Pi Tau Sigma Annual Report

Drexel Xi Chapter

2011-2012 Academic Year

A. Initiations

Selection Process

The selection process for the Drexel Xi chapter of Pi Tau Sigma is dependent upon both the prospective member's academic record as well as their willingness to be involved in university activities. A list of prospective students in the Mechanical Engineering and Mechanics department at Drexel University who have met the academic requirements for the Junior and Senior class standing is provided by the Academic Advisor of the department to the President of the Drexel Xi chapter one month prior to the induction ceremony. The list is then screened by the Department Head so as to remove any and all prospective students who have violated the Honor Code for Drexel University. After the list has been screened, the President of Pi Tau Sigma Drexel Xi contacts each prospective member to invite them to be a part of the honor society. The stipulations set out in the invitation to be inducted into the honor society are to one: attend an informational meeting explaining Pi Tau Sigma, and two: attend at least two events hosted by either Pi Tau Sigma or the Mechanical Engineering and Mechanics Department. These events typically fall under the classification of social, volunteer, or educational forums upon which the prospective students are regularly invited to attend. Should members who have met the rigorous academic requirements, meet the additional informational and involvement requirements for the Drexel Xi chapter, they are then cordially invited to participate in the upcoming induction ceremony and subsequently solidify their role as a member of the organization for life. Additionally, for the induction ceremony for Fall term 2011 as well as Spring term 2012, one member of the Mechanical Engineering and Mechanics department faculty has been selected as an honorary member. Nominations for such are determined by the Executive Board for the Drexel Xi chapter, and an invitation was extended to each of these professors to request their participation in the induction ceremony as honorary members.

Requirements

Each prospective member must meet the requirements set forth by National Pi Tau Sigma via the Constitution, and reinforced by the Drexel Xi Pi Tau Sigma Constitution. These academic requirements for Pi Tau Sigma Drexel Xi chapter are reflected as follows:

- First term Juniors upper 25% 17%
- Last term Juniors upper 33% 25%
- First term Seniors upper 35% 33%
- Last term Seniors upper 35% 33% (with BoD Approval)

Within these ranges, Drexel Xi Chapter also requires a 3.5 GPA minimum. If there is not a reasonable number of students who meet the GPA requirement, as determined by the officers and advisor of the chapter, the range is opened to edge of the range but not past the 3.2 GPA Nationally required floor.

Additionally, the aforementioned information session attendance as well as proof of attendance at at least two events hosted by either the Drexel University Mechanical Engineering Department or by the Pi Tau Sigma Drexel Xi chapter is required of inductees. Above all, each inductee is required to pass an academic honesty screening conducted by the Department Head of Mechanical Engineering and Mechanics at Drexel

University. This ensures each student inducted into Pi Tau Sigma Drexel Xi follows the Drexel Academic Honesty Policy, maintaining the integrity of the organization.

