



# Expanding Your Horizons

## Friday, March 30, 2018

Please Print

Student Name \_\_\_\_\_

FIRST LAST

Telephone \_\_\_\_\_ City \_\_\_\_\_

School \_\_\_\_\_

Grade \_\_\_\_\_ Special Needs\* \_\_\_\_\_

E-mail \_\_\_\_\_

\*Reasonable accommodations will be made

**Registration closes March 16th or earlier if filled.**

For more information, see your school counselor, or visit <http://lakewashington-wa.aauw.net>



## Science, Technology, Engineering & Math Conference for Girls

### Grades 9 – 12

Friday, March 30, 2018  
7:45 a.m. – 1:00 p.m.

Bellevue College  
3000 Landerholm Circle SE  
Bellevue, WA

**REGISTER NOW!**  
**Space is limited!**

### EYH Conference Goals:

- Increase the interest of young women in science, technology, engineering and math (STEM) through positive, hands-on experiences.
- Foster awareness of career opportunities in the STEM fields.
- Provide young women with opportunities to meet and interact with positive role models who are active in STEM-related careers.

Sponsored by:



### Workshop Preferences

You will be assigned to three workshops. Place your **workshop number** choices in the blank spaces below. Please explore a variety of professions. By indicating nine workshops you improve your chances of getting workshops you have chosen.

- |          |          |          |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |



**Student Fee** \$20 (non-refundable) covers lunch/materials. Your school must be notified of your plan to attend this conference before mailing in your registration. **No confirmation will be mailed; your counselor will be notified of your registration.** Students registering independently may check registration status at [gogirlseyh@gmail.com](mailto:gogirlseyh@gmail.com)

Registration forms must be postmarked by March 16, 2018.

### Make checks payable to: AAUW / HS EYH

Mail to: **Expanding Your Horizons**  
**16602 NE 18th Street**  
**Bellevue, WA 98008**

**EDUCATORS AND PARENTS – PLEASE USE SEPARATE ADULT REGISTRATION FORMS**

Adult program & registration forms are available at <http://lakewashington-wa.aauw.net>.

Questions: [gogirlseyh@gmail.com](mailto:gogirlseyh@gmail.com)

# Expanding Your Horizons

Friday, March 30, 2018 • 7:45 a.m. – 1:00 p.m.

## Conference Schedule

7:45 – 8:15 Check in – Bellevue College cafeteria  
8:30 Session 1 Workshop Begins  
1:00 Conference Ends

## Workshops

### 1. You've Got the Power!

Providing energy while minimizing the impact that we have on the climate is a major challenge facing us in the world today. Hands-on experience with electrical circuits gives you a chance to explore. Maureen Albi, Area Channel Manager; Marsela Jakub-Wood, Power Systems Engineer, Sr.; Michele Bar, AC Drives Specialist  
SCHNEIDER ELECTRIC

### 2. Atmospheric Chemistry and Physics

Learn about the power of the atmospheric and the scientific processes that are happening all the time around you!  
Rachel Atlas, Julia Greenwald, Graduate Students  
UNIVERSITY OF WASHINGTON

### 3. Occupational Therapy – Choices Abound

Do you truly care about people? Are you creative? Would you love to go to a job that changes often, with a variety of different “fields” to work in, allows you to use your best self, a job that is flexible and can include summers off? Travel? Would you like to be self-employed?  
Constance Ballou, MA, OTR/L, Certified Hand Therapist  
SELF-EMPLOYED

### 4. Twisted Topology

What do knots and DNA have in common? Come and find out how mathematical puzzles can help us understand some of our own biology!  
Florencia Boshier, Doctor (Post-doctorate Research Fellow)  
FRED HUTCHINSON CANCER RESEARCH CENTER

### 5. Mallow Mania

Learn about Newton's Laws and use them to build and compete with your own marshmallow catapult. We will talk about strategies for launching the highest and farthest, then test our theories (and eat them too).  
Stephanie Bostwick, Associate Professor of Engineering  
WHATCOM COMMUNITY COLLEGE;  
Tiff Cremer, Innovation and Design Engineer  
AMAZON

