The Tau Psi chapter would like to recognize the following individuals for their support in the convention. This event would not have been possible without their contributions and support.

Dr. Altaf Khan and Dr. Alex Moutsoglou for their immeasurable support to Pi Tau Sigma and to the Tau Psi chapter’s convention preparation

Mr. James Turner for his inspiring keynote presentation and continued support to the Tau Psi chapter

Dr. Bryan Willson for his generous donation, influential keynote, and tour of his laboratory

Dr. Yolanda Mack for volunteering to help with the panel discussion and resume review

The remainder of Pi Tau Sigma National’s Board for their insight and support: Dr. Darryl James, Dr. Chris Wilson, and Dr. Antonios Kontsos

Dr. Wade Troxell, Dr. Mitchell Stanslowski, and Mr. Matthew Todd for donating their time for the panel

Mr. Dan Banach for his continued support to Pi Tau Sigma and his passion for teaching the next generation of engineers how to collaborate and think critically

The 2018-2019 Tau Psi Officers for their hard work and collaboration to make the event possible

Alex Grauberger – Coordinator
Brandi Grauberger – Financial manager
Scott Bayliff – Panel moderator and tour guide
Katherine DeRose – Photographer
Anna Matthews – Graphic designer
Noah Ivey - Social event planner and tour guide
Marcus Martinez – Social event planner and tour guide
Colin Diehl – Social event planner and tour guide

Dr. Shantanu Jathar – Pi Tau Sigma - Tau Psi Advisor
February 15th, 2019

The National Convention began with registration at 3:30 p.m. MST at the Fort Collins Hilton where attendees stayed. Check-in at the Hilton remained open through 5:30 p.m.

At 5:30 p.m. check-in was transferred to the Lory Student Center (LSC) where it was open through dinner and the social event for late arrivals. The dinner was served at the LSC’s ballroom.

Friday’s dinner started just after 6:00 p.m. where Dr. Darryl James gave welcoming remarks, introduced the National’s Board, the Tau Psi chapter, and rolled called attending chapters. Alex
Grauberger, Tau Psi Convention Coordinator, spoke through the itinerary before plated salads and dinners were served by LSC catering.

After dinner, Dr. Altaf Khan announced several items of business including that the national’s board was seeking a new Secretary Treasurer and a chapter to host the 2021 national convention. There was no formal business meeting at this convention. Following this, Dr. Shantanu Jathar, the Tau Psi advisor, introduced Dr. Bryan Willson who provided the evening’s keynote.

Dr. Bryan Willson is the founder and Executive Director of Colorado State University’s Powerhouse Energy Institute. His focus is developing technologies that make significant environmental and social impacts in developing nations. His presentation touched on the building of his laboratory, the finding of the businesses he helped develop, and how he uses them to help
his cause. His talk sparked an interest in the audience for the tour of his laboratory the following day. Following his keynote, Alex Grauberger thanked him and dismissed attendees.

In an adjacent ballroom, a game night was set up as the sponsored social event. Two Smash Brothers Ultimate tournaments were held by the Tau Psi chapter with cash prizes and a trophy for the winners. There were also numerous board games set up around the room by FOCOBOCO, a local organization Tau Psi President, Noah Ivey, has a relationship with. Pizza, mozzarella sticks and a cash bar were provided. The event started at 8:00 p.m. and lasted until 11:00 p.m.
February 16th, 2019

Saturday began with a buffet style breakfast at 7:30 a.m. at the same location dinner was held the night before. There were a handful of registered attendees that failed to sign in the night before, so the Tau Psi chapter also held a check-in during this event.

After this, attendees were escorted to CSU’s Walter and Suzanne Scott Biomedical Engineering Building for the Autodesk competition at 9:00 a.m. The Tau Psi chapter helped Mr. Dan Banach set up his equipment, made a coffee and hot water station, and put out fresh fruit and doughnuts before the event. Attendees were split into 32 random teams and given an introduction and several instructions by Mr. Banach before they were released to start the competition. The challenge was to design and model a facility that could sustain life on the moon. Several teams designed entire facilities while others designed key components of a facility. The competition was cut off at 11:00 a.m. for the group picture. Despite this, teams had until 12:30 p.m. to submit their files if they desired to work over lunch.
Two group pictures were taken, one on the iconic staircase in the Scott Engineering Building, and another near the CSU Lagoon with the mountains as a backdrop. Following the pictures, the group was escorted to the Braiden Cafeteria where they ate lunch.

