

ANNUAL REPORT 2019-2020



NEW YORK UNIVERSITY

Institute of Transportation Engineers Student Chapter

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PRESIDENT'S MESSAGE

The 2019-2020 school year has been full of successes and great opportunities for our ITE Student Chapter at New York University.

Receiving an award for Outstanding Organizational Growth as well as being named the Organization of the Year at the NYU Tandon School of Engineering has put us in the spotlight, and motivated us to go even further in fostering interest in transportation and bringing together students of diverse backgrounds.

This year we have been able to create great events from original ideas. These events have allowed our chapter to explore varied fundamental areas such as diversity, innovation, and networking. We also have continued important partnerships such as our commitments to hosting and organizing TransportationCamp 2019, as well as our ties to the ITE Northeastern District, Traffic Bowl, as well as other ITE members and student chapters in the region.

All this, of course, has only been possible thanks to our outstanding executive board. Having a team full of passionate members, that are always willing to take initiative, is what has enabled us to come so far, and is what motivates us to dream even further. Our chapter, that keeps gaining traction within our school and the entire region, is filled with leaders that are willing to work hard to make a difference.

We both rest assured that the NYU ITE student chapter rests in good hands and that even more exciting events and ideas lay ahead of us. Because of that, we want to thank you all for being a part of it!

Sincerely,
Bruno and Mateo

ABOUT NYU-ITE

The NYU Tandon-ITE Student Chapter aims to connect students who are interested in the transportation and traffic field with professionals working in the ITE Metropolitan Section of New York and New Jersey. This is the 16th year of operations of this student chapter. The main goal of NYU-ITE is to introduce interested students in new, exciting topics in the transportation field, guide them to events to participate in and promote collaboration with other student chapters, professors and researchers from other local and national chapters of ITE. ITE NYU is also committed to building a culture that respects and embraces diversity, inclusion, and equity.

The chapter is organized and operated by students under the supervision of faculty professors from the Department of Civil and Urban Engineering and support from the C2SMART Center, a USDOT Tier 1 UTC based at the Tandon campus. The chapter had seen the admission of 50 new members in the past year, coming from different study disciplines. Though the numbers might seem to be on the lower side, for this year, this due to the club concentrating on consolidation of current members with more emphasis on bringing multi-disciplinary collaborations rather than new members. Thus, the ITE Chapter here at the Tandon School of Engineering at New York University has had a successful year full of different events.

Membership to the ITE Tandon chapter is free. A summary of this year's events, participation in conferences, student publications and the social media initiative are presented on the pages that follow. The membership roster is also included, and the report concludes with information about the initiatives and activities planned for next semester. Please contact tandon-ite@nyu.edu with any questions or comments.

CHAPTER

1. STUDENT CHAPTER EXECUTIVE BOARD













Faculty Advisor: Dr. Jack Bringardner, ITE Met Section Transportation Education Committee Chair

2. STUDENT CHAPTER MEMBERSHIP

Number of Student Chapter Members: 224

Number of Student Members of Institute: 52

Number of Faculty Members who are Current ITE Members: 3

3. INFORMATION ON TRANSPORTATION ENGINEERING ENROLLMENT

Number of Undergraduate Students in Civil and Urban Engineering: 126

Does Curriculum Allow Undergraduate Students to Major or Minor in Transportation: YES

4. SUMMARY OF ACTIVITIES AND MEMBERSHIP ROSTER

See pages 6-25

Report Submitted by:

Siva Sooryaa Muruga Thambiran, NYU ITE Secretary

Content approved by:

Jack Bringardner PhD.