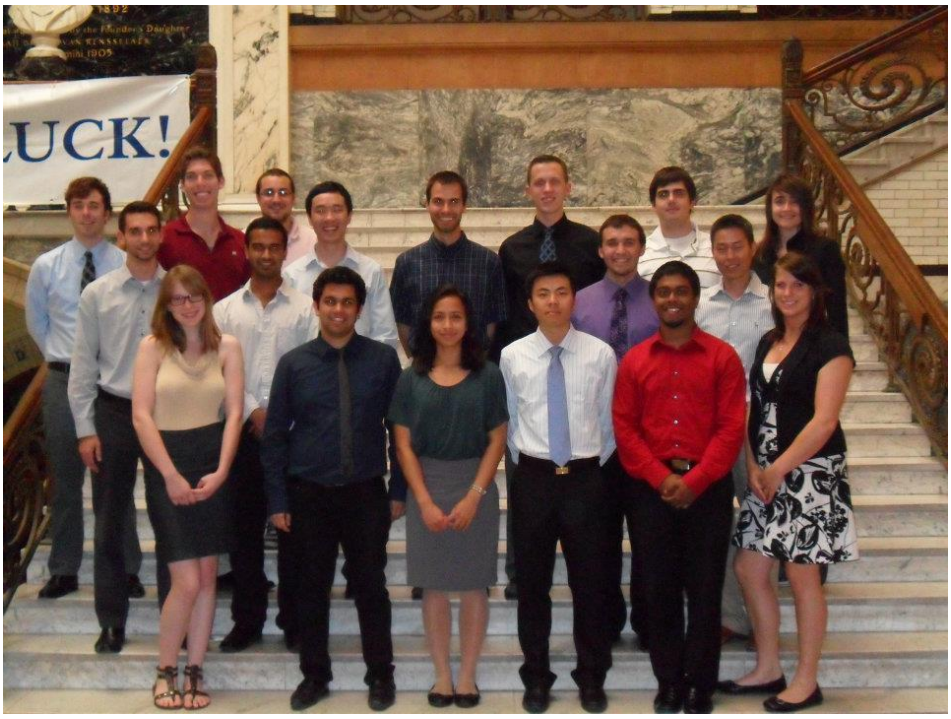
Ceremony, Rituals, and Celebration

Induction ceremonies were held twice during the 2011-2012 academic year. The first induction ceremony was held during the Fall quarter, Friday, November 18th from 5-7:00pm in the Mechanical Engineering and Mechanics Seminar Room with all members of the Pi Tau Sigma Drexel Xi executive board in attendance. The second induction ceremony was held during the Spring quarter, Friday, March 18th from 5-7:00pm as well in the Mechanical Engineering and Mechanics Seminar Room with all members of the executive board in attendance. Our rituals uphold the script found in the Pi Tau Sigma National Constitution. Following the rituals of Pi Tau Sigma, a photo of the initiates with the present executive board was taken in the Main Building of Drexel University. After each induction ceremony, initiates were invited to celebrate their achievements with the executive board with a dinner paid for by the Mechanical Engineering and Mechanics department of Drexel University. The majority of initiates attended the celebratory dinner and found it a great time to network and meet new members of the organization.

The Fall 2011 induction saw one of the largest classes of initiates to be inducted into Pi Tau Sigma Drexel Xi chapter since its inception. All together 25 students were inducted into the honors society at the Fall 2011 induction, along with 1 honorary member, Drexel University Mechanical Engineering and Mechanics faculty member Dr. Antonios Kontsos. The induction class, along with the executive board, is pictured below.

Fall 2011 Pi Tau Sigma Drexel Xi Induction Class

A smaller, but nonetheless integrally sound and accomplished class of individuals was inducted during the Spring 2012 ceremony. All together 10 students were inducted into the honors society at the Spring 2012 induction, along with 1 honorary member, Drexel University Mechanical Engineering and Mechanics faculty member Dr. Jin Kang. The induction class, along with the executive board, is pictured below.



Spring 2012 Pi Tau Sigma Drexel Xi Induction Class

B. Activities

Volunteer Services

Pi Tau Sigma Drexel Xi participated in several volunteer events through Drexel University itself, including day and open houses at Drexel dedicated to prospective and accepted students. However, there was one major volunteer event that surfaced as a directly influential effort in the lives of potential engineers. On April 19th 2012, two Pi Tau Sigma officers, Kelly Collett and Sean Rossiter, volunteered their time and resources to give a presentation on Engineering at a local Philadelphia High School. Merion Mercy Academy is a private, all girls high school located on the main line in Philadelphia. The presentation focused on understanding their perception of what Engineering was, educating the students as to what studying Engineering and what a possible career in engineering might look like, and finally, what college, and more specifically Drexel University, might be expected to be like in their near futures. The presentation lasted

MERION MERCY ACADEMY
Educating young women to live mercy and seek justice

approximately thirty to forty-five minutes and the two officers fielded a variety of questions for approximately twenty minutes thereafter. Of the more than thirty female students that attended the presentation, several were even taking notes throughout the presentation. The ability to reach out to a demographic that is largely underrepresented and could be expanded upon quite readily, that of women engineers, was truly a pleasure and the start of an initiative that Pi Tau Sigma Drexel Xi seeks to continue as it moves forward.

The members of Drexel Xi also serve as representatives at MEM department Open Houses and Accepted Student Days, fielding questions from prospective students and their families about the department and student life. Many of the officers also serve on panels within the department, acting as the student voice on matters such as tenure for professors, student life, department activities, and ways to make the department better.

Our chapter has also worked to volunteer at local Philadelphia institutions and events, such as the Philly Science Festival and at events at the Franklin Institute.

