



2013

ONTARIO NETWORK OF WOMEN IN ENGINEERING



PHOTO: LUTHER CAVERLY

Young women with higher mathematics marks in high school (at least 90% in grade 9 or 10) were less likely to opt for a Science Technology Engineering and Math (STEM) university program than men with marks in the 80% to 89% range.

– STATISTICS CANADA DECEMBER 2013 – Gender differences in science, technology, engineering, mathematics and computer science (STEM) programs at university

## ONWiE

I feel privileged to have been chosen as the Ontario Network for Women in Engineering (ONWiE) chair in July 2013 for a five year term. For close to ten years, the Ontario Network of Women in Engineering (ONWiE) has operated to promote the engineering profession to girls and young women across Ontario. ONWiE is a unique partnership between all the accredited schools and faculties of engineering across Ontario to collaborate and provide opportunities for women and girls to explore and excel in engineering professions. ONWiE continues to be a platform to allow collaboration between member institutions in developing joint activities and initiatives.

Mary Wells

Mary A. Wells Ph.D. P.Eng.  
ONWiE Chair

**ONWiE is committed to:**

### COLLABORATING

ONWiE members and supporters work together to improve the participation rate of females as students and professionals in engineering in Ontario.

### ENGAGING

Through programs such as Go ENG Girl and Badge Day, ONWiE members engage girls and young women in hands-on activities and introduce them to the engineering profession.

### SHARING BEST PRACTICES

Through communication of best practices and opportunities around mentorship, communication materials and assessment strategies.

### PROVIDING OPPORTUNITIES

By offering opportunities for participants to network and to share information and available resources related to women in engineering across Ontario.

For more information please contact us at [www.onwie.ca](http://www.onwie.ca).





I most enjoyed hearing from the young women who are currently in school to become engineers. I liked how they gave feedback to our questions - it made me a little less nervous about University and gave me more information about going into engineering.

– GO ENG GIRL/GENIALES, LES FILLES participant

I found it very enlightening and informative. A great pre cursor to the university experience; my children have many years to do but it will provide a better focus until then.

– GO ENG GIRL/GENIALES, LES FILLES parent

# INSPIRING TOMORROW'S ENGINEERS

**Go ENG Girl/GÉniales, les filles** is an exciting opportunity for girls in grades 7-10 to visit one of sixteen university or college campuses across Ontario that offer accredited engineering programs, meet with engineering students and professionals and engage in fun hands-on engineering activities. This province-wide program is coordinated through the Ontario Network of Women in Engineering (ONWIE) and has been an annual event since 2004.

During this event, the girls work with engineering students and peers through hands-on activities that encourage them to think like engineers and design creative solutions to challenging problems. Girls leave **Go ENG Girl/GÉniales, les filles** with a new understanding about the diversity of careers possible as an engineer, the importance of continuing to pursue math and science courses in high school and what engineers do. In 2013, each participant took home a USB bracelet full of information about the engineering university/college programs available in Ontario and helpful links that contain more information about the profession.

Thanks to the help of our sponsors, **Go ENG Girl/GÉniales, les filles** is offered free of charge to girls and their parents each year. To date, over 10,000 girls and their parents have participated in this program.

## 2013 BY THE NUMBERS

840 Girls

635 Parents and  
guardians

270 Volunteers  
and organizers

## DESIGNING, CREATING AND SOLVING

- Balloon racers
- Marble and paper roller coasters: create a roller coaster using their knowledge of physics
- Egg transportation system
- Design and construct a boat using recycled materials
- Remote control cars
- Throw frisbees with robot
- Crane design challenge





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I thought this would be boring, but it's the best thing I've done at girl guides!

– BADGE DAY participant

My daughter had a great time and her interest in engineering was cemented.

– BADGE DAY participant parent

## ENGAGING THE NEXT GENERATION

**Badge Day** is an opportunity for Girl Guides to visit an accredited engineering university or college campus, and complete the required activities to earn their Science & Technology badges. This program is modeled off the success of **Go ENG Girl/GENiales, les filles** and has been coordinated by ONWiE since 2010.

