevier

How to use it:

1) **Identify male advocates in your organization**

2) **Increase awareness of why their participation is needed**

3) **Provide actionable ways for them to participate**

This program provides recognition, encouragement, visibility, community, and educational and career opportunities to high-potential, technically inclined women in high school and college.

Aspirations in Computing

- **Allison Obourn**
  Lecturer
  University of Washington

- **Hai Hong**
  Program Manager for K-12 Education Outreach
  Google

- **Savannah Loberger**
  National Award Winner
  Sophomore in CS, Oregon State Univ.
  Girls Get IT! Program Founder

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Aspirations in Computing Award University of Washington

Allison Obourn, Lecturer
Computer Science & Engineering
University of Washington

NCWIT Lifetime Partner:

NCWIT Strategic Partners:

NCWIT Investment Partners:

4 years of Aspirations winners

The ceremony

- Food and an informal ice breaker
- Keynote
- Panel
- Parent discussion and activities for the winners
- Awards and dessert

Why host Aspirations?

AspireIT

- 75 pupils from 5 middle schools
- Recruited 10 volunteer high school girls to teach
- Requests to bring this to other schools

Alka Pai
STEM High School, Redmond, WA

Outcomes

- Students to consider for admission
- Create a community
- Additional point of contact

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Google's engagement with Aspirations in Computing & Aspire IT

Hai Hong, K-12 Education Outreach

NCWIT Lifetime Partner:

NCWIT Strategic Partners:

NCWIT Investment Partners:

Why Google supports Aspirations & Aspire IT

- Shared mission
- Inspiring and building communities
- Scaling reach and impact

What Google's engagement looks like

- Funding
- In-kind support
- Googlers as volunteers
- Partnering on programs

Outcomes we've seen

- Strong social community
- Hired Aspirations winners!
- Changing lives

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Savannah Loberger, National AIC Award Recipient

NCWIT Lifetime Partner:

NCWIT Strategic Partners:

NCWIT Investment Partners:

It only takes one experience...

Opportunities Available

Members of Girls Get IT—a Hillsboro, Ore., high school program that encourages girls to get involved in tech—scan the June issue for project ideas.

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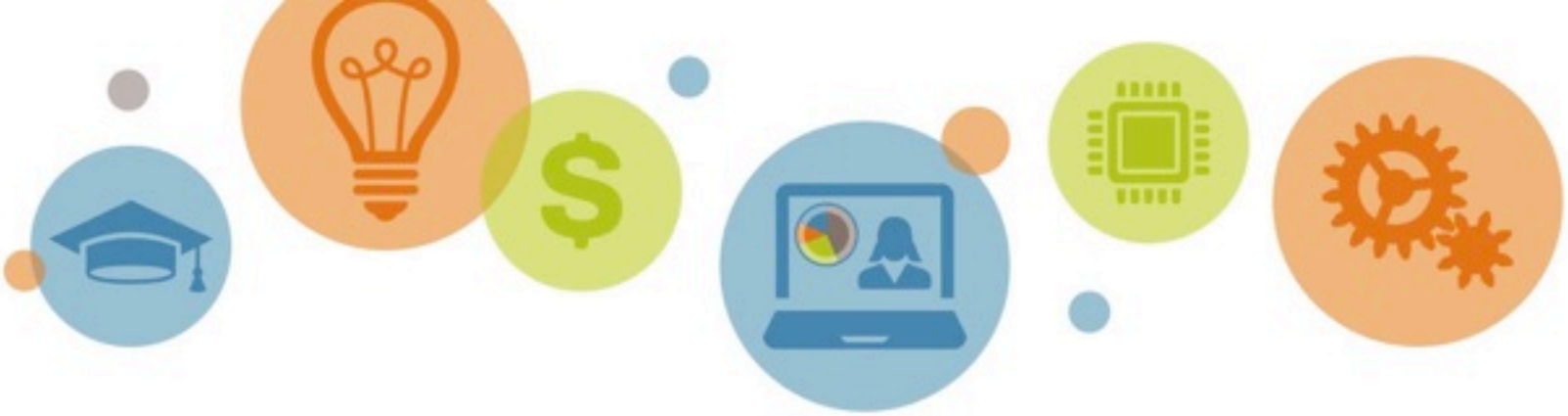


AspireIT and Girls Get IT!