Faculty Advisor

STUDENT CHAPTER ACTIVITY OVERVIEW

Date	Event Name	Event Type
03/07/19	Resume Workshop (co-host with NYU-NYWEA,	Training/Professional
	NYU ASCE Student Chapter)	Development
03/27/19	2nd Women in Transportation Panel Discussion	Diversity and Inclusion,
	(Panelist: Nadereh Moini, New Jersey Sports and	Professional Development,
	Exposition Authority; Yixin Wang, Cambridge	Networking
	Systematics, Olga Abinader, NYCDCP)	
04/12/19	2019 ITE Northeastern District Collegiate Traffic	Leadership Development,
	Bowl, Mentorship Lunch and Student Symposium	Professional Development,
	(Hosted by NYU-ITE)	Networking, Application of
		Technical Knowledge
Summer 2019	ARISE Program with K-12 students	K-12 STEM Outreach, Field Trip
09/05/19	NYU Tandon 2019 Fall Club Fest	Leadership Development
09/26/19	Joint Kick-off/General Body Meeting with NYU-ITS	Leadership Development
	Student Chapter	
10/12/19	TransportationCamp NYC 2019 (NYU-ITE was in	Leadership Development
	charge of venue/volunteer coordination)	
11/07/19	Cities: Skylines Game Night I	Social and Relax
11/15/19	Fehr & Peers Transportation Consultants	Professional Development,
	information session and networking event	Networking
11/19/19	3rd Women in Transportation Panel Discussion	Diversity and Inclusion,
	(Panelist: Elaine Du, AKRF; Lu Ding, New Jersey	Professional Development,
	Sports and Exposition Authority; Sanam	Networking
	Lakhwara, AKRF)	
01/30/20	NYU Tandon 2020 Spring Club Fest	Leadership Development
02/11/20	Joint Kick-off/General Body Meeting with NYU-ITS	Leadership Development
	Student Chapter	
02/11/20	Cities: Skylines Game Night II	Social and Relax

UPCOMING EVENTS

- Mar. 16th, 2020: NYU ITE/ITS Subway Challenge
- Apr. 7th, 2020: ITE Collegiate Traffic Bowl
- Apr. 19th-21st, 2020: ITE Mid-Colonial District Annual Conference.
- October 2020: TransportationCamp NYC 2020

ITE EXECUTIVE BOARD MONTHLY MEETINGS

Regular NYU-ITE member meetings include kick-off/general body meetings, executive board meetings, and traffic bowl interest meetings. NYU-ITE hold its kick-off/general body meeting at the beginning of each semester. The main objective of the kick-off meeting is to reintroduce the Chapter to Tandon students, explain general functions and resources provided by ITE society, and recruit new members. The executive board meetings are often held once in a month. The agenda for the meetings usually revolves around funding, new leadership positions, organizing events, conferences as well as site visits. The chapter schedules 1-2 traffic bowl interest meetings per semester and invites members who are interested to go over possible topics for the competition. NYU-ITE files its annual report in every February and elects its executive members in every April.

Location: NYU-ITE meetings were held in NYU Brooklyn campus in either the Hub (LC 223) or C2SMART Center (6th floor, 15 MetroTech).

#	Date	Description
1	03/28/19	Traffic Bowl Interest Meeting
2	04/08/19	Executive Board Meeting
3	04/25/19	Executive Board Meeting
4	09/19/19	Executive Board Meeting
5	09/26/19	Joint Kick-off/General Body Meeting with NYU-ITS Student Chapter
6	10/03/19	Traffic Bowl Interest Meeting
7	10/17/19	Executive Board Meeting
8	12/05/19	Executive Board Meeting
9	01/29/20	Executive Board Meeting
10	02/11/20	Joint Kick-off/General Body Meeting with NYU-ITS Student Chapter
11	02/12/20	Executive Board Meeting

EVENTS

ITE NORTHEASTERN DISTRICT COLLEGIATE TRAFFIC BOWL 2019

NYU's ITE chapter hosted this year's Northeast District Collegiate Traffic Bowl, a quiz-style transportation competition. Teams from NYU, Cooper Union, University of Connecticut, University of Massachusetts Amherst and NJIT competed, with NYU finishing in second place. Competing for NYU were students Mateo Leon, Bruno Chede Cunha, Siva Sooryaa Muruga Thambiran, and Logan Wagner, and the team was led by NYU-ITE president Jingqin Gao and Vice President Reuben Juster.

The full-day event also included a mentorship lunch, during which attendees from all of the participating schools had an opportunity to network with professionals in transportation, and a poster session featuring student research.



