PI TAU SIGMA ANNUAL CHAPTER REPORT, 2013-2014

South Carolina Delta Tau Chapter

A. Initiation of New Members

Current policy for initiation into the South Carolina Pi Tau Sigma Delta Tau Chapter (PTS-Δτ) is to identify (a) undergraduates who have completed their 2nd semester and are in the top 25% for GPA and (b) undergraduates who have completed their 3rd semester and are in the top 33% for GPA. The President of Pi Tau Sigma distributed a congratulatory letter to all nominees, which included details regarding the initiation process, the initiation fee, date for induction and attire requirements.

B. Chapter Activities

B.1. Plaques

Figure 1: *Top Plaque*; Listing of officers for PTS-Δτ. *Middle Plaque*: Listing of previous faculty and service awards by PTS-Δτ. *Bottom Plaque*: Dedication plaque honoring three individuals who set up PTS-Δτ

As noted previously, a plaque was erected honoring our founding fathers, Mr. Robert Smith III, Mr. Frank Knight and Mr. Oliver Barnes. The plaque also highlights PTS-Δτ's dedication to honoring outstanding mechanical engineering educators and service providers. The plaque will be displayed in the lobby of the engineering building. Additional plaques were purchased to (a) identify the current PTS-Δτ officers and (b) identify previous PTS-Δτ faculty/staff awardees. The three plaques are now installed in the main lobby of the Mechanical Engineering Department wing in the 300 South Main Street building. Photos of all three plaques are given above.

B.2. Mid-year Election

Due to the December, 2012 graduation of two of our officers, Ms. Whitney Tharp and Ms. Leanna Valentine, elections were held in Fall, 2012 to replace Whitney and Leanna. The new officers for 2013-2014 were as follows:

- President, Artem Aleshin (2013-2014)
- Vice President, Donathan Rose (2013-2014)
- Treasurer, Andrew Mohs (2013-2014)
- Secretary, Scott Phillipi (2013-2014)

B.3. Bi-weekly Seminars

During Fall and Spring, 2013-2014, PTS-Δτ continued its emphasis on providing members with seminars in engineering-relevant areas while also requiring potential members to perform service for the community and/or university. Seminars were given by several faculty members including all of the following, with extended Question and Answer time for each 30 minute seminar after the seminar ended;

Mr. Robert Smith III	One of the founders of PTS-Δτ, Mr. Smith talked about his 30+ year career and interesting engineering studies as the top engineer at Fort Jackson in Columbia, SC. He also talked about why he and his two fellow students started PTS-Δτ….. Civil Engineering was considering starting an Honor Society, so ME wanted to have the first one!
Dr. Tanvir Farouk	Discussed his early difficulties and how he ended up as a faculty member
Dr. Stephen R. McNeill	Title was "So you want to start a business?". He discussed the difficulties faced by anyone trying to start a new business.
Dr. David Rocheleau	Talk revolved around his many interesting positions, emphasizing to all PTS-Δτ members that engineers

	oftentimes change their jobs/focus to meet the evolving needs of companies
Prof. Kenneth Reifsnider	Talked about his personal technical career and emphasized the need for thinkers, innovators and committed individuals of intelligence (such as our PTS-Δτ members) to tackle the continuing problems in energy-related fields.
Prof. Michael Sutton	Discussed measurement science and how the field has changed so radically with the advent of the digital age and the exponential growth of computational power.
Prof. Anthony Reynolds	Discussed his career and how he ended up at USC, changing his area of interest/focus to meet the needs that arose in friction stir joining and he took advantage of the opportunity to build his career and reputation.
Ms. Eileen Miller	A 2013 MS graduate from USC-ME who took a new position in Advanced Composites Technology Group within Boeing in Charleston, SC, Ms. Miller talked about what you should do and what you shouldn't do as a new employee in a company