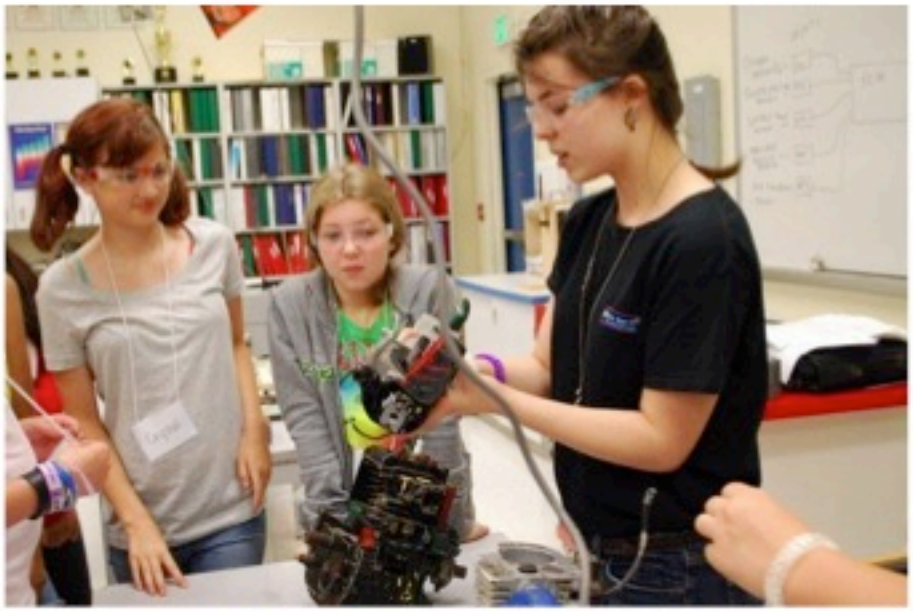
ncwit.org

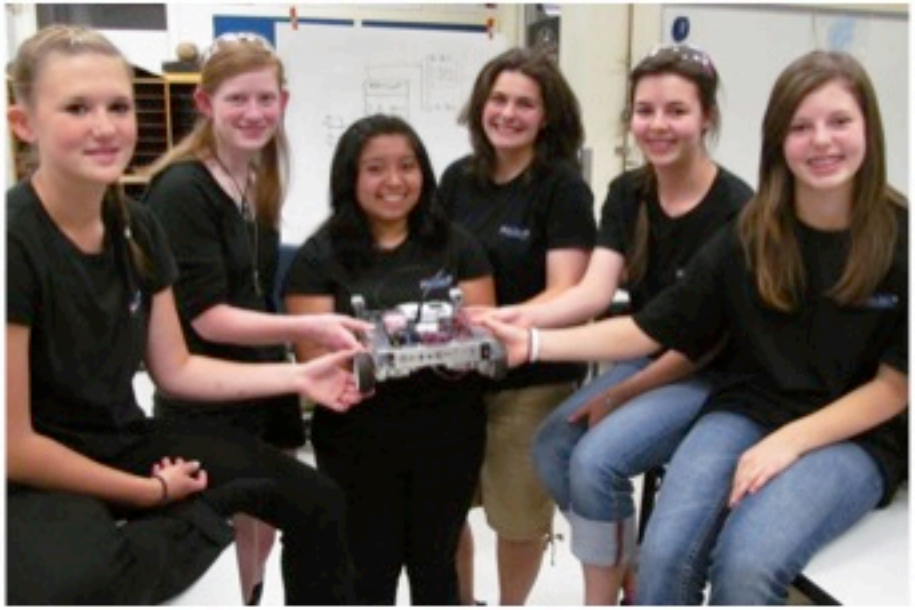
twitter.com/ncwit

facebook.com/ncwit

ncwit.org/linkedin

Active Engagement - Peer Leaders





Perla
GGIT Intern 2014

Ashley
Camp Director 2014
Teacher 2012-2013

Growing a community of support

Outcomes

- Network of future engineers and workforce
- Building confidence
- Encouraging girls to succeed

This program provides school counselors and those in an advising role with up-to-date information and resources they can use to promote education and careers in computing.

Counselors for Computing

How to use it:

1) **Partner with NCWIT to host a C4C event for counselors in your community**

2) **Order C4C kits to distribute to high school counselors in your network**

These programs offer turn-key solutions to pressing issues facing the computing and IT community. They provide all the components necessary for quick and strategic action, right out-of-the-box.