NYU-ITE team won the second prize in ITE Northeastern Traffic Bowl 2019

ITE NORTHEASTERN DISTRICT MENTORSHIP SESSION

On the same day as the Traffic Bowl, a Mentorship Session was held with 20 mentors from 8 different companies. Mike Salati spoke on building and sustaining relationships and the importance of mentors. The presentation also included an overview of client relationships as well as mentorship relationships. Mentors led their tables in 20-minute group discussions on finding and building mentorship relationships. The list of topics and questions provided were used to lead the discussion.





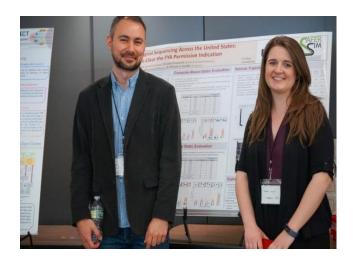


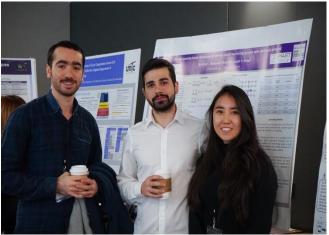
ITE NORTHEASTERN DISTRICT

POSTER PRESENTATION

The Poster Presentation is a research communication competition. The exercise develops academic, presentation, and communication skills and supports the development of research students' capacity to effectively explain their research in a language appropriate to an intelligent but non-specialist audience.







Please see event-day video at https://youtu.be/H9VCZHq8bLc

NYU Tandon School of Engineering Club Fest

(Fall 2019/Spring 2020)

The chapter participated at the Tandon Club Fest Fall 2019 and Spring 2020 where new members were recruited for the club and current members were welcomed back. It was an opportunity for ITE to represent ourselves and our initiatives to members of the community. More than 50 students signed up during the events.





ITE/ITS Kickoff Meeting 2020

Number of participants: 58

The main agenda for the meeting was to reintroduce the Chapter to Tandon students, explain general functions and resources provided by ITE society and recruit new members. Two of the Tandon faculty members were present at the kick-off meeting – Prof. Jack Bringardner, and Prof. Joseph Chow. They gave short speeches welcoming students and talking about ITE purpose and benefits that come with being a part of it. NYU ITE chapter's presidents, Bruno and Mateo, spoke in detail about ITE student benefits, such as a free chapter membership and a free first-year national membership, upcoming events, and finally internship and job opportunities available to upperclassmen peers. In addition to many Tandon Students, NYU CUSP and Wagner students also joined the meeting.





Transportation Camp NYC 2019

Number of participants: 200+

Number of Volunteers from ITE Student Chapter: 26

TransportationCamp was an "unconference" where sessions were determined and led by the attendees. Each single attendee has the opportunity to shape and lead the events by proposing the ideas they would like to discuss at the beginning of the day. TransportationCamp NYC 2020 was an all-day event and was opened to the public. NYU ITE student chapter acted as a volunteering group in this camp. There were 26 ITE officers and members who volunteered in assisting the event including the checking-in process, running session proposals, shuttling attendees to different locations and staffing





Women in Transportation Panel Discussion

Number of participants: 35

Being a part of the broader *Women at Tandon Initiative*, a formal effort to increase representation, retention and success of women in the science, technology, math and related fields, this event was a panel discussion between several leading women in the transportation industry in New York City. There were two editions of this series in the last year.

The first edition took place on March The panelists worked for NYCDCP, NJSEA and Cambridge Systematics and the discussion was moderated by Jannie, our former ITE President for the year 2018-19. Approximately 22 students were in attendance and there was a lively audience Q&A following the event. This event gave students an opportunity to meet professional leaders and ask them questions about their career paths, solicit advice and better understand the day-to-day work of a transportation professional in New York.



The second edition took place on November 19, 2019. The panelists in this event worked for AKRF and the NJSEA. They were also active members of the ITE Met Section. The session was moderated by our current vice-president Suzana. The panel had an initial ice breaker, then, the discussion continued with a few more open questions. Lastly, we opened the floor up to three or four questions from the public. Refreshments were provided and it was also a networking opportunity for the chapter students to connect the professionals. This event was attended by 13 people.