### 6. Earth Experiments in a Virtual World

Get hands-on experience running your very own global climate simulation! Learn how Earth Scientists use physics, mathematics and computer science to understand the climate of the past and predict climates of the future.  
Katie Brennan, Stephanie Rushley, Graduate Students;  
Marysa Lague, PhD Candidate  
UW, DEPARTMENT OF ATMOSPHERIC SCIENCES

### 7. Math Puzzles and Strategies

Join us as we look at graph theory, which is used in laying fiber optic networks and planning efficient routes for travel, and also explore cryptography, which people turn to when they need to secretly store or communicate messages.  
Rini Chakrabarti, Usha Raman, Instructors  
BELLEVUE COLLEGE

### 8. A Great Technology Needs Great Marketing

You may have created an amazing technology product, but how do you drive customers to adopt your product? Learn how to create a marketing strategy using a real problem faced by Microsoft Cloud.  
Teresa Conte, Senior Product Marketing Manager  
MICROSOFT

### 9. Build A Better Website

What are your favorite websites and why? If you had your own site, what would it look like? Learn the basic concepts and languages to create a webpage, modify its appearance and make it interactive.  
Kim Curtis, Director, Software Developments; Erin Stoner;  
Lori Dey, Solutions Architect  
eBAY

### 10. Driving in the Fast Lane

Learn about Newton's Laws of Motion as you construct your very own Rocket Car! Explore how symmetry, friction, and other variables play a role in the speed of your car. Learn how mechanical engineers apply these principles in real life!  
Dana Day, Flight Controls Engineer  
UW SOCIETY OF WOMEN ENGINEERING

### 11. Medical Simulation Robotics

Learn how to design, program, and test run a medical simulator (super fancy robot that looks like a person) with highly programmable capabilities that can make it respond realistically to nearly any medical situation.  
Andrea Elliot, Medical Simulation Program Administrator  
BIG BEND COMMUNITY COLLEGE

### 12. Power of Design!

We'll explore the practice of architecture and program an environment you're familiar with. You will then get to see how design concepts come to life through 3D software and realistic visualization tools.  
Natasha Epstein, Architect  
COLLINS/WOERMAN

### 13. The World of Dentistry

A career that has it all - working with people, ability to own your own business, science & medicine, and a typical full-time work week is 4 days! Changing the world one smile at a time!  
Libbi Finnessy, Dentist  
SELF-EMPLOYED

### 14. CSI: Solving Crime with Fingerprints

Develop fingerprints like a real CSI! You will apply the chemicals and develop prints. You will also get to see fingerprints “glow” with an alternate light source!  
Rachel Forbes, Amanda Poast, Latent Print Examiners  
SEATTLE POLICE DEPT.

### 15. Ace Your Immune System

Learn about actual clinical cases where Acupuncture and Herbal Medicine brought patients balance and better health.  
Mayme Fu, Acupuncturist and Herbalist  
PEOPLE'S ACUPUNCTURE, SELF-EMPLOYED

### 16. Come to Your Senses

Learn how your brain can interpret and respond to external signals (like pressure, temperature, and light). Hear from neuroscientists who study how the brain works.  
Clare Gamlin, Kali Esancy, Graduate Students  
UNIVERSITY OF WASHINGTON

### 17. The World of Microfluidics

We will explore fluid and colloids on the micro scale and discuss applications on the nano scale! We will create ferrofluid and “elephant toothpaste.” While based in chemistry, this workshop is multidisciplinary.  
Belinda Garana, UW Student  
UW WOMEN IN CHEMICAL ENGINEERING

### 18. Epidemics!

Discover how diseases like Ebola, flu and malaria spread in a population, and learn what we can do to control epidemics.  
Jaline Gerardin, Caitlin Bever, Research Scientists;  
Jillian Gauld, Postgraduate Research Scientist; Laina Mercer, Research Statistician  
INSTITUTE FOR DISEASE MODELING

### 19. Drones on Climate

See the aircraft scientists bring to the Arctic to study the climate. Then test your pilot skills on our flight simulator.  
Lexie Goldberger  
DEPARTMENT OF ENERGY, PACIFIC NORTHWEST NATIONAL LABORATORY

## 20. Toy Adaptation

Adapting toys allows children with disabilities to play with and learn from toys that were previously inaccessible to them. Come and learn how to adapt toys!

