

2021-2022 Annual Report

Intelligent Transportation Society of Texas



Student Chapter at Texas Southern University

August 08, 2022

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Organizational Orientation

The TSU student chapter of Intelligent Transportation Society (ITS) was founded on June 10, 2010, under ITS Texas. The primary objectives are to: 1) boost students' knowledge and research in Intelligent Transportation Systems; 2) enlarge students' vision in the application of advanced technologies in ITS; 3) build up a platform for students at TSU to join in Intelligent Transportation Society of America; 4) provide interested students with ITS access to interact with the transportation professionals in the intelligent transportation system-related field; 5) provide maximum resources for students to attend the ITS-related conferences, and 6) create opportunities for ITS TSU members to be involved in campus events proactively.

Current Leadership Team

2021-2022

Advisor	Dr. Fengxiang Qiao	Fengxiang.qiao@tsu.edu
Advisor	Dr. Xuemin Chen	chenxm@tsu.edu
President	Sayed Abuzar Kazimi	abuzar.kazimi@gmail.com
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Secretary	Sanddip Acharya	s.acharya5117@student.tsu.edu
Committee Chair	Abdullah Adeal	a.adeal 0338@student.tsu.edu

Academic Activities

During the last year, the ITS student chapter in TSU organized chapter members through various platforms to encourage student members to participate in academic activities related to the transportation field; it mainly includes state, national and international level meetings and conferences. Due to the impact of the pandemic, the ITS student chapter in TSU has organized chapter members to participate in academic conferences and webinars both virtually and in person. Further information on educational activities the ITS TSU student chapter attended is shown below.

ASCE Houston Meeting

On June 21, 2022, the ASCE Houston branch conducted a two-hours virtual & in-person meeting. ITS TSU Student Chapter organized student members to participate in this meeting. Sayed Abuzar Kazimi, the chapter president, also participated in this meeting. Several TSU undergraduate students won the ASCE scholarship.

ASCE JUNE HOUSTON BRANCH IN-PERSON & VIRTUAL MEETING



June 21, 2022 11:00 AM to 1:00 PM Add to Calendar

Marriott Westchase 2900 Briarpark Dr. Houston, TX 77042

PLEASE READ COVID-19 WAIVER FOR IN-PERSON EVENT BEFORE YOU REGISTER

The safety of all our members is a top priority. By registering for the event you are agreeing to all terms set forth in the <u>COVID-19 WAIVER</u>. By attending, you agree to abide by and engage in certain health-and-safetymeasures as required by the event venue. This includes, but is not limited to, adhering to <u>CDC recommended</u> <u>guidelines</u>.

AGENDA

- 11:00 AM Technical Presentation
- 12:00 PM Lunch/ Keynote Address

Figure 1. Chapter members participated ASCE Houston Meeting



Figure 2. Chapter members participated ASCE Houston Meeting

TSU Research Week Competition

TSU conducted a research week an in-person meeting from March 28 to April 01, 2022. ITS TSU Student Chapter organized student members to participate in this meeting. Throughout this research week, Dr. Qiao, the adviser of the student chapter, presented a poster presentation on Machine Learning Modeling Based on Transportation Equity Analysis by Comparing In-Service Performance of Roadside Safety Devices. Sayed Abuzar Kazimi, the chapter president, presented his research on Synthesis of Best Application and Verification Practices for Long-Life Pavement Marking. Sanddip Acharya, the chapter secretary, delivered a presentation on the Application of Artificial Intelligence in Freeway Congestion Management. Emmanuel Ekezie, a chapter member, presented a poster presentation on New technology and Marking Materials. Olajumoke Lizzy Omosebi, a chapter member, presented a poster presentation on eVTOL The Future of Air Transportation. In the end, Dr. Qiao and Sayed Abuzar Kazimi were recognized as the third winners, respectively, of the TSU research week competition among the faculties, and students, respectively.



Figure 3. Chapter members participated in the TSU Research Week



Figure 4. TSU Research Week - Winners

Participated in the Asia Pacific Transportation Development Conference

On November 17-18, 2021, ICTPA Headquater held its 13th annual conference named "Asia Pacific Transportation Development Conference" on Zoom where Dr. Qiao, the chapter adviser, was one of the conference organizers. ITS TSU student chapter organized student members to join the virtual meeting. The topic of this meeting was sustainable transportation development, where transportation researchers and practitioners delivered their presentations. Student members had discussions about the presented research in and after the webinar.