Fehr & Peers Transportation Consultants Information Session

Number of participants: 13

A networking event was help along with Fehr & Peers, a reputed consultancy company in transportation planning and engineering. Senior transportation engineer Delia Votsch flew all the way from California to interact with Tandon students and answer questions about the transportation industry, share insights about important projects and discuss career opportunities. It was a good session for chapter members to network with fellow students, practitioners, event attendees and the speaker.



Field Trips/Technical Tours

A field trip to Google's office in Manhattan was hosted by the student chapter on August 2nd, 2019. A group with a mix of graduate, undergraduate students from NYU and high school students of the K-12 ARISE program visited the entire office and had a presentation of what a day in the life of a Data Scientist looks like. NYU-ITE members also participated in technical tour during the ITE Northeastern District Annual Meeting – visiting New Haven's city operations center, CTDOT Rail Maintenance center and Union Station. Our members were exposed to novel solutions like using image processing technique for road occupancy as well as getting to know the daily operations in the rail maintenance center and history of the Union Station.



Service Projects

Members from NYU-ITE Chapter volunteered in the ITE YMC Fort Greene Park Clean-up event that happened on a Saturday, June 8, 2019. The participation in the event included assisting the park's Conservancy with weeding the park entrance landscaping and removing glass from the park's running trails. After helping in the park, the group headed for lunch and network in a restaurant nearby. Chapter members also volunteered in the Uni BUILD event in City Point, Brooklyn on October 6th., 2019 by assisting with setting up the furniture, facilitating Lego activities, making sure the participants were having fun and cleaning up.



Game Night

Number of participants: 19

Cities:Skylines is a city-building and simulation game with numerous possibilities to emulate real life infrastructure and urban systems. An introduction of the game for new players was given, cities built were showcased and at the end students participated in a small in-game competition.





Resume Workshop

Number of participants: 15

A resume workshop was organized by this chapter along with the student chapters of American Society of Civil Engineers (ASCE) and the New York Water Environment Association (NYWEA) will take place on March 7th. A representative from the NYU Wasserman Career Development Center would be there to assist with the preparation and to answer questions.









Resume Workshop

ARISE Summer Program

In 2019, the UrbanMITS Lab participated in the NYU Tandon School of Engineering ARISE Summer program. The ITEXITS Student Chapter was involved through their Vice-President, Suzana Duran Bernardes, and former President, Jingqin Gao. They were both key members in the selection process and mentoring of the students. The lab received two female high-school students, Jessica Katzman and Awestaa Zia, to perform different research tasks and develop a final project to present at the ARISE Colloquium.

Their project consisted in analyzing the effects of vehicle proximity to stress levels of cyclists riding in the Downtown Brooklyn area. They collected the distance between the bicycle and passing vehicles using ultrasonic sensors, a Global Positioning System (GPS) receiver, a real-time clock (RTC) connected to a Raspberry Pi mounted to the bicycle. In addition, they collected the heartrate of cyclists while riding with the sensors by using a smartwatch. They combined both datasets and analyzed the results obtained from them. Their final results have shown that the proximity of vehicles to the bicycle is correlated to higher heartrates and will be used in future projects of the lab. They also had classes on SQL, ArcGIS and AIMSUN.

This type of program is really important in the formation of skilled future transportation planners and/or engineers. The ITEXITS is proud to have been part of the program through our Vice-President and former President.





