



Winter, 2010

Vol. 3 - Issue 2



SWE~Charlotte-Metrolina

# Chronicle

## Carowinds Girl Scout Overnight

The Girl Scout event at Carowinds on September 11, 2009, was a great success! The girls were broken into groups and sent out to discover the “mad” science of the park. The SWE volunteers played the “mad” scientist scattered throughout the



Above: “Mad” Scientists for Carowinds Girl Scout Overnight

park. At each station, the “mad” scientist would describe the principle of science that applied to a specific ride at the park. Short demonstration experiments were used to make the points about the principle.

Hypothesis were used to help with the experiments. These were posed as questions first and once answered by the group, turned into hypothesis that were tested. One principle that was demonstrated and used this approach was the speed of fall of different weight objects. The question was “Do heavier objects fall faster than light weight objects?”. The answer was different for each group but could be used to form a hypothesis. Usually the hypothesis was heavier objects fall faster than lighter objects. The demonstrations that were used for

tests for the hypothesis included dropping a heavy ball and a light ball from the same height at the same time. Both balls usually hit close to the same time. Then a heavy book and a piece of paper were dropped beside each other. The

paper floated down while the book dropped fast. Then the paper was placed on top of the book and dropped together. Both hit at the same time. The discussion of how air impacts falling objects followed this. Finally the ride was used as an example (for this one, the Drop Zone). The discussion was how each car would be loaded with different weight (different sized people) and yet the cars dropped at close to the same time. The conclusion was that heavier objects do not fall faster than lighter objects given enough room to fall and a vacuum (remove the air resistance).

Each of the stations had similar experiments and demonstrations. The Girl Scouts held a question and answer session after the event.

### Inside This Issue

Carowinds Girl Scout Overnight  
pg 1

President’s Corner  
“Laid Off? Now What?”  
“Engineers are Cool!”  
pg 2

“Engineers are Cool!” Continued  
FY10 Leadership Team  
pg 3

Upcoming Events  
Event Summaries  
pg 4

Region D Conference  
“Take Charge of Your Career &  
Your Life” Webinar  
pg 5



# President's Corner

by: Chris Cathcart

The holiday season is passing us and I wish all of you had a happy one!

Of course, this time of year has everyone thinking of family and friends. I am no exception. I attended the Girl Scout event in November and was reminded what a great group of friends I have within SWE. The National Conference again showed me the same thing. So why do we not take advantage of the support, encouragement, and friendship we have within SWE?

With the event held in August, "Laid off, now what?" and the follow up to this in October, I was so surprised to find out how many of our members are either laid off looking for a job or, like me, working at a job that is not a good fit and therefore looking as well. The other part that surprised me is the outpouring of support and encouragement I got and continue to get from SWE members.

So again, why do we not take advantage of this? I have tried to come up with my own reasons, no time, no energy, no place to meet, no ..... Well enough no, let's take some action. I am putting together a survey for the Section to determine what aspect of job searching needs the most attention right now. This will be out before the end of November with a deadline of December 15. This gives the officers a chance to digest the results and make the appropriate plans for support.

The economy is not the only thing that is holding people back with their job search. Many other aspects including self-esteem come into play with this. Hopefully some input from the survey will help guide us to the right mix of input to help our members.

Another aspect of the network we have

[Continued on page 5]

## Laid Off? Now What?

by: Angela Berry

On August 29, 2009, members and friends of SWE enjoyed an afternoon of homemade ice cream while networking and critiquing resumes. Several of those attending were currently unemployed or looking to make a job change and enjoyed the opportunity to make new connections. A local search professional, Jim Kemper, President of W.H. Meanor & Associates, joined the group to offer his insights into the current job market and advise the participants on their resumes and interview strategies.

