

swe NEXT

It's Summertime!

Hey, SWENexters! This is our last newsletter issue of the school year. Enjoy your summer, be safe and keep engineering! We'll be back in September.

What is Engineering Management?

Engineers design, build and create some incredible things. Without them, our lives would look much different than they do now.

It's easy for engineers to get incredibly wrapped up in their work and the various project management tasks get forgotten. That's why Engineering Managers are so important. They have a critical understanding of the technical work being done, but they spend their time looking at the big picture. They report project status to upper management or customers, they drive the schedule with the engineers and they deal with business needs for the project. They are an important bridge between the designers and the business or customers.

At many universities, Engineering Management programs are offered as graduate level degrees. This is to ensure that managers still have a strong technical background. Many first acquire a bachelor's degree in a specific engineering field before moving on to management.

If you've ever been a team leader on a group project, you've gotten a small taste of what it's like to be in Engineering Management! [Click here to learn more about this.](#)

Day in the Life of an Engineering Manager

Meet Kalyani Mallela, a Director of R&D at Johnson & Johnson. Find out how she got there, the types of projects she's working on, and how you can #BeThatEngineer on [SWE's All Together Blog](#).



Advice from Women Engineers with Engineering Management Degrees

Angel McMullen-Gunn

Associate Director, Global Operations Quality at UTC Aerospace Systems

B.S. in Mechanical Engineering, University of Nebraska-Lincoln

M.Eng. in Engineering Management, University of Nebraska-Lincoln



Thoughts on Giving Back

Throughout my career, I have made it a point to give back by empowering future engineers and leaders. I am very active with the Society of Women Engineers (SWE) at the local and Society levels. I enjoy supporting collegiate SWE Sections and have mentored many young engineers. In addition to SWE, I like to volunteer at our local library in Seward, Nebraska. I have helped with the library's Technology Classes, helping teach 2nd through 6th graders how to use the TinkerCAD program and print projects on the 3D Systems Cube Printers. I also have enjoyed helping with the library's Pokémon Club, encouraging relationship building, negotiation, cooperation, and strategy with Pokémon cards and battles. (Tip: Never thought you could talk about Pokémon Club at a job interview, did you? Well there you go! You can take it from me!)

Many folks have asked about why I take the time to help with these programs. First is to share and give back so that I can be the female role model that I did not have in rural Nebraska growing up. Engineering can be found everywhere in our daily lives, and it is important to share that with others! Second is to empower the next generation with the logic and knowledge so that they have the confidence to solve problems. Not everything is perfect the first time through, so I encourage you to learn from each time you try! This will help you mature your growth mindset and establish a foundation that will help you be the engineering leaders of tomorrow.

Jonna Gerken

Deputy Global Transitions Manager, Pratt & Whitney

B.S. in Industrial & Management Engineering, Rensselaer Polytechnic Institute

MBA, Technology Development, Rensselaer Polytechnic Institute at Hartford

(Jonna was also SWE's President in 2017-2018)



Thoughts on Being a Woman in Engineering

There were not a lot of women when I was studying engineering in college. I had to find a support group to have an outlet when I wasn't feeling strong or encouraged. I joined SWE and used that network when I moved to a new state after college to start

my career. I have a strong SWE network to help when I have questions or tough situations to tackle.

Most of the challenges I've faced as a woman in engineering were earlier on in my career – not being taken seriously, having to prove myself more than male counterparts, etc. More recently, and as a Project Manager (PM), there haven't been many issues. In fact, the balance of gender of PMs in my organization is pretty good. Previously, my tricks were to make the other folks my allies, to do an amazing job and to not let them get to me. Utilizing knowledge from others to make you a better engineer and thanking them along the way for their “help” works wonders for creating a great working relationship.

What To Do This Summer

As the school year comes to a close, you may be looking for fun ways to fill your endless hours of freedom. If you're starting to think about college applications and what you'll major in, you may want to look for a way to intern, volunteer, or shadow at a company near you. It's a great way to see engineers in action and get a feel for how you like what they're doing.

Perhaps your SWENext Club could put on STEM events for younger girls. That would be a great way to keep their excitement going strong between school years. Or you may look to enrich your own knowledge of engineering skills. Look around your area to see if there are any STEM or engineering camps that could be fun and educational! You could also try to learn a new skill on your own. There are plenty of websites that help you learn coding or other skills right from your home! ([Alice](#), [code.org](#), [CodeCademy](#), [Khan Academy](#), [Coursera](#), [HarvardX](#), and many more).

For a complete list of things you could be doing this summer to prepare for college, be on the lookout for an email from SWENext on “Milestones to College Preparation”. We have a version just for you, no matter if you are a rising Freshman or a rising Senior.

If you're graduating this year, good luck in college! Make sure you join SWE this summer. Questions about SWE? Just ask us at swenext@swe.org.

Curious about Upcoming SWENext Programming for Fall 2019?

Click the graphic below to expand the opportunities.