MEETINGS AND CONFERENCES

The NYU-ITE Student Chapter has always placed a special emphasis on meeting and conferences. Attendance at local research events, state and district meetings allows students to learn from a wide variety of perspectives related to current transportation issues and also provide them with an opportunity to network and build relationships with many inspiring leaders in the field. In the past year, Students from the NYU-ITE Student Chapter were present at the following meetings:

- 2019 Northeast District Collegiate Traffic Bowl April 12, 2019
- 2019 NYU Tandon School of Engineering Research Expo May 3rd, 2019
- WTS Greater New York 2018 Annual Gala Oct. 7th, 2019
- The 99th Annual Meeting of the Transportation Research Board Jan. 13-16th, 2020
- 2020 ITE Annual Open House Reception for Students Jan. 13th, 2020
- Young Professionals in Transportation Professional Development Workshop, Oct. 10th, 2019
- 2020 WTS Winter Reception Jan. 12th, 2020
- Managing Urban Parking and Mobility Workshop with IPMI Nov. 12-13th, 2019
- 6th International Conference on Women's Issues in Transportation, Sept. 12th, 2019
- 2nd Truck Size & Weight Stakeholder Forum, June 18th, 2019
- International Association of Transportation Regulators (IATR) 32nd Annual Conference,
 Sept. 22nd-25th, 2019
- 6th Symposium on Connected and Autonomous Vehicles in NYC REDUX event,
 Apr. 18th, 2019
- Transforming Transportation. World Bank and WRI Ross Center for Sustainable Cities.
 The World Bank headquarters. Washington, D.C. Jan. 2020
- ITS New Jersey Annual Meeting, 2019. Crown Plaza Princeton, Plainsboro. Oct. 2019
- ITE Metro. Emerging Professionals Conference & Career Fair. Hoboken, NJ. Oct. 2019
- Pennsylvania Automated Vehicle Summit 2009, Pocono Manor, PA. Sep. 2019









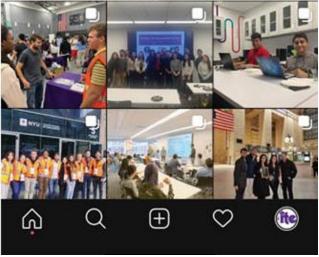
STUDENT PRESENTATIONS AND PUBLICATIONS

Presentations and publications authored by our Student Chapter members:

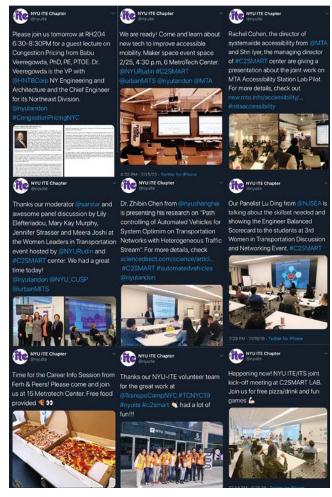
- Guo Q., Li L., Ban X., Urban Traffic Signal Control with Connected and Automated Vehicles: A Survey. Transportation Research Part C: Emerging Technologies Volume 101, April 2019
- Yang D., Xie K., Ozbay K., Yang H., Bartin B., Xu C., Bhattacharyya A., Comparison of State-of-the-art Observational Before-After Analysis Methods in Traffic Safety: A Case Study of the Red-light-running Program in New Jersey. Transportation Research Board 2020
- Yoon G., Chow J., Reinforcement Learning-based Sequential Transit Route Design under Demand Uncertainty. Transportation Research Board 2020
- Dakic I., Yang K., Menendez M., Chow J., Flexible Bus Dispatching System with Modular and Fully Automated Bus Units. Transportation Research Board 2020
- Xu J., Chow J., Gao S. Online Route Choice Modeling for Mobility-as-a-Service Networks with Non-Separable, Congestible Link Capacity Effects. Transportation Research Board 2020
- Xu J., Xie Q., Chow J., Liu X., Empirical Validation of Network Learning with Taxi GPS Data from Wuhan, China. Transportation Research Board 2020
- Gao J., Ozbay K., Nassif H., Khayat K., Demiroluk S., Advanced Software for State-Wide Integrated Sustainable Transportation Monitoring & Evaluation for Performing Project- and Network-Level Life Cycle Cost Analysis. Transportation Research Board 2020
- Li L., Jabari S., A Decentralized Network Control Approach Based on Continuum Traffic Flow Modeling. Transportation Research Board 2020
- Lee, M., Chow J., Yoon G., He Y., Forecasting e-Scooter Competition with Direct and Access Trips by Mode and Distance in New York City. Transportation Research Board 2020
- Carros N., Chow J., Day-to-Day Market Evaluation of Last-Mile Transit Operations using Modular Autonomous Vehicles with En-Route Transfers. Transportation Research Board 2020
- Kalan O., Ozbay K., Kurkcu A., Gao J., Desai V., Joshi D., Network-Wide Life Cycle Cost Analysis That Takes into Account the Effect of Road Roughness on Road Capacity. Transportation Research Board Annual Conference, 2020
- Rasulkhani S., Theodoros P., Chow J., A Many-to-Many Assignment Game Method to Evaluate Cost Allocations of Link Operators in a Mobility-as-a-Service Market without Route Enumeration. Transportation Research Board 2020
- Rath S., Chow J., Air Taxi Skyport Location Problem for Airport Access. Transportation Research Board 2020
- Pantelidis T., Rasulkhani S., Chow J., A Path-Based Many-to-Many Assignment Game to Model Mobility-as-a-Service Networks. Transportation Research Board 2020
- Xiong X., Ozbay K., Jin L., Feng C., Dynamic Origin-Destination Matrix Prediction with Line Graph Neural Networks and Kalman filter. Transportation Research Board 2020
- Chen X., Ye Q., Zhang H., Cai J., Ozbay, K., Diffusion Network Analysis of Public Attitude toward Shared Bicycles Strategies using Social Media Data. Transportation Research Board 2020
- Kurkcu A., Building and Using an Innovative Data Warehouse Platform. Transportation Research Board 2020
- Cai J., Lu J., Wang Y., Anchan P., Gu S., Guo Z., Estimating the Effect of Uber & Lyft on Parking Violation in NYC. Transportation Research Board 202