Brianna Goodwin, Molly Mollica, Graduate Research Associates  
UNIVERSITY OF WASHINGTON

## 21. How to Build Stuff That People Love

Why do we love some technology products and hate others? How to build products that people love? Learn about what User Experience does to make technology friendly and loved by people who use it.

Lada Gorlenko, Director of Research; Hina Shah, Senior UX Researcher  
SMARTSHEET

## 22. Stitch a Chicken and Splint a Friend

Come learn and practice surgical suturing on chicken skins, splinting your neighbor's not-so-broken limbs and learning about the day-to-day activities of an orthopedic surgeon and PA-C.

Katie Henderson, Physician Assistant-C; Kathleen Moen, M.D.  
SWEDISH MEDICAL GROUP

## 23. Balancing Act: Designing a Stable Reusable Rocket

Explore the factors that affect stability by designing and testing your own mini rocket. Discover what these smaller rockets have in common with larger launch vehicles.

Marina Hernandez, Outreach Coordinator; Lyndsey Wright, Structural Engineer  
BLUE ORIGIN

## 24. The Heart of Nursing

Do you know that nurses work in IT, on cruise ships, and as CEOs? We'll talk nursing careers, look at the inner working of a real cow heart and lung, and how dysfunction can affect patients.

Melissa Hutchinson, MN, RN, ARNP-CS, CCNS, CCRN; Natina Dudley, RN, MSN; Collyn West, MSN, RN  
VAPSHCS

## 25. Design Studio

Like art and science? Open up your imagination to product development! Learn creative problem solving techniques and how they apply to today's design industry.

Sena Janky, Principal UI/UX Designer and Founder  
CONNECT DESIGN

Kristin Wells, Industrial Designer/Consultant  
CAMP INTERVENTION/NATIONAL INVENTORS HALL OF FAME

## 26. Landscape Architecture: Creativity Meets Sustainability

Landscape architects shape outdoor environments for people of all ages and abilities. Tap into your creative side and design a park, playground, green roof, or even a healing garden.

Gina Kim, Landscape Designer; Rachel Dotson, Landscape Architect, Senior Associate; Merit Oviir, Landscape Architect, Associate  
HBB LANDSCAPE ARCHITECTURE

## 27. Landscape Masterpiece

#ArtAndScience = City or country. Landscapes or veggies: Desk work or outside time. Learn more about Landscape Design by putting 'plants' to paper and see if your career dreams can come true.

Kirsten Lints, C.P.H., Landscape Designer Gardens ALIVE Design  
Smitha Navda, M. Architect (Landscape), Landscape Designer  
ROOTED IN LANDSCAPE

## 28. Save the Oceans (and the Fish and Birds, too!)

Do our energy sources present risks to our environment? Explore different materials and attempt to contain and cleanup an oil spill. Then we'll investigate the effects of an oil spill on marine wildlife.

Lynette Lopez, Manufacturing Engineer  
UW SOCIETY OF WOMEN ENGINEERS

## 29. Managing Money in the Stock Market

Learn about an exciting career managing money in the stock market. We will cover the required learning as well as the pros and cons of this particular career. We will also discuss the day-to-day duties of an advisor, as well as look at various websites pertaining to the stock market.

Shannon Loughery, Investment Advisor Representative  
SELF-EMPLOYED

## 30. Impactful Project Management

In support of the Foundation's mission of reducing inequity in the world, we are opening a new facility in Africa. Learn what it takes to manage this important project!

Julia Marenkova, Senior Manager of IT Project Management Office;  
Meg Gaffney, Deputy Director of IT Project Management Office  
BILL AND MELINDA GATES FOUNDATION

## 31. You're an Ichthy-What?

Ichthyologist = a person who studies fish. Learn about the UW's 11 million preserved fish specimens, hear what it's like to do field work on fishing boats in Alaska, and try to identify some of our local fish species.

Katherine Maslenikov, Ichthyology Collections Manager  
UNIVERSITY OF WASHINGTON

## 32. Scientific Discovery and Communication

Explore what it means to approach the world scientifically by discovering the contents of mystery boxes. Learn about the skills science encourages that are useful in many areas of life.