NCWIT Programs-in-a-Box

Outreach-in-a-Box

How to use it:

The box assists IT professionals with developing a classroom presentation and hands-on activities to inspire and inform middle school students about opportunities in IT

NCWIT Programs-in-a-Box

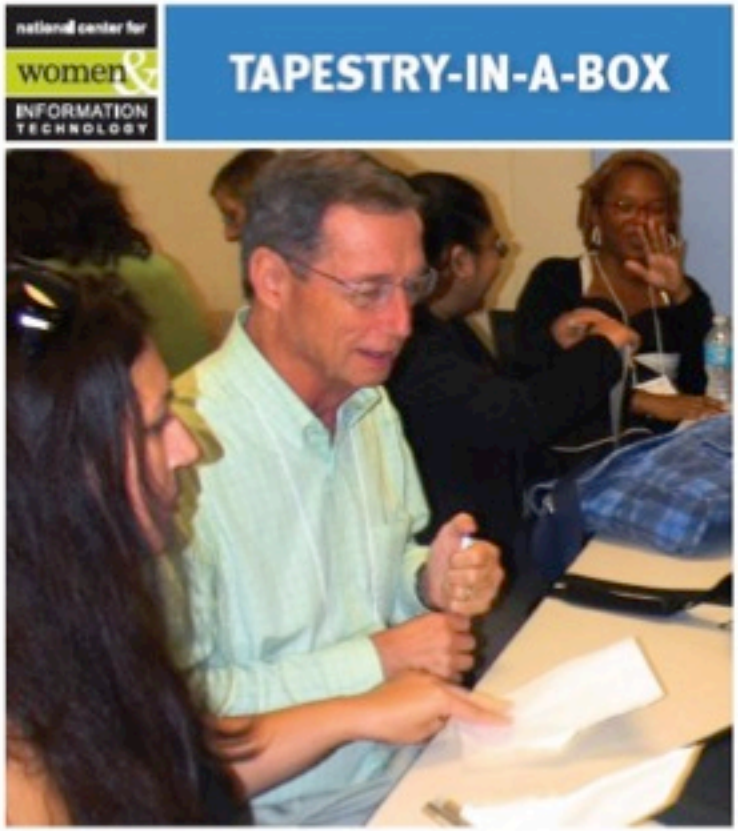
Roadshow-in-a-Box

How to use it:

The box provides resources for colleges and universities to create a K-12 outreach program featuring inclusive activity-based classroom experiences that are run by student presenters

NCWIT Programs-in-a-Box

Tapestry-in-a-Box (coming soon)



How to use it:

Organize a professional development workshop to train high school teachers to attract and retain diverse students to computing courses

This program's goal is to recognize the value of women's technical contributions by taking a small, but symbolic action:

sit to take a stand.

Sit With Me

✧ **Ellen Momsen**
Director of Women & Minorities in Engineering
Oregon State University

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Sit With Me: NCWIT Red Chair at Oregon State University

Ellen Momsen,
Director Women and Minorities in Engineering

Goal: Raise awareness on campus

NCWIT Lifetime Partner:

NCWIT Strategic Partners:

NCWIT Investment Partners:

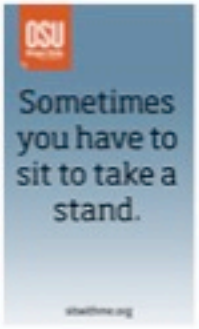
Pre-event Campus Celebs

I sit to encourage women to help change the way technology serves people. Women in computer science make a difference.

Margaret Burnett
Professor

I sit to promote women's diversity of thought and perspective.

Dan Di Spaltro
B.S. Computer Science '07
General Manager
Rackspace San Francisco



I sit to inspire women to seek a degree in computer science.

Jennifer Parham-Mocello
Instructor

I sit to encourage women to fully explore their interests to find their life passions.

Annette von Jouanne
Professor

I sit to invite more women to help improve our world through the practice of science and engineering.