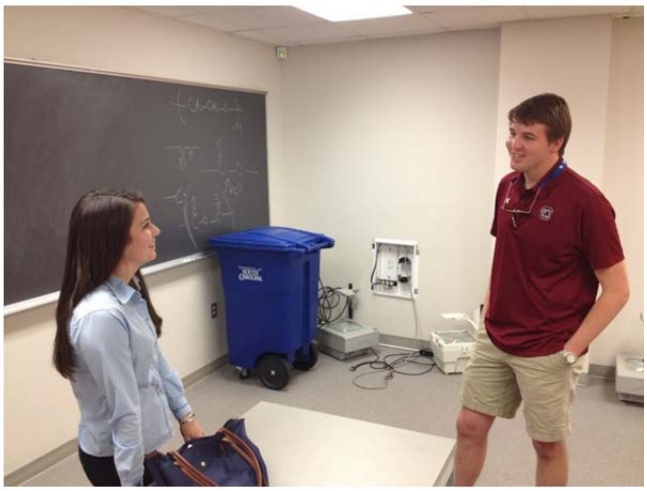

Figure 2: *Above*; PTS-Δτ members and pledges during Q/A session with Ms. Eileen Miller *Right*: Ms. Miller answering questions from PTS-Δτ member after talk in Room B110 of Mechanical Engineering in Spring, 2014.

B.4. Annual Pi Tau Sigma Meeting

This year, President Artem Aleshin attended the annual meeting on the campus at Texas A&M University in Texas. President Aleshin brought back several ideas that he identified through discussions with other active PTS organizations. Some of these ideas are listed in Section D as areas where our organization could consider changes.

B.5. Spring Induction Ceremony

PTS-Δτ held its Spring induction ceremony on February 13, 2014 with 14 new initiates and all officers attending attendees. New initiates were presented with (a) their PTS-Δτ certificate, (b) PTS-Δτ card and (c) PTS symbol. A total of 14 new members were inducted at that time. Their names are as follows;

- Logan Bastian
- Scott Bernier
- George Michael Berry
- Trevor R Berry
- Max Boozer
- Brian Burrows
- Brendan Croom
- Branden Dowling
- Jonathan Gates
- Jonathan Justice
- Kyle Norris
- Donathan Rose
- John Thompson
- Michael Wold

Two additional members met all induction requirements later in the semester, and will be inducted in the fall, 2014.

B.6. Constitution, Student Organization Status and Webmaster

As part of the effort to make PTS-Δτ more visible and active on the USC Campus, the members completed a Constitution and went through the process of being approved as a recognized USC Student Organization. After several changes were made, the request was approved in late April 2014. Thus, for the first time, PTS-Δτ will be a fully recognized Student Organization beginning in August, 2014, with the opportunity to obtain modest financial support for their activities. As part of the new constitution, PTS-Δτ approved the addition of a new officer, the Webmaster, so that the upcoming election of officers will be for five individuals; President, Vice-President, Treasurer, Secretary and Webmaster.

Due to the upcoming graduation of two officers in PTS-Δτ and the end of the term for the remaining officers,new elections were held in early April, 2014 for all officers. The elections resulted in the selection of a new slate of officers for 2014-2015 as follows;

- President, Michael Berry (2014-2015)
- Vice President, Ian Adkins (2014-2015)
- Treasurer, Andrew Mohs (2014-2015)
- Secretary, Jon Gates (2014-2015)
- Webmaster, William Kent (2014-2015)

B.7. Annual Faculty/Staff PTS-Δτ Awards Ceremony

PTS-Δτ held its Annual Faculty/Staff Awards ceremony on April 29th, 2014 to acknowledge distinguished educators and service providers in the mechanical engineering department. Awards were presented by officers of the society. The professor of the year award was presented by PTS President Artem Aleshin to Dr. David Rocheleau, who has now received the PTS Award three times over his two decades as a faculty member at USC. The outstanding young professor of the year award was presented by PTS-Δτ Vice President, Donathan Rose, to Dr. Xinyu Huang. The outstanding service provider award was presented by PTS-Δτ Treasurer, Andrew Mohs, to Mrs. Misty O'Donnell. Later in the day, PTS-Δτ members and the officers hosted an award supper for the awardees and their families.