Liz McCullough, Dr.; Carolina Chambers, M.S.  
PACIFIC SCIENCE CENTER

## 33. Family Practice: Health Care from Cradle to Grave

Find out how interesting working in family practice can be. Listen to heart sounds. Examine ears and eyes. Find out what education is necessary.

Rebecca McKanna, ARNP; Stephani Amstadter, M.D.  
BELLEVUE FAMILY MEDICINE

## 34. Code Now!

Want to go from being a user of technology to being its creator? Get a running start toward coding -- writing computer software -- and find out how you can use software development skills to make the world a better place.

Christe McMenomy, Dr., BOEING/INSTRUCTOR FOR SCHOLARS ONLINE (RETIRED)  
Pat Tressel SAHANA SOFTWARE FOUNDATION

## 35. Flex Your Engineering Muscles!

Did you know you can control machines with the electrical activity of your muscles? Learn how to use your muscle signals to control a remote-control car and race your friends!

Momona Yamagami, Michael Rosenberg,  
Graduate Student Researchers  
UNIVERSITY OF WASHINGTON

## 36. Why Didn't I Think of That?

Are you intrigued by other people's businesses or ideas and wish you could be a part of it? Are you afraid you might fail? What does it take to create your own business? Where do you start?

Adriana Neagu, CEO  
FORMOTUS, INC.

## 37. Stormwater Engineering to Save Our Environment

What does it take to clean rainwater that runs over the streets into a stormwater pipe which discharges to a salmon-bearing stream?

Explore the world of stormwater engineering with women engineers. Tarelle Osborn, President & Senior Civil Engineer; Janina Glovatchi, Jana Hindman, Project Engineers  
OSBORN CONSULTING

## 38. You Can Be an Urban Forester!

Learn why we need trees, how to identify different tree species, use forester tools, diagnose tree problems, and how to protect trees in cities.

Deb Powers, Urban Forester  
CITY OF KIRKLAND

## 39. Fish Get Sick, Too!

Fish get sick from diseases just like people. Fisheries biologists study these diseases to keep our salmon populations healthy. Use microbiology

and molecular biology to diagnose a mysterious salmon disease.  
Maureen Purcell, Research Microbiologist; Carla Conway,  
Histologist; US GEOLOGICAL SURVEY – WESTERN FISHERIES  
RESEARCH CENTER  
Krista Nichols, Research Geneticist  
NOAA – NORTHWEST FISHERIES SCIENCE CENTER

- 40. Architectural 3D Modeling Using Sketchup**  
Learn how to take a two dimensional house plan and create a 3D architectural model without using cardboard, Exacto knives and lots of hot glue.  
Leila Ramac-Pasco, Project Manager ECCO DESIGN INC;  
Ginny Chan, Designer INTERIOR EXPRESSIONS LLC;  
Aya Hirunuma, Stephanie Itow, Design Associates NEIL KELLY COMPANY
- 41. A Vast Ocean of Opportunity**  
See what life at sea is really like for marine biologists and learn how to keep the oceans healthy and sustainable.  
Melanie Rickett, Fisheries Biologist; Kayla Ualesi, Data Management Specialist  
NOAA
- 42. Chemical Engineering in Color**  
Come explore the main ideas of chemical engineering with ice, candy and glow sticks.  
Emily Ruskowitz, Monica Esopi, Graduate Students  
UNIVERSITY OF WASHINGTON
- 43. Catching Babies**  
Discover the modern science and ancient art of midwifery. “Birth” a ping pong ball baby; learn what it takes to become a midwife-and handle the tools of the trade.  
Valerie Sasson, LM CPM, Midwife; Liz Chalmers  
CO-OWNERS PUGET SOUND MIDWIVES & BIRTH CENTER
- 44. Marine Renewable Energy**  
Energy from the ocean can be used to generate electricity. Learn about the different ways we can use the waves, tides and currents to power the future!  
Isabel Sheri, Hannah Ross, PhD Students  
UNIVERSITY OF WASHINGTON
- 45. Made By Cells:  
From Concept to Commercial Chemical**  
Many chemicals we use today are manufactured using different types of cells (microbial and mammalian). Learn about how we go from choosing what to make to large-scale production.  
Amanda Smith, Upstream Process Development Scientist  
ZYMOGENETICS/BRISTOL-MYERS SQUIBB  
Janet Matsen, Data Scientist ZYMERGEN
- 46. Virus Hunting**  
Explore how researchers identify bacteria and viruses through gel electrophoresis using colored candy as an example “pathogen”. We will also see how bacteria and viruses spread.  
Amy Stone, Program Leader of the Center for Innate Immunity and Immune Diseases Education Core  
UNIVERSITY OF WASHINGTON
- 47. Nurses are TRUE Superheroes!**  
Find out how Nurses save lives around the world. You will get a chance to practice being a nurse by taking Vital Signs and practicing giving a shot.  
Lisa Stubenrauch RN-BC BSN CDONA/LTC RAC-CT NHA, Administrator; Jenn Daley RN CDONA/LTC SWOC, Director of Nursing ; Laura Hokenson LPN  
ISSAQUAH NURSING AND REHABILITATION CENTER
- 48. Neurodiagnostic Technology –  
Recording Brain Waves**  
Learn how we attach electrodes and record the electrical activity of the brain. We will have live recordings going on and you will be able to participate in attaching electrodes and talking to volunteers who are undergoing an EEG.  
Elizabeth Thomas R.EEG/EP T  
BELLEVUE COLLEGE