Annabelle Pratt
Ph.D. Electrical Engineering '09
Senior Power Research Engineer
Energy and Sustainability Lab
Intel Labs / Intel Corporation

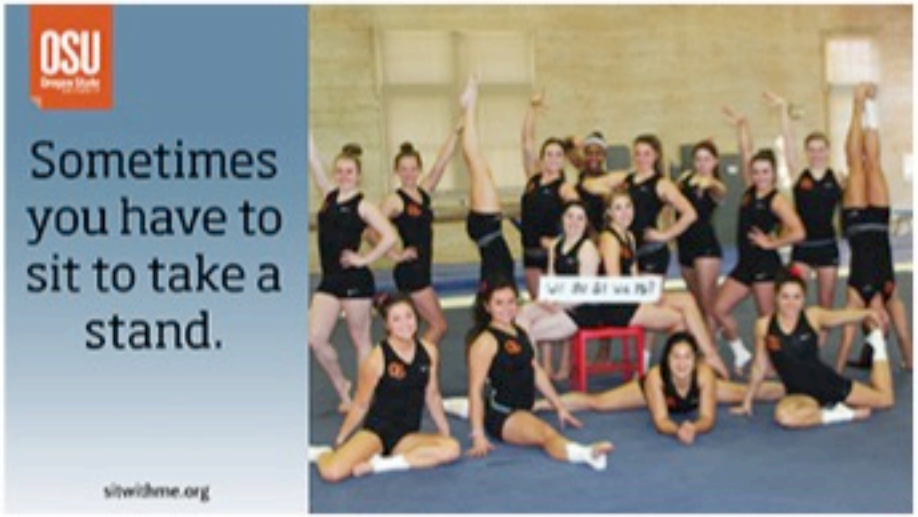
I sit to recognize women's technical creativity and leadership devoted to helping people have a better future.

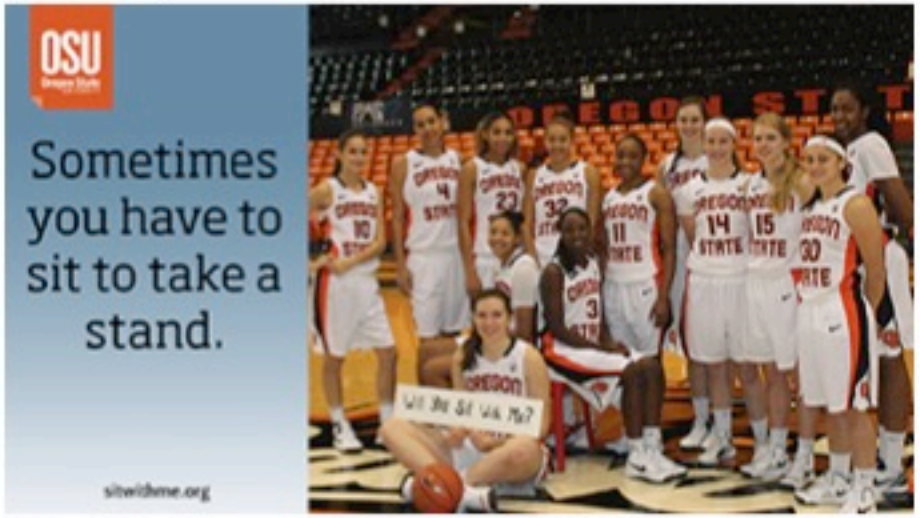
Ron Adams
Executive Associate Vice President for Research
Oregon State University

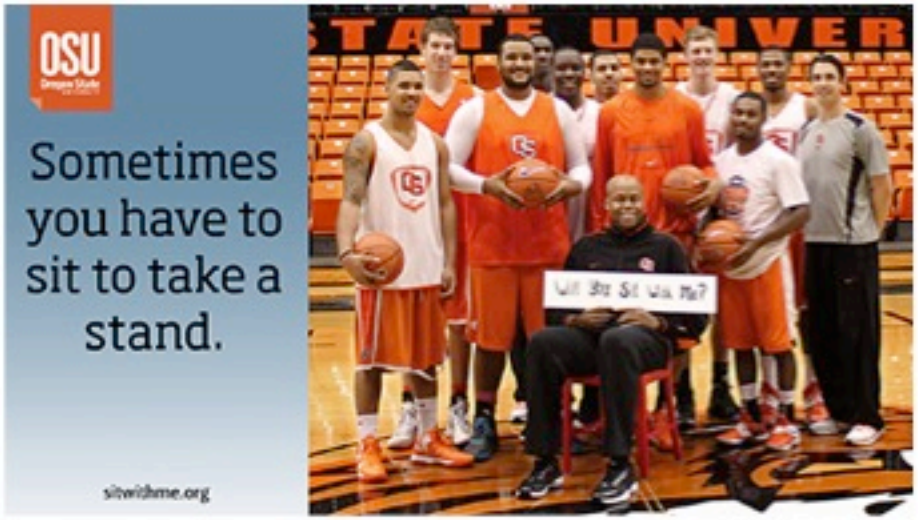
I sit to celebrate the contributions women have made to the computing profession.