Social Events

To promote camaraderie and amiability amongst its members, Pi Tau Sigma Drexel Xi held a number of social events during the 2011-2012 academic year. The first of such events was a Men's basketball game. The trip to the Drexel Dragons vs. North Western Wildcats on January 21st was a free event for all members who participated as students are admitted free of charge, though seats were reserved ahead of time by Pi Tau Sigma Drexel Xi. The event provided a forum for members to show their school pride and build upon relationships formed as a result of Pi Tau Sigma. Then, Drexel Xi hosted a trip to the Philadelphia Auto show on February 4th and 5th 2012. The auto show, held annually at the Philadelphia Convention Center, is a massive gathering of not only the larger car manufacturers in the American car market, but various exotic and custom cars as well as exhibitions on display for general admission to the event. The event was a joint cooperation between Pi Tau Sigma Drexel Xi and the Drexel chapter of ASME. Both organizations worked to promote and organize the event leading up to the weekend trips to the auto show. The last social event of the 2011-2012 academic year was a trip to a Phillies game on May 11th 2012. Drexel Xi again was able to offer discounted prices for tickets to the game to its members as well as faculty members within the Mechanical Engineering and Mechanics Department. The chapter has made an attempt each year to plan at least one sporting event for its members to experience with one another and the fans of Philadelphia sports.

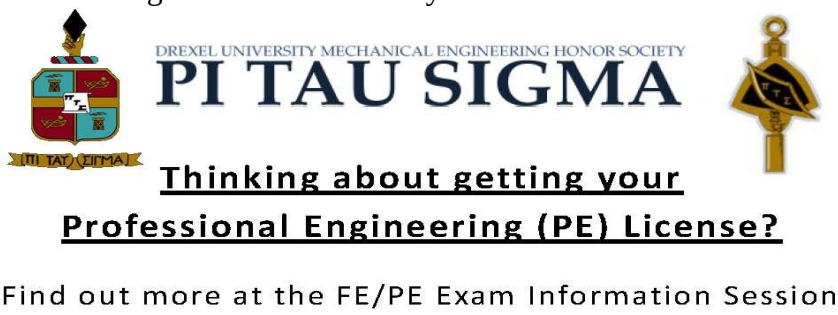
Fundraisers

The Drexel Xi chapter currently has three means of funding for the organization. The first is from dues; at the time of initiation, students are asked to pay $45, $35 of which is for national dues and $10 of which is designated for the Drexel chapter. The next portion of funding comes from the Mechanical Engineering and Mechanics

department at Drexel University. They typically fund Pi tau Sigma with approximately $4000 a year, which covers more than half of the expenses for convention and bi-annual dinners held as celebration for each induction ceremony. In return, Pi Tau Sigma helps and supports the department by volunteering their time for events such as open houses or even assisting on a scholarship committee. The remainder of funding for convention and events comes from the student allocated funds (SAFAC), which Pi Tau Sigma applies for each year.

Information Sessions

Upheld as an integral facet to the involvement and benefit of being a Pi Tau Sigma Drexel Xi member, the proliferation of information is vital in the success not only of our organization, but of our members and participants themselves. To stress this factor, various information sessions were held for members throughout the academic year. Two such events were those centered around topics including graduate studies as well as the FE/PE exams for engineers. The presentation detailing and explaining the application process for grad school was given by then Corresponding Secretary Kelly Collett and Member at Large Adrian Ambrus. The session was aimed at answering any prospective engineering students' questions as the two Pi Tau Sigma officers had gone through the process and been accepted for graduate studies at their respective universities. The presentation regarding the FE/PE exams was given by newly appointed Treasurer Sam Shepherd. Sam was able to give an abundance of information and answers to frequently asked questions surrounding the FE/PE exams. Students were given all necessary information for the application process, deadlines, as well as implications of obtaining an FE and eventually their PE license.



University Events

Various University projects and events were sought out by Pi Tau Sigma Drexel Xi Members throughout the 2011-2012 academic year to provide service and integrity to Drexel University at large. One of the largest events at Drexel University, Drexel Research Day, which incorporates research from various facets of the colleges of Drexel University, was a perfect time for Drexel Xi to get involved. Members volunteered their time to present some of their research while representing Pi Tau Sigma at the event. This past year, members have also served as judges and helped set up Drexel Research Day, a showcase and competition of undergraduate and graduate research at the University. The Mechanical Engineering Department had the highest participation rate of all engineering departments this year, both as volunteers and contributors.