- 49. Women in Charge:  
Be a Leader in the Engineering World**  
What do Civil Engineers do? Meet three women who will discuss leadership, career options in Civil Engineering, and what it's like to be a woman working in the Public Works arena.  
Tricia Thomson, Bridge and Pavement Program Mgr CITY OF REDMOND; Hillary Stibbard, Principal Office Engineer CITY OF BELLEVUE; Glynda Steiner, Assistant Director, Solid Waste Division KING COUNTY
- 50. Where Does Our Drinking Water Come From?**  
Environmental engineers design the processes that treat and convey drinking water to our homes. Build a water filter and perform the steps of turning dirty water into drinking water.  
Alena Thurman, Traci Brooks, Ali Leeds, Environmental Engineers  
COROLLO ENGINEERS
- 51. Polymers Everywhere!**  
Polymers are the tires on cars and hair on your head! Their characteristics depend on the repeated smaller blocks that they're made of. Make your OWN slimy polymers and compare their properties.  
Gaby Tosado, UW Student  
UW WOMEN IN CHEMICAL ENGINEERING
- 52. Lotions = Labels and Labs**  
What makes your favorite lotion so special? Investigate ingredients and the claims on labels. Learn lotion chemistry and make a lotion with the fragrance of your choice.  
Reitha Weeks, Biotech Camp Program Coordinator  
SHORELINE COMMUNITY COLLEGE
- 53. WINGS!**  
How do airplanes stay up in the air? Build and launch your own gliders. Explore the aerodynamics of airplane design and some of the things aeronautical engineers do.  
Tracey Westry, Caroline Downie, Airplane Performance Engineers  
THE BOEING COMPANY
- 54. A Veterinarian's Day**  
Explore the exciting world of veterinary medicine! From wellnesses to injuries to diseases, there is never a dull moment at the office!  
Rachel M. Israel Wise, D.V.M.  
REDMOND KIRKLAND ANIMAL HOSPITAL
- 55. Egg Drop Swoop!**  
Good engineering design, sound mathematics, and creative thinking are needed to design a vehicle to transport precious cargo safely to earth. Can your design protect an egg when dropped?  
Cathy A. Wolfgram, Industrial Engineering/LEAN Manager (retired); Erin Petersen, Mathematician  
THE BOEING COMPANY
- 56. 3D Printed Medical Devices**  
See how engineering can help people with disabilities by designing and then assembling a 3D printed assistive medical device.  
Jessica Zistatsis, Pre-Master's Graduate Researcher; Karley Benoff, Undergraduate Researcher  
UNIVERSITY OF WASHINGTON

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**ATTENDANCE: You will receive proof of attendance at the conference. Your school will be notified if you are registered but do not attend the conference.**

We wish to thank *Bellevue College*; *AAUW (American Association of University Women) Lake Washington Branch* and our other sponsors for their support.

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