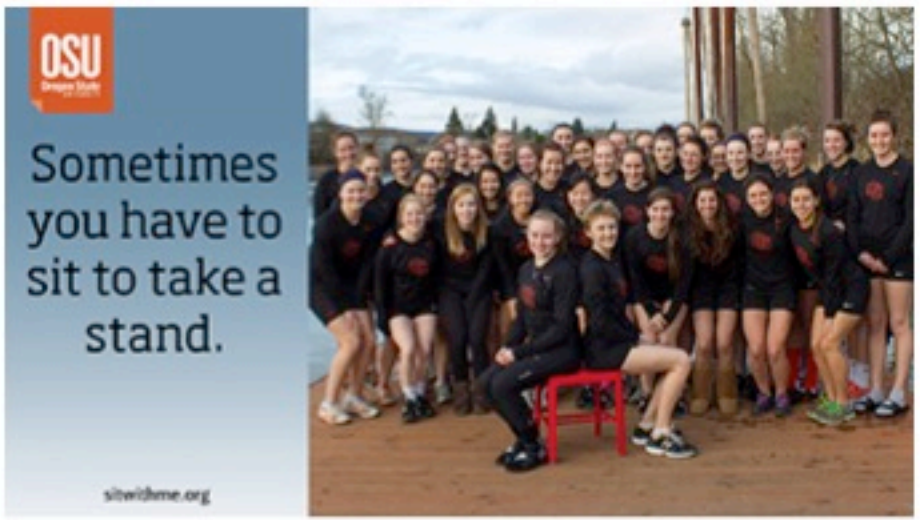
Cherri Pancake
Professor

Student Engineers/Computer Scientists









Sit With Me

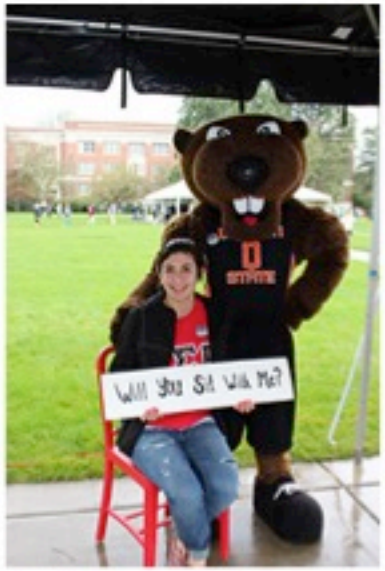
WE ARE
BEAVER NATION

STATE
Travel
Be creative
Change the world
Make a difference
Work with great people
Solve problems

Will She Sit With Me?

Sit With Me

ΦΣΡ
Will You Sit With Me?


Will You Sit With Me?

Will You Sit With Me?

Will You Sit With Me?

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Revolutionizing the Face of Technology

