A sobering fact: the U.S. Department of Labor Statistics predicts that by 2018 there will be 1.4 million open technology jobs in the United States and, at the current rate of students graduating with degrees in computer science, only 61% of those openings will be filled—and just 29% of applicants will be women.

The need is all the more critical when you realize that the latest advances in improving healthcare, protecting the environment, and upgrading manufacturing have come from technological innovations. At Microsoft Research we believe that in order to build the most innovative technology solutions that solve the world’s toughest problems, we need to ensure our research and development teams are diverse enough to anticipate, respond, and serve the needs of the changing marketplace.
Microsoft Research focuses on four key actions to help bridge the gender gap:

- **Reaching middle and high school girls with tools and programs**
- **Partnering with key organizations and top academic institutions to actively engage undergraduates and post-graduates in the field of computer science**
- **Raising awareness of the importance of events and mentorships**
- **Providing opportunities in computing**

### Women in Computing Matters

#### Reaching middle and high school girls with tools and programs

The courses a girl takes in middle and high school can play a key role in determining her path in college and beyond. We sponsor a number of technology tools and programs designed to show girls and young women the power of technology and to inspire them to pursue it in their course of study and careers. Some of these include:

- **Kodu**: An exciting visual programming language designed to be accessible to children and enjoyable for anyone who wants to create cool games. Learn more at research.microsoft.com/kodu
- **.NET Gadgeteer**: A rapid prototyping platform for small electronic gadgets and embedded hardware devices. Learn more at research.microsoft.com/gadgeteer
- **Pex for Fun**: Brings programming in C#, Visual Basic, and F# to your web browser and to Windows Phone 7. Learn more at pex/pex4fun.aspx
- **Touch Develop**: This radically new software development environment lets you write code for your phone on your Windows Phone. Learn more at research.microsoft.com/touchdevelop
- **International Women’s Hack-A-Thons**: In partnership with ACM-W, IEEE-W and NCWIT, encourage undergraduate and graduate women to be producers of tomorrow’s technology to help solve world problems for NGOs around the world. Learn more at research.microsoft.com/womenms-hackathon

### Partnering with key organizations and top academic institutions to actively engage undergraduates and post-graduates in the field of computer science

We have partnered with a number of companies and organizations that demonstrate the same dedication as Microsoft Research to engage women in computer science at all levels of their professional lives from middle school through college, and into their careers. Notable partners include:

- **Academic Institutions**: To support women computer scientists and rising stars in their research
- **National Center for Women & Information Technology (NCWIT)**: A coalition dedicated to attracting and retaining graduate women. We also participate in opportunities to mentor and encourage women to reach their full potential in computing. Some of these include:
  - **NCWIT Affiliates Aspiration Awards**: These awards honor young women at the high-school level for their computing-related achievements and interests. Recipients are selected for their computing and IT aptitude, leadership ability, academic history, and plans for post-secondary education.
  - **NCWIT Affiliates Research Awards**: An organization that works to transform culture in engineering education as a means of attracting and retaining graduate women.
- **Women in Engineering ProActive Network (WEPAN)**: A committee dedicated to increasing the number of women in computer science and engineering research and education.
- **Association for Computing Machinery’s Women in Computing (ACM-W)**: An organization that celebrates, informs, and supports women in computing and works to improve working and learning environments for women.

### Raising awareness of the importance of events and mentorships

Education does not end with graduation. This holds especially true in technology. We sponsor and participate in numerous events each year designed to inspire and educate women in the technology field. We also participate in opportunities to mentor and encourage women to reach their full potential in computing. Some of these include:

- **Grace Hopper Celebration of Women in Computing and Regional Conferences**: Produced by the Anita Borg Institute for Women and Technology, the Grace Hopper Conference brings the research and career interests of women in computing to the forefront.
- **NCWIT Affiliates Aspiration Awards**: These awards honor young women at the high-school level for their computing-related achievements and interests. Recipients are selected for their computing and IT aptitude, leadership ability, academic history, and plans for post-secondary education.
- **Computer Science Education Week**: Admiral Grace Murray Hopper was a visionary in the field of computer science. Her engineering in programming languages and computer system standards laid the foundation for advancements...
in computer science from the 1940s – 1970s. CSEdWeek is designated as the second week of December to honor her birthday, December 9, 1906, as well as her extraordinary contributions to the field.

**CRA-W Grad Cohort Workshop:** The CRA-W is an action-oriented organization dedicated to increasing the number of women participating in Computer Science and Engineering research and education at all levels. This workshop invites students in their first year of graduate school to meet with computer researchers and professionals for a first-hand perspective on the industry.

**NetHope TechConnect:** Women’s TechConnect (WTC) brings together professional women with young, college-educated women and women IT Professionals in the humanitarian sector, to support career development, confidence-building and success in the technology industry. Helping women in the developing world obtain jobs and opportunities will help us grow the field of computing and inspire young women in the next generation. Microsoft is proud to mentor women in the TechConnect Program.

**Providing opportunities in computing**

A student’s college education is more than just time spent in the classroom. We support a wide variety of scholarships, internships, fellowships, research opportunities, and awards designed to inspire young women to pursue technology as a career path. These include:

**The Microsoft Research Graduate Women’s Scholarship:** This one-year scholarship program supports women in the second year of their graduate studies to help increase the number of women pursuing a PhD. Applicants must be enrolled in a Computer Science, Electrical Engineering, or Mathematics program at a U.S. or Canadian university.

**Internships at Microsoft Research:** Microsoft Research offers internship opportunities at research locations throughout the world. Internships provide students with the opportunity to apply research and theory to practice while working with well-known researchers and networking with fellow PhD students.

**Full-Time Positions at Microsoft Research:**
Full-time positions at Microsoft Research provide the opportunity to be at the forefront of computer science research and technology development, working with world-class research colleagues on meaningful research and product incubations.

**Post-Doctoral Research Opportunities:**
We provide a rich research environment, an open publications policy, and close links to top academic institutions worldwide for post-doctoral researchers.

**NCWIT Academic Alliance Seed Fund:** Microsoft sponsors this fund, which awards members of NCWIT’s Academic Alliance with start-up funds to develop and implement initiatives for recruiting or retaining women in computing at Universities.

**Microsoft Research**
in partnership with Constance Steinkuehler and the team at University of Wisconsin-Madison plans to create a girls-only computer science Massive Open Online Course (MOOC) to excite them into learning computer science through games, projects and peer mentoring.

To learn more about Microsoft’s programs, tools, and how you can get involved, please visit research.microsoft.com/diversity or contact Microsoft Research diversity at MSRWIC@microsoft.com.

Together we can bridge the gender gap through diversity and creativity

Through partnerships with businesses, organizations and individuals, we believe we can make a real positive impact to grow the next generation of women in computing. We will bridge the gap to future innovation together, through diversity and creativity.