During **Badge Day**, the Girl Guides complete some of the following activities to meet the requirements for their badges:

- mix chemicals and observe the chemical reaction;
- demonstrate reflected light by making a kaleidoscope;
- learn about the tools that engineers use;
- engage in hands-on activities on magnetism, chemical reactions, or electricity;
- build a simple device using engineering principles;
- create a website.

**Badge Day** usually precedes **Go ENG Girl/GENiales, les filles** by reaching girls ages 9-11. The participants leave with a confidence in the sciences that will inspire them to keep their options open in high school and beyond.

### 2013 BY THE NUMBERS

715 Girls

7 ONWiE members offered a Badge Day program



# LOOKING FORWARD

ONWiE will build on the successes of this year to reach out to more girls with the message that engineering is an exciting, hands-on, and people-oriented field and that science and math have real-world applications.

This year ONWiE will celebrate the 10th anniversary of **Go ENG Girl/GENIAles, les filles**. We hope that this anniversary will be a conversation starter at national and international events; further increasing the reach of our message.

ONWiE will profile female engineering professions through an **Awesome Women Engineers (AWE)** lecture in conjunction with the Ontario Society of Professional Engineers (OSPE) and local PEO chapters.

ONWiE is developing a new website that will better inform the community of events and registration information. Visit us at [www.onwie.ca](http://www.onwie.ca).

## MARK YOUR CALENDARS

**GO ENG GIRL/ GENIALES, LES FILLES**  
October 18th, 2014

**BADGE DAY**  
Varies – Typically in March-June

In Ontario, of 10 female students registered in grade 10 science, 3 will go on to take grade 11 physics, and only 1.5 will complete grade 12 physics and be ready to even considering applying to engineering.

– ONTARIO MINISTRY OF EDUCATION Data

# BEHIND THE SCENES

ONWiE events are supported by a dedicated team of leaders at each campus locations. Teams are comprised of engineering students, faculty, staff, and alumni who manage all aspects of the program. This year, these dedicated individuals were joined by over 300 volunteers who helped make the events as exciting and insightful as possible.

## THANK YOU!



### CARLETON UNIVERSITY

Miriam Micael, Mawuena Torkornoo, Natalie Linklater and Ruby Misra



### CONESTOGA COLLEGE

Karen Cain, Nancy Nelson and Robin Carmichael



### LAKEHEAD UNIVERSITY

Heather Moynihan and Meilan Liu



### LAURENTIAN UNIVERSITY

Donna Cortolezzis, Marty Hudyma, Ramesh Subramanian and Claudine Beausoleil



### McMASTER UNIVERSITY

Carm Vespi and Linda Coughlin



### QUEEN'S UNIVERSITY

Maria Lahiffe



### ROYAL MILITARY COLLEGE OF CANADA

Phillip Bates



### RYERSON UNIVERSITY

Nika Zolfaghari



### UNIVERSITY OF GUELPH

Andrea Bradford and Caroline Charbonneau



### UNIVERSITY OF ONTARIO INSTITUTE OF TECHNOLOGY

Marnie Ham and Adam Wu



uOttawa

### UNIVERSITY OF OTTAWA

Nathalie Vallieres, Frank Bouchard, Christina Charles and Angeline Blais



### UNIVERSITY OF TORONTO

David Noorden, Darlee Gerrard and Elizabeth Christy,



### UNIVERSITY OF WATERLOO

Mara Fontana, Rohini Wittke, Mary Wells and Martin Scherer



### UNIVERSITY OF WINDSOR

Edwin Tam, Mike Constantins, Katia Benoit and Jacqueline Stagner



### WESTERN UNIVERSITY

Lesley Munteer and Joanne Colling



### YORK UNIVERSITY

Lindsay Amyot, Gunho Sohn, Regina Lee, Shelly Scurr and Gayathry Wright



### ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

Liz Greenland

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