Sparking Young Girls' interest in Computer Science Lessons Learned

Hilton Head, SC/NCWIT 2015 Summit
May 20, 2015

Giti Javidi, Associate Professor of Computer Science, VSU

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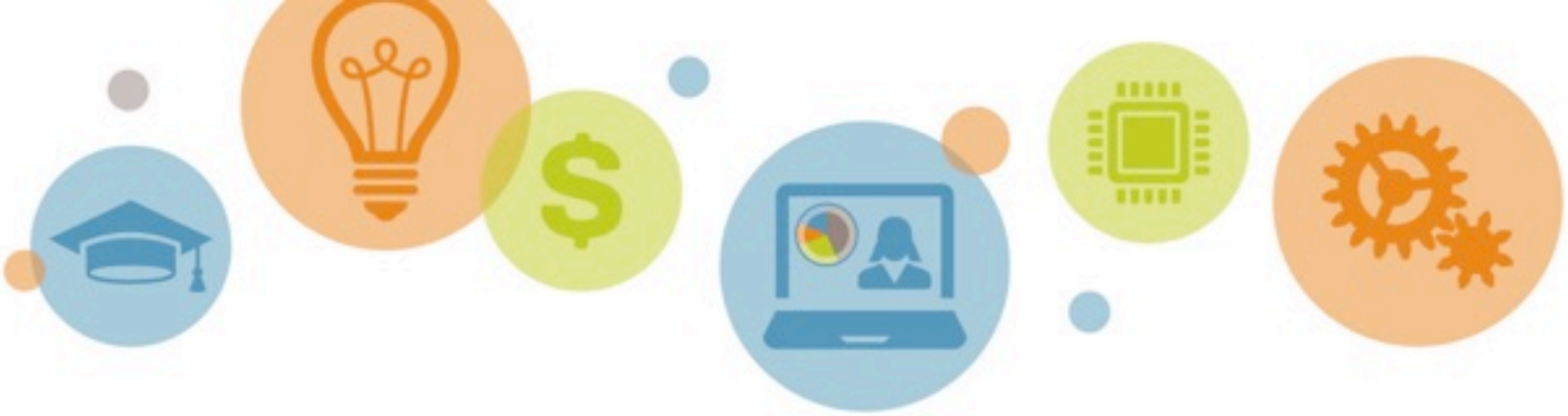

Did You Know?

Our main baseline for our activities

(One of NCWIT's Best Resources)

ncwit.org

twitter.com/ncwit

facebook.com/ncwit

ncwit.org/linkedin

Did you Know?

Did you know it's possible to teach coding without a computer?

Many K-12 teachers and non-profits in support of introducing kids to computing early on are teaching "CS Unplugged." Coding without a computer allows all students to learn the basic building blocks of computer science, regardless of the amount of computer hardware or software available.

Activities?

- Established VSU Computing Academy – Saturday workshop
  - It is all about me
  - Breakfast Bytes

What we learned?

- Recruitment process
- Get teachers and counselors attend the sessions
- Choosing the right activities
- Recruit and train male and female undergraduate students to teach the sessions

Choose CS activities that of interest to girls!

Cryptography

Error Detection, Correction, parity

Working with Robots

Resources

NCWIT's "Computer Science-in-a-Box: Unplug Your Curriculum" provides great tips to unplug your CS curriculum and teach students the fundamentals of coding without using computers.

Did you Know?

Did you know that national test results show that elementary and secondary school girls outperform boys in writing and verbal tasks? Many believe that girls might have natural advantages over their male peers when it comes to computer coding, a process he compares to writing a book. They argue that one need grammar, an outline, organization and the ability to break things down into individual components. Therefore it could be argued that creating software is more female-oriented than male.

Activities?

- GirlsCanCode

What we learned?

- Have ice breakers at the beginning of sessions
- Scratch is an excellent tool to use with introducing girls to programming
- Recruit some of the participants for helping with programming workshops designed for younger kids

GirlsCanCode

NCWIT Resources:

- Snap, Create, and Share with Scratch

Other Resources:

- http://skillcrush.com/2012/08/13/resources-offline-tech-classes/
- http://Code.org

Did you Know?

Did you know that that the creative aspect of computing is the first thing that captures girls?

Activities?

- There's an App for That
- Girls Go GUI

What we learned?

- Provided proper training sessions for undergraduate students to teach the workshops
- Girls enjoyed app development and most of them wanted to create some type of app related to fashion or beauty

There's an App for That

A two-week summer program targeting sophomore and junior level females from regional high schools. The summer program emphasized computer science concepts through smart phone application development using Google App Inventor.

NCWIT Resources:

- **Snap, Create, and Share with Scratch**: Since App Inventor utilizes frameworks closely related to scratch, these benefits will directly apply.
- **Pair Programming-in-a-Box: The Power of Collaborative Learning**: Pair programming is a collaborative learning method in which students program in pairs instead of individually.
- **Roadshow-in-a-Box: Capitalizing on Models for Outreach:** Utilized in outreach efforts leading up to the summer program to make high school students aware of the Department, the Computer Science program, and computing professions.

Girls Go GUI

NCWIT's
AgentCubes-in-a-Box: Introduce Computing Through Game Design

Retention of Female CS Undergraduates

- Provide financial support to promising minority students in need. Merit- and need-based scholarships are provided to students who pursue a Bachelor of Science degree in Computer Science at VSU.
- Proactively advise students through proactive advising.
- Encourage a community of computer science scholars.
- Facilitate mentoring for CS students.
- Encourage summer internships.
- If no internship available, then we offer summer research opportunities.
- Get them trained to hold workshops for K-12 students.
- Have them serve as CS Ambassadors.
- Invite female role models as guest speakers.