During the lunch, Tau Psi officers went back to the Scott Building to prepare the room for the panel discussion at 12:45 p.m. This discussion was aimed to provide attendees with insight to how differing levels of education and certification affects one’s career. The panel comprised of Mr. Matthew Todd, B.S. in mechanical engineering, former CSU PTS president, and current sales engineer for Wolf Robotics, Mr. Jim Turner, M.S. in materials engineering and NASA’s Marshall
Space Flight Center Engineering Directorate, Dr. Yolanda Mack, PhD in mechanical engineering and senior principal systems engineer at Raytheon, Dr. Wade Troxell, PhD in mechanical engineering, mayor of Fort Collins, CO, and CSU professor of mechanical engineering, and Dr. Mitchell Stanslowski, PhD in mechanical engineering, PE licensed, CSU professor of mechanical engineering, and President/Founder of Pioneer Engineering and Voyager Instruments. The discussion was moderated by Tau Psi officer Scott Bayliff.

Three tours were arranged by the Tau Psi chapter following the panel discussion. The first was a brewery tour at New Belgium. The tour was focused around their sustainable brewery practices.

The second tour was of CSU’s Powerhouse Energy Institute provided by Dr. Bryan Willson and several facility ambassadors.
The final tour was of CSU’s campus provided by a CSU tour guide and Tau Psi officer Colin Diehl.

While the tours were going on, the career fair was set up. Attendees were able to talk to recruiters for positions and get their resumes reviewed. Dr. Yolanda Mack assisted the Tau Psi officers with resume review.

The Tau Psi chapter also held a hosting workshop for chapters interested in hosting a convention. Four chapters attended including Rochester who is hosting next year’s convention. National officers Dr. James and Dr. Khan also attended to provide insight regarding the conventions they have hosted.

Mr. James Turner recruiting for NASA
Following the career fair and hosting workshop was the Saturday evening dinner at 6:00 p.m. The dinner started with initiation where two new members were welcomed to the Tau Psi chapter. Dr. Yolanda Mack and Dr. Altaf Khan performed the initiation. There were no new chapters to induct into the organization this year, so dinner followed.

During dinner, design teams from the Autodesk competition presented their designs. Each team sent a representative who was allowed a minute to present their design. The designs were then displayed throughout dinner for attendees to pick their favorite. Voting for best design was done via a polling app.
Once dinner was concluded, several awards were presented. First, outstanding service and performance awards were announced. Illinois, Colorado State, and Purdue were recognized and presented awards as well as checks.

Following this, Dan Banach presented the awards for the top three Autodesk designs. The winners were awarded Pi Tau Sigma graduation stoles and cords.
The last award was a trophy presented by Noah Ivey to Hao Xu, the winner of the Smash Brothers Ultimate tournament the night before.

![Tau Psi President Noah Ivey (right) presenting the Smash Brothers Ultimate trophy](image)

Following awards, Alex Grauberger introduced and welcomed Mr. James Turner, Marshall Space Flight Center Engineering Directorate, to the stage to present his keynote “A Journey of Innovation.”

![Mr. James Turner quantifying the requirements for a vessel needed to travel to Mars](image)

This presentation related the trip to Mars as a road trip from California to Alaska. It would take six months to get there traveling only a few miles per hour. You would then stay for six months before returning home. You couldn’t stop for gas, water, or food and would have to bring all supplies and tools necessary so set up camp. Describing the trip to Mars from this perspective shows what an incredible feat a Mars mission would be. The take away from the presentation is
that this trip will occur in our live times and engineers like PTS members are needed to accomplish this. Following the keynote, Dr. Darryl James announced that Dr. Altaf Khan was retiring from the Nationals Board and presented him with a plaque of recognition thanking him for his time and service. Dr. Khan then gave a quick speech overviewing his time with PTS and describing how impactful the organization has been to him.

Rochester, who is hosting the 2020 convention, was then able to present their planning progress. They already have transportation and lodging settled and are working on planning exciting social events and a large career fair.

Illinois also gauged the audience’s interest in a regional convention at Urbana-Champaign for chapters within driving distance.

Before closing the convention, the Tau Psi chapter was recognized by the Nationals Board for their planning efforts and were given the Hosts and Attending Chapters plaque to keep and display at CSU. Following the closing of the convention, attendees were allowed to travel to downtown Fort Collins with provided bus passes to visit local stores and bar hop with new friends.
## 2019 National Convention Statistics

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*The Tau Psi Chapter will share any additional information with those who wish to host a convention (reach out to pitausigmacsu@mail.com)*