PI TAU SIGMA ANNUAL CHAPTER REPORT
2012-2013
Clarkson Tau Gamma

A. Initiations

At the beginning of each semester our chapter submits a request form to the Clarkson Student Administration Services offices for the names of the eligible students who have met the requirements to become a member of Pi Tau Sigma. The Student Administration Services office sends us the names, email addresses, and local school addresses of each entitled student and with this information we are able to continue a tradition that started 3 years ago. Instead of sending a mass email to the perspective members inviting them to join, a personalized letter to each student is generated. All of the current members then meet to stuff and label individualized envelopes. These are split among the members to personally deliver to each student. We have found this procedure to be much more effective in attracting new members than emails. Students receive a lot of general communication from the University which is often ignored. The personal letters, personally delivered, has resulted in a considerable increase in our membership. Once the student receives the invitation they attend a set of meetings that are required to become a member which are listed below.

1. Information Session: All current members and eligible students interested in joining Pi Tau Sigma attend this meeting. This meeting is intended to explain what Pi Tau Sigma is and specifically what the Clarkson Tau Gamma chapter actually does. Information sheets, background packets and a list of important dates are distributed. This meeting also helps current and future members to meet and for new initiates to ask questions.

2. Initiate Examination: Initiates that decide to join the Clarkson Tau Gamma Chapter are required to take a test on both the formation of Pi Tau Sigma and the chapter history. Rough Bents/keys are also distributed to initiates as well as signature sheets at this meeting. Signature sheets require the initiates to get at least 10 current member and 10 professor signatures. The initiates are encouraged to talk with the ten professors regarding the research they do so as to give each initiate an idea of the research opportunities in the department as well as to build relationships with professors.

3. Service Activities: A number of service and related activities are held throughout the semester and initiates are encouraged to participate. Each initiate is asked to complete at least 2 hours of service for initiation. The main service activities which took place in the fall 2012 and spring 2013 semesters was to help in the mechanical and aeronautical laboratories. Initiates helped the laboratory director set-up experiments and organize the labs.

4. Hand in Signature Sheets: One week before initiation, initiates are required to hand in their completed signature sheets. Initiates are allowed to drop by during the evening at their convenience. Multiple officers wait to collect the completed sheets in order for the initiates to get to know the officers and also to ask us questions on the roles we have as officers for Pi Tau Sigma Tau Gamma Chapter. It is a great opportunity for initiates to

get to know who we are and it is a good way for the officers to learn more about the future members of Pi Tau Sigma. This is also the time where any member who has completed community service outside of Pi Tau Sigma can submit a signed letter of completion.

5. Dress-up Week: This is done the week of initiation. Initiates are required to be in business formal attire while on campus from 9AM-5PM. They must also wear their keys with Pi Tau Sigma colored ribbons. This increases the visibility of Pi Tau Sigma on campus and gives the initiates a chance to be recognized by their classmates.

6. Initiation: At the end of the week the initiation ceremonies are held, to which all current members are asked to come. A judging of the polished bents occurs at that time. The individual with the best bent is not required to pay the membership fee, which encourages initiates to do a good job of polishing. At the end of the spring semester we held our annual banquet at a local restaurant, which was the Lobster House this year. For the spring semester officer elections took place as well. A further description can be found in the activities section.

Since the last academic year, few changes were made to the initiation process and membership has remained constant.

The fall 2012 semester brought in 11 new members, as shown in Figure 1. The spring 2013 semester brought in 20 new members, shown in Figure 2.

Figure 1: Fall 2012 Initiation

Figure 2: Spring 2013 Initiation

B. Chapter Activities

This past academic year our chapter participated in a number of community service activities with the help of our new initiates and current members. These activities increased both the visibility and comradeship of our Pi Tau Sigma chapter on campus.