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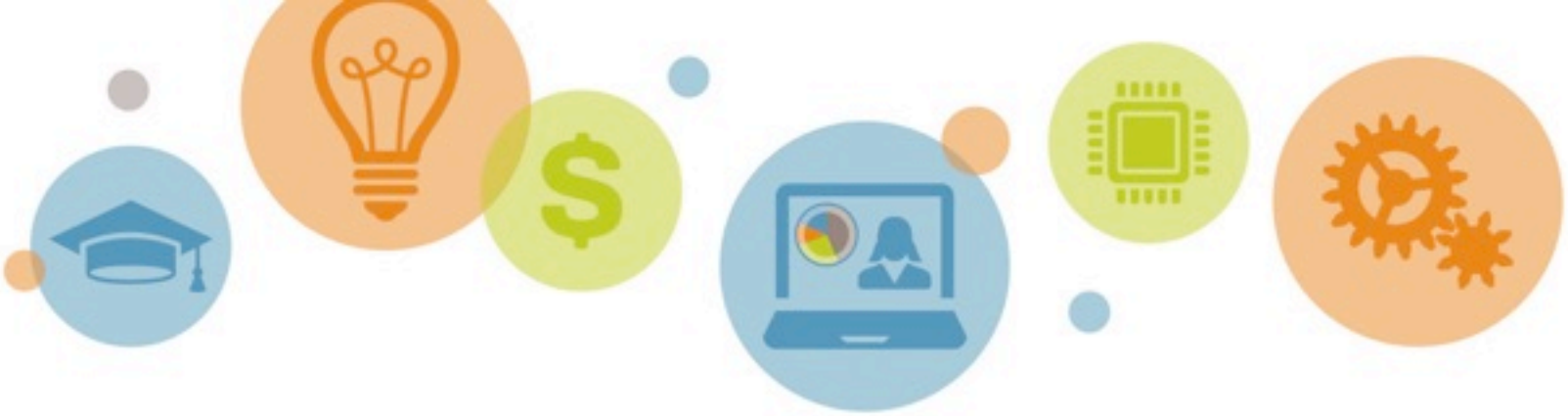

Other Useful NCWIT Resources

ncwit.org

twitter.com/ncwit

facebook.com/ncwit

ncwit.org/linkedin

Resources we have found useful

Recruitment

University Pathway to IT and Computing Careers

•Share with school counselors

Moving Beyond Computer Literacy: Why schools should teach computer science

•Share with principals, superintendents

•Present to the schools board

Outreach-in-a-Box: Discovering IT

•Excellent resource for recruitment school visits

Counselor Lesson Plan (PowerPoint)

Counselor Lesson Plans (pdf)

Retention

How Can Encouragement Increase Persistence in Computing?

How Do Stereotype Threats Affect Retention?

Talk with Faculty Colleagues About Stereotype Threat

Strategic Planning for Retaining Women in Undergraduate Computing

•Share with your colleagues

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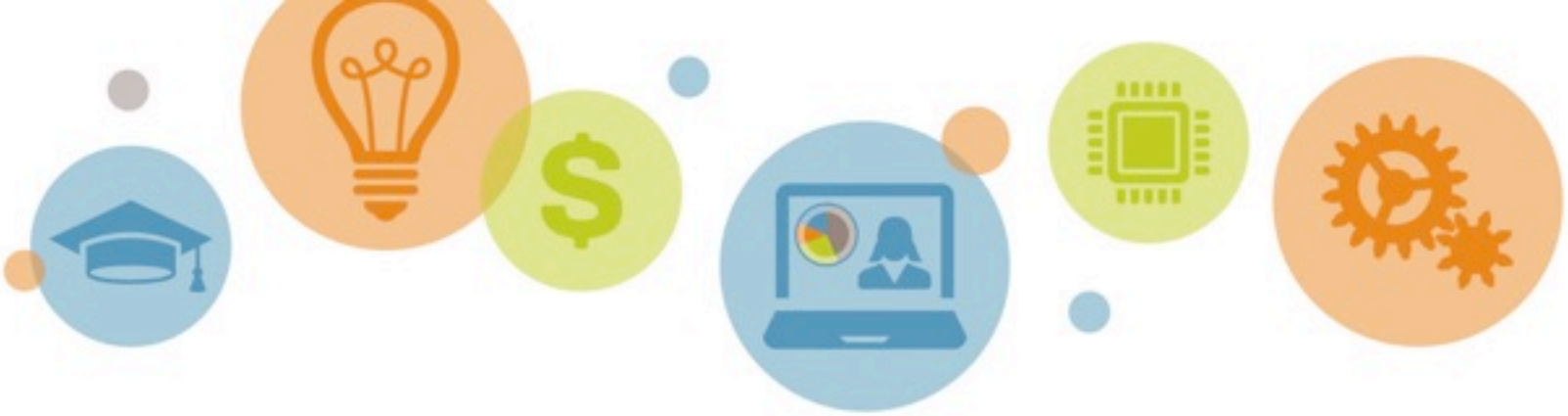