## "Engineers are Cool!"

Junior Girl Scout Badge Day,  
November 14, 2009

Twenty-eight volunteers showed up on a beautiful sunny Saturday November morning to assist with the semi-annual Girl Scout badge event "Engineers Are Cool!" This event is held twice per year by the Charlotte-Metrolina Section in association with the Hornets' Nest Girl Scout Council. The event is limited to 50 Junior Girl Scouts (4th and 5th Grade). This fall, we actually had 60 Girls registered and a waiting list of 20 girls! Our 28 volunteers conducted five sessions around various fields of engineering including mechanical, structural, civil, electrical, and chemical engineering. A single volunteer generally leads each ses-

*Below: Bridge loaded with engineering books during Structural Engineering session.*



Ten SWE members and four non members joined us on October 29 at Greek Isles Restaurant for a follow up to our August 2009 event "Laid Off? Now What?" Everyone enjoyed the casual atmosphere, as well as the appetizers and soda/tea. We all had a chance to make new connections and I know I enjoyed meeting new friends and seeing old ones. We were again joined by Jim Kemper, President of W.H. Meanor & Associates, a professional search firm. Jim again offered us his advice on resumes, the job search effort, and interview techniques.



*Above: Volunteers for "Engineers are Cool!"*

sion and is assisted by other volunteers so that the Girl Scouts are provided with a lot of attention.

Our structural session was led by the students of the UNC Charlotte Collegiate Section with Rebecca Turner, Collegiate Section President, heading up the team. The students explained the basics about bridges such as the components that make up a suspension bridge as well as the basic compression and tension forces that are balanced. Each group of Girl Scouts was broken into teams of 3 to 4 to build suspension bridges out of chairs (towers), rope (cable), string (stringers) and poster board (deck). At the end, each bridge is loaded with engineering

[Continued on page 3]



*[Continued from page 2]*

text books until the bridges collapse to the cheers and groans of the Girl Scout teams. While having fun, the girls learn to work together. UNCC engineering students Elizabeth Carver, Stephanie Cellemme, Emily Lukens, Allie Burke and Matt Johnson all helped with this session.



*Above: Puff Mobile in progress during Mechanical Engineering session.*



*Above: Super Slime 'in process' during Chemical Engineering session.*

Long-time chemical engineering session leader Kerrie Goforth taught the girls how to make a polymer out of two simple household ingredients, borax and glue. Our polymer is better known as "Gloop" or "Slime" much to the girls enjoyment. This session teaches some basic principles of chemistry such as measuring ingredients to the right proportions. Kerrie was challenged throughout the day when her recipe didn't produce a polymer with the usual stretchy, slimy properties. She persevered, and with the help of Regina Cousar and Tina Maguylo, she was able to add dish detergent as an emulsifier to produce the polymer with the desired properties. Through this challenge, the leaders of this group were able to share the principles of trial and error with the participating girls. The Girl Scouts were thrilled as usual to take home their colored slime in plastic sandwich bags to share with their delighted parents. Ann Prock and Mya Aun and her husband volunteered with this group as well.

In the mechanical engineering session, the Girl Scouts make an air (sail) powered car called a Puff Mobile. Teresa Spicer stepped forward as a first-time

leader for this session. She was aided by Machella Litaker, Raianne Cruz, and Zhengzheng Hu to learn the ins and outs of air-powered vehicles made of one sheet of paper, 4 lifesavers, 3 paperclips, 2 plastic straws and all the tape the girls can use. Junior Girl Scout Emily R. had the furthest distance of all five sessions - a record 60+ inches (our tape only went to 60 inches).



*Right: Chocolate Asphalt being made during the Civil Engineering session.*

Emily Reinicker stepped forward again to lead our civil engineering session where the Girl Scouts make chocolate asphalt. Emily brings in pictures of paving equipment and explains the purpose of each. She also has cores of real asphalt sections for the girls to look at and compare what they see in the core against the ingredients in their "asphalt." The chocolate asphalt is made from melted chocolate chips (binder), chopped walnuts, shredded coconut, old fashioned and quick oats, and sprinkles (various