Engineering Festival

The festival happened during the fall semester and consisted of a variety of activities with the help of several organizations on Clarkson's campus. This was the third year the festival took place with the purpose of encouraging middle school and high school students to take an interest in studying engineering. Pi Tau Sigma's activity involved the use of a catapult to launch a ping pong ball into a bucket of candy. If the students could adjust the catapult so that the ball landed in the bucket, they got to pick out a piece of candy. A demonstration of how to use the catapult was first showed to the students and then they were able to launch the balls on their own. The festival was a big success and our members were very involved and excited to teach students how to launch the catapult. A few of the incoming initiates used this festival for their service requirement.

ABC Exam Review

All freshman engineering students must take a basic math exam called the ABC exam, sometime during the semester, in order to pass Calculus I. This is beyond the normal exams in the course. Students are required to get a very high score on basic math topics in order to pass the exam but can take the exam as often as needed. Pi Tau Sigma members held review sessions for the last 4 exams given during the semester. We were able to have our members sit individually with students and show them examples as well as answer questions the student had.

Engineering Week

This year a new tradition was started by the Dean of Engineering in order to better guide students at Clarkson who majored in engineering studies (undecided engineering) at the start of freshman year and needed to make a decision on which engineering major was the best fit for them. A whole week was used for different activities and a variety of panel sessions by each major to highlight their engineering discipline. Each day within the week was devoted to one or two

majors. Mechanical and Aeronautical Engineering shared Wednesday, February 20th. On this day Pi Tau Sigma members led a scavenger hunt, held a panel session, had a paper airplane competition, and showed off different senior design projects in the mechanical engineering field.

Pi Day

Every year on Pi day, March 14th (3/14), (This year they put Pi Day on the 13th of March) the Math Department holds a carnival day for the elementary, middle, and high school students who are located in the area. Many different honor societies and organizations found on campus participate in this day with several creative activities. Our booth involved using the catapult to understand the physics of the very popular video game, Angry Birds. Each student was able to catapult a ball three times and if the student was able to reach the basket filled with candy on the first try they received 3 points, if the ball went in on the second try then they received a score of 2 points and they received a score of one if they were able to get the last ball in the basket or if they were unable to make any baskets. Once the carnival was over, points are tallied and the winners from each grade got a prize. Many Pi Tau Sigma members and initiates participated throughout the 3 hour duration of the carnival.

Figure 3: Pi Day

Graduate Engineering Information Session

Each fall semester Dr. David Morrison, the Graduate Committee chair for the MAE Department, holds a graduate information session sponsored by our chapter and the local chapter of ASME. This session is intended to provide engineering students of all disciplines with information about the graduate school process. He outlines the recommended steps for applying to graduate school and financial aid as well as answers any questions juniors and seniors may have. This session is always well attended and provides a useful mechanism for exposing students to graduate school as well as promoting Pi Tau Sigma.

Convention

This year we were able to send eight students to the national convention at Ohio State. We determined that it would be most helpful if we took at least 3 juniors that would be involved in a

leadership role next year to the conference so that the class next year would have a good idea of what convention was all about. Since the convention was not too far away we were very fortunate to take as many students as we did. We received funding from our MAE department and in return, wrote an article on the trip for the local newspaper as well as hosted a booth at the career fair for Clarkson's graduate school. Overall it was an excellent experience enjoyed by all and I think that the juniors we brought learned a lot about what goes on at the national level. They brought back a lot of new ideas for future activities.

Figure 4: Ohio State Convention

Engineering Rocket Launch

A senior design project within the Mechanical and Aeronautical Engineering Department was the design and construction of a rocket which launched in the air following a straight path by accounting for wind forces acting on it. In order to promote engineering the rocket launch was made into a full day of activities for the surrounding high school students to attend. Pi Tau Sigma set up an activity which launched tennis balls across a soccer field in order to hit large buckets on the other side of the field. Everyone had a great time participating in the activity and getting ready for the rocket launch.

Outstanding Professor Award

Traditionally, an award for the best educator in the MAE Department has been given to a professor that exemplifies what it means to be a professor. We continued the activity this year and honored a professor at our annual banquet. Near the end of the semester our chapter voted to give Dr. Ronald LaFleur, professor of the mechanical and aeronautical laboratories, this award. He was invited to our yearly banquet as an honored guest along with his wife and his name was engraved on the Pi Tau Sigma honor roll plaque located in a display case outside MAE Department office.