Figure 5. Chapter members participated in the ICTPA U.S. Chapters' Joint Webinar

ITE Houston Area Section Student Resume Coaching Meeting

On November 11, 2021, ITE Houston Area Section conducted a student resume coaching virtual meeting for TSU students. ITS TSU Student Chapter organized student members to

participate in this meeting. At the end of this meeting, students received valuable feedback on their resumes from industry professionals.



Figure 6. Chapter members participated in the ITE Houston Area Section virtual meeting

KITTELSON & ASSOCIATES Meeting

On October 26, 2021, Kittelson & Associates consultancy conducted a virtual webinar for students studying in the field of transportation. ITS TSU Student Chapter organized student members to participate in this webinar. The meeting panelists detailedly talk about the *A Career in Transportation*. In the end, the panelists promised to share future internship opportunities with students who participated in this meeting.

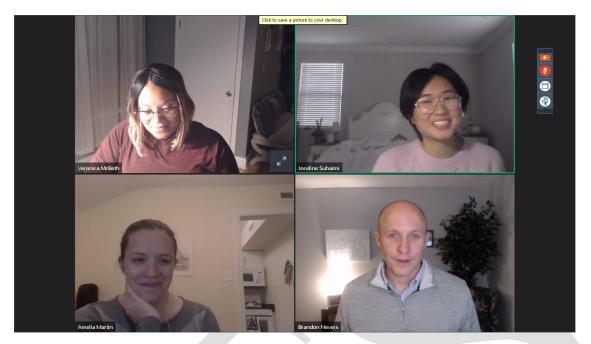


Figure 7. Chapter's student members participated in the TSU KITTELSON & ASSOCIATES Meeting

TSU President's Council Meeting

On October 12, 2021, the Texas Southern University's President, Dr. Lesia Crumpton Young, conducted an in-person meeting with the presidents of campus organizations. ITS TSU Student Chapter's president, Sayed Abuzar Kazimi, attended this council meeting. In this meeting, Sayed Abuzar Kazimi introduced the ITS TSU Student Chapter to the university's president and discussed further regarding the Chapter's overall vision and goals.

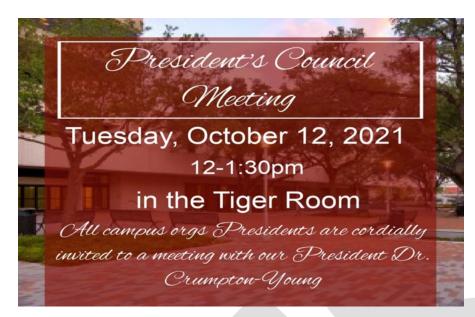


Figure 8. Chapter's president participated in the TSU President's Council Meetings

The U.S. Department of Transportation University Transportation Centers (UTC) Guest Speaker Series

On October 07, 2021, the UTC conducted a virtual seminar on Zoom with the theme of Automated Vehicles. ITS TSU Student Chapter organized student members to participate in this webinar. The panelists deeply talked about the recent development of Automated Vehicles in the U.S. In the end, the ITS TSU students asked several questions from the panelists.

Panelists



DR. FIRAS IBRAHIM Director, Office of Research, Development, and Technology U.S. Department of Transportation (moderator)



GREGORY D. WINFREE Agency Director Texas A&M Transportation Institute



KRISTIN WHITE Executive Director of Minnesota's Office of Connected and Automated Vehicles (CAV-X) Minnesota DOT



PRACHI VAKHARIA Technical Program Manager Massachusetts Bay Transportation Authority

Figure 9. Chapter members participated in the UTC webinar

Research Projects

ITS TSU chapter members are self-motivated to explore the exciting research in the improvement of the transportation system. They actively conducted various studies through a series of research projects to enhance their academic capability and professional skills. The list of partial research topics that the Chapter members have performed during the fiscal year 2021-2022 is shown as follows:

Participated chapter members: Sayed Abuzar Kazimi, Jianbang Du, and Emmanuel
 Ekezie

Project: Synthesis of Best Application and Verification Practices for Long-Life Pavement Markings, 0-7135, TxDOT.