Several events for prospective and accepted students which are scheduled throughout each quarter at Drexel University had several representatives from Pi Tau

Sigma sharing experiences and knowledge not only of the Drexel University system and atmosphere but of Engineering and more specifically Mechanical Engineering so as to better inform those considering a similar path of study. Additionally, Pi Tau Sigma Drexel Xi participated in University-wide organization town hall. Finally, members of the organization participated in not only Senior sendoff events, but even went so far as to organize a breakfast for the graduates and their families of the Mechanical Engineering and Mechanics department. The following is a list of University events which Pi Tau Sigma Drexel Xi aided or participated in:

- Drexel Research Day
- Accepted Students Day
- Mechanical Engineering and Mechanics Open House
- College of Engineering Open House
- Student Life / Office of Campus Activities Town Hall
- Senior Send-off
- Graduate Breakfast

Chapter Meetings

Drexel Xi chapter meetings were held at various levels of operations within the organization. Throughout each quarter (Fall, Winter, & Spring) of the 2011-2012 academic year, weekly meetings were held for the officers of Pi Tau Sigma. Meetings were typically at around 5:00pm or 6:00pm in order to accommodate the schedules of those at Drexel with class as well as those on co-op. These meetings were one hour long, and general discussion as well as action items were discussed. Additionally, planning meetings were held at the beginning of the term to sketch out a schedule of desired events and involvement of the organization within its ecosystem(s). The planning meetings were generally two hours, and had an open discussion forum, with secretaries recording consensuses and responsibilities. Even still, there were general body meetings to be held. The most recent general body meeting, held March 6th 2012, was a forum to discuss upcoming events, graduation logistics, officer elections, and the National Convention. Each of these items was presented and addressed by Pi Tau Sigma Drexel Xi officers. In addition to the regular meetings, there was also the matter of electing the new members of office. These elections were run using Google Docs, so as to provide everyone with the same information that could easily be accessed, as well as subsequently voted upon , thus electing officials desired by the Pi Tau Sigma Drexel Xi majority on March 22nd 2012.

National Convention

National Convention, held at San Jose State University on March 2nd thru the 4th was an instrumental step in the progression and alignment of Pi Tau Sigma chapters around the country, as well as internationally. Three Drexel Xi officers attended the Convention (Chris Elko, Kelly Collett, and Sean Rossiter), in addition to the chapter's faculty advisor, Dr. Antonios Kontsos (one of the only advisors represented at the conference). Each officer participated in the various discussions and deliberations held throughout the first day, as well as attended the number of talks and informational sessions throughout the convention. Drexel Xi was very fortunate enough to win both chapter awards for outstanding service as well as outstanding performance, for a second year in a row. Additionally, Christopher Elko took home a cash price for his involvement and excellence in his studies at Drexel University. Not only were the officers busy, but the faculty advisor Dr. Kontsos was busy meeting with regional heads of National Pi Tau Sigma, as well as the President and Vice President, in order to gain a better insight into the direction of the organization and the sustainment of the excellence and integrity which it exudes. Benefits of attending the National Convention were found to be limitless by the officers that attended, it truly resounded as one of the most important events and activities of the chapter throughout the entire 2011-2012 academic year.

C. Other

Awards and Recognition

At some of the events mentioned above, various awards were given on behalf of Pi Tau Sigma Drexel Xi. The first event at which awards were given out was that of Research Day at Drexel University. During Research Day several Pi Tau Sigma officers, as well as the faculty advisor Dr. Antonios Kontsos, walked around to view all posters within the Mechanical Engineering and Mechanics Department. Previously it had been announced that cash prizes would be awarded to MEM students who displayed the "best" research that day. The results are shown below:

- *First Place* ($100 prize) **Mickey Whitzer**
  Co-Author(s): Darko Blazic, Adrian Ambrus, Ashan SenaratnePS32: Small-scale Three-dimensional Cell Printer with Potential Space Application
  Advisor(s): Wei Sun, Qudus Hamid
- *Second Place* ($50 prize) **Kelly Collett**
  Co-Author(s): Frank Arute, Timothy Wilwert CN18: Polar Orbiting Passive