B.8. Service Activities of PTS-Δτ members

B.8.1. PTS-Δτ members Trivia Night

President Artem Aleshin hosted a trivia night on Friday, November 22nd in the Adesso Condominiums at 601 South Main Street in Columbia, SC. The event, which attracted 20 members and pledges, provided an excellent opportunity to socialize and to get to know each other better (as well as learn some new facts in a competitive environment). A top prize of $60 was awarded to the top 3-person team by PTS advisor, Prof. Sutton, The top team included Brendan Croom.

B.8.2. Feeding the Homeless

Mr. Jason Barber served our community through volunteering with an organization called Transitions which is located in Columbia, South Carolina. Transitions is a local organization that aims to help end homelessness in Columbia and uses its resources to better help the homeless find food, shelter and jobs. I arrived at Transitions at 6:45 a.m. and proceeded to prepare and serve breakfast to the people who were taking refuge at the

Figure 3: Jason Barber at Transitions, preparing to serve food for the homeless

Transitions shelter for the next few hours. Seeing how appreciative nearly all of the people I was serving were for what I was doing was genuinely a surprise to me. Nearly every person I served food too personally thanked me and shook my hand, which made me realize how much they appreciated such a simple thing like having a new face around to talk too, even if it was for just a few hours. After speaking with a few of the men and women I met there, I quickly gained a new perspective on the types of people who are homeless, how they become homeless, and after this great experience, I honestly intend to give Transitions my time again soon to help these people more.

B.8.3. Highway Beautification, Arboretum Program

At least one Saturday each month, a group of friends and Mr. Robert Herring, a PTS-Δτ pledge, are responsible for cleaning up Huger Street from the BP gas station to the McDonald's across from Publix. We accomplish this cleaning through the well-known program called Adopt-a-Highway, which provides the vests while we provide the labor. It is such an amazing feeling to drive past these streets days after we've cleaned them and have the opportunity to actually see the difference that was made.

Figure 4: Highway beautification crew that works with Robert Herring

In a separate service program, located at the Belser Aboretum, Mr. Herring and 3 friends traveled to the Belser Arboretum at the University of South Carolina. Working with a gentle soul named Dr. Pat Decoursey, who maintains the facility for the university, we participated in a national scale project that required the assembly of many passenger pigeons using the art of origami. This project was to remind everyone about the wonderful marvel of passenger pigeons and hopefully simulate that memory for some who had the opportunity to see them before they became extinct. We folded these pigeons for three hours and then attached them to a tree to show our appreciation for nature's lost species.

Figure 5: Assembly of passenger pigeons via origami. Robert Herring is shown in middle-left photo and also at edge of middle-right photo with blue sweater.

B.8.4. Findlay Park and Helping Homeless

Ms. Leanna Valentine, former Vice-President of PTS-Δτ, convinced several of her friends to join her in helping serve food to the homeless in Findlay Park within Columbia, SC on October 23, 2012m

Figure 6: Mechanical Engineering students setting up to serve homeless in Findlay Park. Photo by Leanna Valentine, October 23, 2012.

B.8.5. Travails of Scott Bernier to Serve Homeless

A PTS-Δτ member, Scott Bernier, decided to contribute food via the "Hunters for the Hungry" program. This program receives donated meat from local hunters and distributes it to food banks throughout the state. This is a national organization in which food banks are located in every state. The goal of this organization is to take donated meat to help diminish the hunger in the United States. For my service, I was attempting to personally hunt and bag a deer so that I could donate the meat to the Hunters for the Hungry Foundation. If you noticed, I said attempt. Unfortunately, I was not successful in my attempt(s)! However, I requested that my dad bring down meat from my house in Virginia when he came down to Columbia for Thanksgiving. When he brought the meat down, we took the meat to the closest processor that delivers to a food bank, which happened to be in Florence County, and ask that they take the meat to the food bank on their next delivery. So, although I was unsuccessful in my attempt to donate a deer that I personally bagged, I was still able to donate deer meat from the previous season, though there are no photos of the "unsuccessful" attempts!