*[Continued on page 5]*

## FY10 Leadership Team

### President:

Chris Cathcart  
Gulfstream  
Chris.Cathcart @ swe.org

### Vice President:

Angela Berry  
City of Charlotte - DOT  
Angela.Berry @ swe.org

### Secretary:

Leigh Ellington  
Charlotte.Metrolina @ swe.org

### Treasurer:

Kerrie Goforth  
Goforth Residence, Clover Schools  
Kerrie.Goforth @ swe.org

### Section Representative:

Sandra Kolvick  
Fluor  
Sandra.Kolvick @ swe.org

### Alternate Section Rep:

To be elected as necessary

### Newsletter Editors:

Leigh Ellington & Kerrie Goforth

### Website Coordinator:

Kerrie Goforth  
webmaster@swe-cm.org

### Nominating & Teller Committee Chair:

To be selected by 01 March 2010

### Membership, Outreach, & Professional Development Committee Chairs:

Open; email webmaster@swe-cm.org to volunteer

Subscribe to or unsubscribe from our email list.

# Upcoming Events

The following is our **tentative** calendar of events for FY10. Details will be available on our website and through email announcements.

## January 15 & 29, 2010; 12:00pm-1:00pm

“Take Charge of Your Career and Your Life” with Marcus Buckingham Webinar

## February 20, 2010; 8:00am-2:30pm

“Engineers are Cool!” Girl Scout Event

## March 5-7, 2010

Region D Conference, Memphis, TN

## March, 2010 - Women’s Health Meeting

## April 1, 2010

Call for Distinguished Engineering Service Award (DESA) nominations

## April 23 or 24, 2010

Bowling with SWE-UNCC

## May 1-25, 2010

Section Officer Elections

## May 6, 2010; 6:00pm

Section Anniversary Celebration

## May 14, 2010; 8:30am-1:00pm

Carowinds Education Day

## May 15, 2010 - DESA nominations due

## June 11 or 12, 2010

Awards & Recognition Banquet

## Holiday Social

by: Kerrie Goforth

On Thursday, December 3, 2009, the Charlotte-Metrolina Section held its annual holiday social at Texas Land & Cattle (TXLC) Restaurant on University Center Boulevard. We had a great attendance of twenty-two people including Section President Chris Cathcart’s mother, seven other non-members, and three SWE-UNCC members.

Each year we try to support a charity and give raffle tickets for each item donated. This year’s charity was the United Family Services’ Shelter for Battered Women 2009 Holiday Store. We received a wonderful number of donations for the size of our gathering.

After having a time of networking and fellowship, we ate a scrumptious meal. After the meal, we held the raffle where several guests received such prizes as various restaurant gift certificates, Best Buy gift certificates, and homemade card

## Women in Power: “The Tight Rope of Life”

by: Sandra Kolvick

The fall Professional Development Seminar was a great success! SWE again partnered with Duke Energy’s Women In Nuclear (WIN), and the Women’s Transportation Seminar (WTS) to co-host Debbie Reeves, RN, CNOR, MS, CNO, who presented “The Tight Rope of Life,” sharing strategies on work-life, balance and leadership. The work-life balance portion included methods on how to establish ways to balance people at work and at home while promoting personal time and maintaining a positive attitude. This centered on being able to identify pessimistic thoughts and to refocus on having a positive attitude. The leadership segment centered on the elements of leadership and fostering more cohesive relationships.



*Above: One-half of the group at the Holiday Social.*

sets. The manager of TXLC was so gracious as to donate a \$25 gift certificate as one of our prizes as well.

The holiday social is always an enjoyable time... it’s a great event to catch up with SWE friends or meet new acquaintances while enjoying a good meal and contributing to a great cause. Can’t wait for next year!

The elements discussed included: trust, authenticity, communication, credibility, likeability, listening, respect, and displaying emotion. A great rhetorical question was “Would You follow You?” Lastly, we were provided with some tips on staying mentally and physically healthy along with some notes on recent medical advances. We were excited to hear that there has been good progress on developing a breast cancer vaccine. Overall it was a great seminar and with over 30 attendees, it was a great networking opportunity as well!