Atmospheric Calibration Spheres [POPACS] - Sphere and Container Development
Advisor(s): Dr. Jin Kang

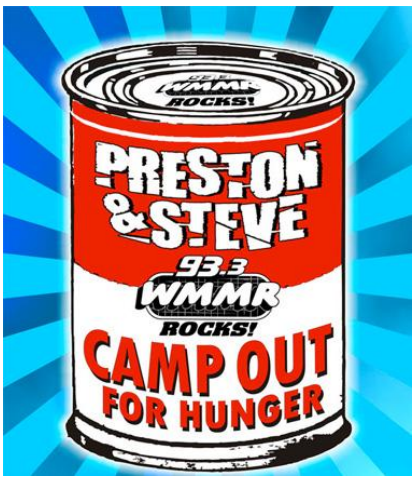
- *Third Place* ($25 prize) **Daniel Servansky**
  Co-Author(s): Prashanth Abraham, Ivan Bartoli, Antonios Kontsos CN12: Data-driven Modeling of Damage Induced Acoustic Wave Propagation
  Advisor(s): Antonios Kontsos

Additionally, awards were given out on behalf of Pi Tau Sigma Drexel Xi chapter during the event held for Senior Send-off. Recipients were nominated by Pi Tau Sigma members and the entirety of the Drexel Xi organization had the ability to vote on who was most deserving of the awards. The awards are shown below:

- *Outstanding Service*: This award will be given to a senior PTS member who has exemplified outstanding dedication and service to the MEM department, university, and community.
- *Outstanding Performance*: This award will be given to a senior PTS member who has exemplified exceptional performance through his or her research and academic performance. GPA will be considered.
- *Best Senior Design Project*: This award will be given to the team which has the best overall senior design presentation. Final presentation of nominees will be observed by a PTS officer for additional comments
- *Best Thesis*: This award is given to a PTS member with the best Master's Thesis.

Future Events

In preparation for events during the 2011-2012 academic year, Pi Tau Sigma officers kept the scope of event planning open for events carrying through into the subsequent 2012-2013 academic year. Most of these events are centered around volunteering and public service in order to promote the ideals and recognition of Pi Tau Sigma Drexel Xi in the greater Philadelphia area. The first of such events is a "toy repair workshop" where Pi Tau Sigma members would have the opportunity to repair and fix old or broken toys collected from shops and schools around the area. Another event, or series of events, is focused on being involved with judging science fair projects for grade school and high school students. Building upon involvement in the school districts of the greater Philadelphia area, Pi Tau Sigma officers are looking into expanding presentations on the importance of engineering and bringing forward the significance of such a profession in the eyes of high school students in and around the city, similar to the aforementioned efforts at Merion Mercy Academy. Lastly, Pi Tau Sigma Drexel Xi is looking to get involved in an event held during the Winter quarter in the Philadelphia area, "Campout for Hunger", which is organized by Philabundance, and heavily promoted through the local radio station 93.3 WMMR. Additionally, a possible team building event that could go above and beyond



those typically experienced by members of the honors society is an annual mud run and obstacle course, held in the PA/NJ area each year.

T-Shirts

To promote recognition and represent Pi Tau Sigma to the fullest, the Drexel Xi chapter invited members of the organization to design their own Pi Tau Sigma Greek letter T-shirts. Each member was able to fully customize various layers and colors of the design and T-shirt for only $10.

Graduating Seniors

Commencement – June 15th 2012

Adrian Ambrus
Brandon Lee
Brittany Nutt
Chris Chin
Chris Elko
Chris McManus
Christine Gallagher
Daniel Zettler
Danielle Jacobson
David Sharp
Donald Fehlinger
Erica Feldscher
Jasen Carroll
Joe Gruber
Kelly Collett
Kelly Meighan
Kevin Knehr
Marlin Miller
Michael Loftus
Mickey Whitzer
Nidhi Sinha
Rory Larocca
Scott J Holden
Tyler Douglas
Valarie Cavanaug

2012-2013 Academic Year Officers

Elections Announced – March 22nd 2012

President: **Sean Rossiter**
Vice President: **Sylvia Herbert**
Treasurer: **Sam Shepherd**
Recording Secretary: **Nick Meyers**
Corresponding Secretary: **Ken Leibig**
Webmaster: **James Sullivan**
Member at Large: **Amey Khanolkar**