Banquet

As mentioned earlier, our chapter typically holds a yearly banquet at the end of the school year to celebrate the new initiates, honor our most outstanding professor, and rejoice about an excellent

school year. This year we hosted our banquet at the Lobster House. A few special guests were able to join our banquet which included Dr. LaFleur, Dr. Charles Thorpe, the Provost of Clarkson University, and Dr. Kenneth Willmert, our chapters' faculty advisor. Dr. Charles Thorpe was invited to speak at the banquet on behalf of the university and give a few words of wisdom on what we could each do to fulfill our true potential as we were getting ready to leave Clarkson. He spoke about his extensive background in an engineering field and talked about his many years teaching overseas. He encouraged us to truly try a multitude of different experiences so that we can become well round employees and citizens within the engineering field. The dinner was an excellent success with everyone greatly enjoying themselves.

Figure 5: Banquet Dinner Special Guests

Fundraising
Fundraising was done in the spring semester in the form of a 50/50 raffle in order to raise money for our chapter. A portion of the funds collected were donated to the rocket launch senior design project.

C. Other
The following is a press release from the News and Digital Content Services Office at Clarkson University about the Tau Gamma chapter of Pi Tau Sigma attending the national convention. The article appeared in the Potsdam's Daily Courier on April 27, 2013, and it may have been published in other newspapers as well:

Clarkson University Pi Tau Sigma Students Attend National Convention

[A photograph for media use is available at http://www.clarkson.edu/news/photos/PTS-2013.jpg.]

A group of eight Clarkson University students traveled to the annual convention for Pi Tau Sigma, the international mechanical engineering honor society, held at Ohio State University earlier this semester.

Clarkson's Tau Gamma chapter of Pi Tau Sigma was represented by mechanical engineering majors Thomas Rogers '13 of Upper Black Eddy, Pa., Shannon Wrede '13 of Peachtree, Ga., Kenneth Mark '14 of Dansville, N.Y., Janine Amell '13 of Schenectady, N.Y., and Daniel

Spencer ’13 of Penn Yan, N.Y.; and mechanical engineering and aeronautical engineering double majors Matthew Fitts ’13 of Ballston Spa, N.Y., Barry Pawlowski ’14 of Cheektowaga, N.Y., and Kevin M Sweeney ’14 of Middletown, N.Y.

The convention provided Clarkson students with an opportunity to meet and network with other Pi Tau Sigma members from around the country, as well as nominate national officers for the honor society. Nearly 60 chapters attended the convention; there are approximately 55 Clarkson students active in Clarkson’s Tau Gamma chapter.

“The conference was a great experience,” Wrede said. “It was eye opening to see the different activities other Pi Tau Sigma chapters engaged in. Clarkson's chapter was able to take back a lot of ideas to help engage its members in club activities throughout the year."

The students also listened to a panel discussion featuring officials from Honda R&D, Pratt & Whitney, Autodesk and Schlumberger on “Engineering for a Societal Impact.” The panelists shared their experiences in the engineering field and offered advice to students.

The trip to central Ohio also included a tour of the National Electric Coil plant, which provides repairs of electrical components for motors used in power generation plants, and of the Ohio State Football Stadium. The students also received a presentation on cloud computing technology from Autodesk, a software corporation.

"The best part of the conference was meeting all the different members from other chapters around the nation,” Wrede said. “Pi Tau Sigma strongly encourages networks within the Mechanical Engineering field and it was encouraging to meet students that were in the same major to truly develop connections with them."

Photo caption: A group of Clarkson University students traveled to the annual convention for Pi Tau Sigma, the international mechanical engineering honor society. Left to right: Thomas Rogers, Shannon Wrede, Kenneth Mark, Barry Pawlowski, Kevin M Sweeney, Janine Amell, Daniel Spencer, and Matthew Fitts.

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