What Have We Learned?

ncwit.org

twitter.com/ncwit

facebook.com/ncwit

ncwit.org/linkedin

- Connect with colleagues to encourage their participation in such efforts
- Promote male and female mentors.
- Empower parents by providing workshop.
- Teachers and students should learn together. Get k-12 teachers involved in your workshops.
- Partner with classroom teachers who would help you recruit a wide range of girls, especially those who could most benefit but might be least likely to participate
- Offer after school, and free of charge programs
- Share NCWIT resources with your institution and the community
- Make sure walls are full of colorful images of CS boys, girls, men and women of various races, cultures and nationalities
- Train Role Models to Inspire Girls in CS
    - Start a CS Ambassador program and have those students teach the workshops
- Our retention activities are working. We contribute that to great resources provided by NCWIT.
- Our students get excited about having these workshops and K-12 girls are as excited to be in our programs.
- Read those “Did you Know” emails from NCWIT and let those guide you on planning your next activity
- Seek departmental and institutional support
- Use NCWIT resources. THEY WORK.

Roundtables

Small Groups by Audience:

K-8
High School
College
Mid-Career

Discuss

What are you doing that's working?

Or…

What is something you'd like to try?

What's next?

- Visit www.ncwit.org/ncwit2go for easy to use resource collections designed to help you achieve your goals.

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Resources & Tools | Programs | Alliances | News & Events | About Us | Search NCWIT

Home › Resources & Tools › NCWIT's Member Activity and Change Tracker (ACT)

NCWIT's Member Activity and Change Tracker (ACT)

Alliance - Any - Goal tag(s) - Any - Search

Activity - Any - Activity status - Any - UserID

Organization Type - Any - Presenting Un-poster session at Summit? - Any -

Submit Reset

NCWIT members are in action! See some of the work they are doing below. To help them, NCWIT provides hundreds of free resources for increasing and benefiting from gender diversity.

Need help creating an activity? Use our How-to Guide.

NCWIT ACT ACTIVITY AND CHANGE TRACKER

MY ACTIVITIES VIEW ALL

Looks like you haven't created any activities yet. Get started now.

Create An Activity ›

MY COMMENTS

Looks like you haven't commented on any activities. Get started now by clicking on an activity in the main content area of this screen, then leaving your questions or comments in the *Comment* dialogue.

Displaying 1 - 20 of 131

Transforming Culture with Inspirational Space

Status
In progress

Pick a second round Empower Hour to learn something new!

	Aspirations in Computing	Aspirations in Computing is a sweeping national talent development initiative for young women in computing and information technology from kindergarten through graduate school.
	Pacesetters	Pacesetters is a unique fast-track program where company and university leaders work together to increase their organization's number of technical women.
	Extension Services Client Showcase	Extension Services provides customized consultation to computing and engineering undergraduate departments to help them develop high-impact strategies for recruiting and retaining more women students.
	EngageCSEdu	EngageCSEdu is a collection of CS1 and CS2 materials that support the retention of women and other underrepresented groups in undergraduate computing education.
	Sit With Me	Sit With Me invites you to validate and recognize the important role women play in creating future technology.
	Male Advocacy	Learn more about the importance of male advocacy and the most effective ways men can advocate for technical women.
	Tapestry and C4C	Tapestry workshops train high school computer science teachers to attract and retain more and diverse students to computing. C4C provides high school counselors with resources they can use to guide students toward education and careers in computing
	Latinas in Computing	Latinas in Computing is a campaign that brings together policy makers and leaders from education and industry to encourage Latinas and their families to consider careers in technology.