SWE Invites you to the world's Largest Conference For Women Engineers!
Use our Chart to Find the Best Program(s) for You

WHAT, WHEN AND WHERE
Invent It. Build It. – Saturday, November 9th, Anaheim Convention Center, Anaheim, CA
SWENext High School Leadership Academy (SHLA) – Friday, November 8th & Saturday, November 9th, Anaheim Convention Center

GRADES 9-12

- STEM Curious** ... I want to learn more about engineering.
Invent It. Build It. High School Girls Program
 Visit engineering exhibits, colleges & companies. Network with women engineers & build with other girls.
tinyurl.com/inventitbuildit
- STEM Involved** ... I do STEM activities & I'm thinking about a career in engineering.
SWENext High School Leadership Academy (SHLA)
 Day 1: SWE leadership training, college advice, industry tours, the largest career fair for women engineers & the opportunity to experience the SWE community firsthand.
 Day 2: Invent It. Build It.
tinyurl.com/SHLAWee19
- STEM & SWENEXT Involved** ... I'm a SWENext member, I do STEM activities & I'm interested in becoming an engineer.
SWENext Awards
 All award recipients will attend Invent It. Build It. & SHLA.
SWENext Community Award (Grades 9-11)
 Recognizes girls in grades 9-11 who are actively interested in STEM & doing something in their community about it.
 Learn more & see our great prizes at tinyurl.com/SWENextCAWE19
OR
SWENext Global Innovator Award (Grade 12)
 Recognizes the outstanding young women shaping the future of SWE. These students exemplify intellectual curiosity, enthusiasm & leadership in the STEM community for women.
 Learn more & see our great prizes at tinyurl.com/globalwe19

GRADES 6-8

- ADULT ADVOCATES (PARENTS, GUARDIANS, EDUCATORS)**
 Join us for our Outreach EXPO filled with exhibitors from colleges, camps, companies & other STEM organizations.
tinyurl.com/inventitbuildit
- THEN**
- Invent It. Build It. Middle School Girls Program**
 Work with women engineers on hands-on projects.
- Invent It. Build It. Parent/Educator Program (PEP)**
 Learn from women engineers, colleges admissions representatives & outreach experts about how to succeed as a woman in a male dominated field.

SWE MEMBER

- INVENT IT. BUILD IT. VOLUNTEER**
 Make a difference in the life of an aspiring engineer! Opt in as a Volunteer when you register for WE19.
we19.swe.org

SWENEXT

SWENext Awards Season Has Begun!

We like celebrating awesome SWENexters because it inspires us! And we want to recognize your leadership, your successes in the community and how you help other girls develop an engineering identity.

The following awards will be given out at SWE's annual conference, WE19, in Anaheim, California, on November 8 and 9, 2019. Check them all out to see which awards you can apply for!

SWENext Northrop Grumman Community Award

Eligible: Grades 9, 10, and 11 (in Fall 2019)

What you have to do: Create a poster that answers the questions: How do we get more female middle school and high school students involved with STEM? How do we encourage these students to stick with STEM as they plan for college?

What you can win: Participation in the Community Award poster presentation where the winners will present their posters to middle school girls, parents, educators and professional engineers; participation in the SWENext High School Leadership Academy and Invent It. Build It.

Deadline: September 23rd (This has a rolling acceptance for up to 25 students starting as early as late May, so apply early!) Also, one SWENext will be announced as a "SWENext Influencer" in mid to late October.

[Benefits and Application >>](#)

SWENext Global Innovator Award

Eligible: Grade 12 (in Fall 2019)

What you have to do: Answer four short essay questions and create a video that is less than three minutes long

What you can win: All expense paid trip to Anaheim, CA, for you and a chaperone; recognition at the SWE Awards Banquet; participation in the SWENext High School Leadership Academy and Invent It. Build It.

Deadline: September 1st (Up to six winners will be announced by September 13th)

[Benefits and Application >>](#)

SWENext Clubs Challenge

Eligible: Registered SWENext Clubs for High School students

What you have to do: Create a five to seven minutes video that addresses the “WE Live, WE Learn, WE Lead” theme of WE19. The "WE Learn" portion should include a demonstration of an engineering activity that your club has completed and will demonstrate live at WE19.

What you can win: An all-expense paid trip to Anaheim, CA, for four club members and a chaperone where you will perform your demonstration live. You will also participate in the SWENext High School Leadership Academy and Invent It. Build It.

Deadline: September 1st (One club will be announced as the winner by September 13th)

[Benefits and Application >>](#)

Questions? Contact sabrena.lopez@swe.org.

Learn How to Be A Leader at the SWENext High School Leadership Academy!

Take the next step into leadership with SWE!

The SWENext High School Leadership Academy (SHLA) is a two-day program taking place at the Annual SWE Conference in Anaheim, CA, on November 8 and 9, 2019. The program provides high school students with leadership training, college advice and the opportunity to experience the SWE community first-hand.

**Note: Awards/Club Challenge applicants do not need to apply to SHLA through this application. This application is for those interested in attending the Leadership Academy but not interested in applying for the awards.*

Eligible: High school students who identify as female

What you have to do: Tell us about your STEM activities and leadership roles

What you can win: Participation in the SWENext High School Leadership Academy and Invent It. Build It.

Application Deadline: October 14th (This has a rolling acceptance for up to 60 students starting as early as late May, so apply early!)

[Benefits and Application >>](#)

Questions? Contact sabrena.lopez@swe.org.

Win a \$25 Amazon Gift Card!

SWE **NEXT**

Enter the Monthly
Social Media
Challenge!

Win \$25 Amazon
Gift Card

See Details Below!

June marks the start of summer in the Northern Hemisphere, and that means school is ending or has ended for many students. We at SWE want to know what the coolest math or science topic you learned about in school this year was. Let us know what it is and why it was so interesting! Send a photo of yourself and a brief description of your favorite math or science topic you learned about this year.

Follow us at [@SWENext on Instagram](#) and send your submission directly to our Direct Messages **to be entered for a chance to be featured and win \$25!** The competition ends July 5th! #BeThatEngineer #Cool Math-Science Topic #SWENext

And SWENext is on YouTube!

Subscribe at [SWENext YouTube Channel](#) to make sure you don't miss any new videos.

Featured SWE member engineers this month on the SWENext YouTube Channel:

[Lisa Cervia, Biomedical Engineer](#)

[Katelyn Lichte, Mechanical Engineer working in Agriculture](#)



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