Research Advisor: Dr. Fengxiang Qiao at TSU

- Participated chapter members: Mustafa Wali
 Project: Investigating the Impact of COVID-19 Pandemic Outbreak on Bike Share Usage and Ridership: A Case Study in Houston
 Research Advisor: Dr. Mehdi Azimi at TSU
- Participated chapter members: Sanddip Acharya
 Project: Application of Artificial Intelligence in Detecting, Forecasting, and Managing
 Freeway Traffic Congestion
 Research Advisor: Dr. Mehdi Azimi at TSU
 Research Advisor: Dr. Fengxiang Qiao at TSU
- Participated chapter member: Lijie Zhou
 Project: Study of Bicycle Infrastructure and Bicycle Sharing System in Houston, TX.
 Research Advisor: Dr. Azimi Mehdi at TSU
- Participated chapter member: Jianbang Du
 Project: Rule-Based Automated Safety Monitoring System for Highway Work Zone
 Safety, National Academy of Sciences project NCHRP-206, Sub awarded from University of Houston with number: R-18-0069.
 Research Advisor: Dr. Fengxiang Qiao at TSU

Journal Publications and Conference Presentations

With a passion for research work, our chapter members have submitted several research papers to various academic journals and conference proceedings. Some articles have been accepted for publication and presentation through the peer-reviewed process, which are listed below.

- Zhao, Q., Qi, Y., & M.Wali, M. (2022). A method for assessing the COVID-19 infection risk of riding public transit. International Journal of Transportation Science and Technology.
- Du, J., Qiao, F., Yu, L., & Lv, Y. (2021). "Impact of Managed-Lane Pricing Strategies on Vehicle-Sourced NOx and HC Emissions", Gases, 1(2), 117-132. <u>https://doi.org/10.3390/gases1020010</u>
- Du, J., Qiao, F., Wang, H., Zhang, Y, and Yu, L. (2021). "Frequent Pattern Analysis of the Roadside Safety Devices Related On-road Crashes", accepted for International Journal of Engineering Science Invention journal, 10(5), 35-46.
- Wang, H., Qiao, F., Du, J., Zhang, Y. (2021). "In-Service Performance Comparison of Roadside Safety Devices in Rural and Metro Counties in Texas", International Journal of Engineering Science Invention (IJESI), 6(1), 30-38.

http://www.ijesi.org/papers/Vol(10)i6/Ser-1/D1006013038.pdf

Student Awards

Owing to the unceasing efforts in professional studies, many members of ITS TSU chapter have been awarded several types of scholarships. Here are the lists of winners to inspire more students to pursue their goals in transportation-related studies.

- Sanddip Acharya, Spring 2022, TSU Graduate Research Assistantship
- Sayed Abuzar Kazimi, Spring 2022, TSU Innovative Transportation Research Institute Graduate Research Assistantship
- Mustafa Wali, Spring 2022, TSU Graduate Research Assistantship
- Sayed Abuzar Kazimi, Summer 2022, AECOM Internship
- Abdullah Adeal, Summer 2022, AECOM Internship

- Sayed Abuzar Kazimi, Spring 2022 won third position in TSU Research Week Competition
- Emmanuel Ekezie, Summer 2022 TSU Innovative Transportation Research Institute Graduate Research Assistantship

Social Activities

Due to the impact of the pandemic, our Chapter did not host any on and off-campus social activities.

Conclusions

The ITS TSU Student Chapter has held and actively participated in different academic activity levels from Fall 2021 to Summer 2022. Although the pandemic affected outdoor activities, ITS TSU Student Chapter has positively organized student members in our Chapter to participate in various meetings and seminars held virtually online. Student members continued to make efforts in learning and applying the transportation knowledge related to ITS for kinds of research and projects and contribute to on and off-campus communities.

There is a healthy and vigorous atmosphere within the ITS TSU Student Chapter since more and more opportunities became available for members in our Chapter, their career interests in ITS related fields and their networks with government officials and transportation professionals were developed through their participation in activities offered by ITS TSU Student Chapter. For future development, the goals of our organization will be essentially achieved through further advanced activities. ITS TSU Student Chapter expect to promote the advancement and integration of intelligent transportation systems by fostering the close association of students with the more excellent transportation profession and ITS Texas; to acquaint students with topics of interest within the intelligent transportation arena; to promoting shared interests among students, and to encourage the development and enhancement of intelligent transportations.

Acknowledgment

The TSU student chapter sincerely appreciates the strong guidance, continuous support and kind encouragement from ITS Texas.

Editorial Director

Fengxiang Qiao, Ph.D.

Editor in Chief

Sayed Abuzar Kazimi, President of ITS TSU Student Chapter.

Appendix

1. List of Active Members

Last Name	First Name	Email
Kazimi	Sayed Abuzar	abuzar.kazimi@gmail.com
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Wang	Hanzhen	Shallowzhen97@126.com	
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2. Previous Leadership Teams

2020-2021

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