[Continued from page 3]

sizes of aggregate materials). After stirring all their ingredients into the “binder,” the girls roll out their “asphalt” between two pieces of wax paper similar to a drum roller being used to roll and compact real asphalt. Jan Anderson and Candice Crago provided roadway design knowledge to the session.

Another new leader, Jennifer Lawrence, volunteered to lead the loud, but fun, session on electrical engineering. In this session, the Girl Scouts use a manila folder, a plastic straw, aluminum foil, wire, a buzzer, battery connector, and 9V battery to construct a pressure switch that is a burglar alarm they can use on their bedroom doors. Jennifer was aided by Sandra Kolvick, Celia Gray, and Phon Bouaphanh (a past leader of this session). Again, another big take home hit with the parents!

Jenny Kichler and Chris Cathcart provided all around back up by running various errands, taking pictures and routinely checking in with the progress of each session.

During the introduction of the event to the enthusiastic group of Junior Girl



Above: Burglar alarm made during Electrical Engineering session.

Scouts, a troop leader unexpectedly offered the comment that this was her second time bringing girls to this event because it was the best event Hornets' Nest Council had ever sponsored. She made the whole day worthwhile to the volunteers even before we started!

Many thanks go out to our great, and varied, volunteer pool that makes this event possible every time. Our volunteers include men and women, architects, engineers, chemists, and even bankers. We couldn't hold this event without these great people who are willing to give up a Saturday twice per year to interest young girls in the profession of engineering.

## Take Charge of Your Career and Your Life

with Marcus Buckingham January 15 & 29, 2009; 12:00pm - 1:00pm

Ready for a career intervention? Marcus Buckingham has a long history of inspiring people to find their strengths and live a life full of personal success. Marcus is the go-to consultant in his field, a sought-after speaker and a New York Times best-selling author. Challenging accepted and entrenched social theory, Buckingham pioneered a revolutionary concept—that people will be dramatically more effective, successful and fulfilled when they play to their strongest skills rather than attempting to improve their weaknesses. He calls his research-based technique the “strengths revolution,” and his work has been proven again and again in boardrooms, seminars and individuals' lives around the world.

The Charlotte-Metrolina Section presents this seminar via pre-recorded webinar in Room CH-14 of the Charlotte-Mecklenburg Government Center (CMGC) at 600 East Fourth Street, Charlotte. It will be presented in two one-hour sessions that can stand alone. Lunch is “bring your own” but there is a Showmars located in the CMGC. Parking is available in the parking structure on Davidson between 3rd and 4th streets.

RSVP to Chris.Cathcart @ swe.org or 704/752-8594 by January 10.

[Continued from page 2]

available in SWE is just having some fun! We don't have many events for the Section that just focus on relaxing and having fun. I would also like to start having some just fun get together events that are not part of the regular schedule and may only have a one-week notice to them. I will start with something in January and see what results are. If this works, they will continue, if not, it was worth a try. The list of activities that Big Brother and Big Sisters gives to their volunteers comes to mind for some of this: movie night, theater event, music event, visit a museum, go to the zoo, visit the botanical gardens. We also don't have to wait for an officer to schedule something. Any member can decide to do one of these and just send out an invitation for other members to join them. Let's see where this leads!

Chris

## Region D Conference

We are excited to announce the 2010



Region D Conference to be held March 5-7, 2010, in Memphis, TN. The goal of this conference is to instill in all women engineers a true appreciation for their potential to address the major global concerns of the next several years. We want each woman engineer to be aware of the many possibilities to positively impact society, contribute to the economy, and improve life for future generations.

Attendees will be treated to Industry and Local Interest Tours, an Opening Dinner, SWE Boutique, Workshops, a Key-note Luncheon, a Career Fair, Region D Meetings, an Awards Dinner and more! Additionally, Professionals can register for the annual professional development workshop on Friday afternoon sponsored by Medtronic.

For more information or to register, visit the conference website: <http://www.swe.org/regiond/regiondconference/>