B.7.6 President-elect Michael Berry as a K-12 Educator

In an effort to give back something to his community. Mr. Berry chose to help students in the high school where he graduated, which is Irmo High School. On Monday the 18th of November, 2013, I talked for thirty minutes about what it is like to be an engineering student in college. The class was appreciative and responsive to me, showing considerable interest in what I had to say. I tried to convey to each student that, if you do not have an interest in sciences, math, or problem solving, engineering might not be the best option for you. Furthermore, I made the suggestion that, once in college, the student should pursue any opportunities to join the available engineering groups and honor societies, and they should pursue job opportunities, such as co-ops and internships, whenever possible. On the right, you can find a photo of me in the class room at Irmo High School in Irmo, SC, where I spoke. It was a real joy to have the opportunity to help young students who may have an interest in pursuing a college education in the field of engineering, or possibly other scientific areas of interest.

Figure 7: Photo of Michael Berry at Irmo High School just after his lecture on engineering.

C. Other Items

C.1. Tutoring Program Discontinued

In 2013, PTS-Δτ created a tutoring program to offer free mentoring services in several critical subjects including: Thermodynamics, Statics, Solids, Dynamics, Calculus I & II, and Physics I & II. However, due to the recent addition of Tutoring programs by the College of Engineering and Computing and the University, the tutoring effort appears to be duplicative of other offerings and so PTS-Δτ has decided to focus on other areas where they may be able to support activities.

C.2. PTS-Δτ Organizational Structure Activities

In 2013-2014, PTS-Δτ is planning an overhaul of the society structure while also beginning the process of developing a commitment to selected service activities. Items that the society is considered during this time and the results from PTS-Δτ discussions are as follows

1. Develop and publish the first PTS-Δτ Manual for operations, including duties and responsibilities of officers and members

RESULTS: Constitution was completed, with duties and responsibilities broadly outlined. However, the manual for operations remains to be completed.

2. Develop a pledging process where inductees will demonstrate a minimum level of commitment to service

RESULTS: Pledging process was overhauled, and requirements for service and seminar attendance defined. All new pledges must meet these requirements to be considered for induction in PTS-Δτ.

3. Develop a process for identifying service projects and ensuring that progress is made on them. As part of this, determine whether there should be standing service projects that PTS-Δτ always performs as part of its normal activities.

RESULTS: This remains in flux. Currently, PTS-Δτ is considering supporting Engineering Week as one of the fixed assigned Service duties. However, individual service remains as the primary way to meet the service requirements.

4. Ascertain ways to raise funds to support the service activities in the society.

RESULTS: By becoming an approved Student Organization, PTS-Δτ will be able to obtain $500 per year or so in support of its activities. Additional funding opportunities remain to be identified.

5. Develop a timeline for activities so that everyone is aware of their responsibilities and the due dates for specific items.

RESULTS: The advisor, Prof. Sutton, provided an initial timeline for activities. However, this has not been finalized and should be completed in early fall, 2014.

D. Preliminary listing of activities for 2014-2015

Though a complete list of activities for the upcoming year has not been finalized at this point, a partial listing of what is expected to be addressed in the coming year are as follows;

- Activate and fully utilize the Webmaster activities, integrating various activities into a stream of information that flows to the new WEBSITE for the organization and is presented in a timely, updated manner on a regular basis.
- Complete the typical annual timeline of activities for PTS-Δτ and publish it on the WEBSITE
- Continue working to identify regular service activities that our members can participate in on an annual basis to support the College of Engineering and Computing and especially the Department of Mechanical Engineering.
- Complete the operations manual for PTS-Δτ and publish it on the WEBSITE.
- Continue to monitor and improve Pledging process for PTS-Δτ
- Discuss ways to keep in touch with former PTS-Δτ members and let them know what we are doing.