SOCIAL MEDIA

One of the goals of the student chapter was to promote events and encourage participation in the NYU and NYC transportation community. Besides the bi-weekly newsletters, the Student Chapter has fully embraced social media and has used it to connect students with alumni, professionals, and organizations this year. Below is a snapshot of NYU ITE Instagram account posts grid, Twitter account, Youtube videos and Facebook group.









The NYU-IYE email newsletter is the primary mode of communication between the club and its followers. While we do not stick to a fixed schedule on when to send out a newsletter, we do whenever there is important information to share with our members. Most often, the central item of our newsletter email is our next event, so we give information about it, date, time, location as well as a link to RSVP. Frequently, we also include information about other upcoming events, summaries or recaps of past events, club and transportation news, as well useful links for our userbase.



AWARDS

The ITE Northeastern District honoured NYU-ITE with its Student Chapter Achievement Award, given in recognition of providing outstanding services to its members last May. Those members now number close to 200, since the group has, this past year, attracted more than 100 new participants, not only from the Department of Civil and Urban Engineering, but from Computer Science, Electrical and Computer Engineering, Mechanical and Aerospace Engineering, and Technology Management and Innovation.

In addition to that prestigious recognition from the regional ITE, the chapter also garnered Organization of the Year and Outstanding Organizational Growth honors from Tandon's Office of Student Activities and Resource Center (OSARC).

Faculty Advisor Jack Bringardner credits student leadership, as well as the support of C2SMART (Connected Cities with Smart Transportation), the school's Tier 1 USDOT University Transportation Center, for the chapter's success. "Members of the chapter are personally networking with and strengthening connections between NYU Tandon and the international community of transportation professionals," he said. "It gives me confidence that NYU's transportation graduates will make the world's transportation systems more efficient, better-connected, and increasingly safer in the future."



UPCOMING EVENTS

NYU ITE/ITS Subway Challenge

The NYU ITE will try to establish the currently unclaimed record for the NYC Subway Challenge. The Subway Challenge is a challenge in which participants must navigate the entire New York City Subway system in the shortest time possible. This ride is also known as the Rapid Transit Challenge and the Ultimate Ride.

ITE Northeastern District Collegiate Traffic Bowl

The ITE NYU Student Chapter is pleased to participate in the 2020 Northeastern District Traffic Bowl on April 7 this year. This is a jeopardy-style trivia competition among ITE Collegiate Chapters. As a part of the Traffic Bowl event, NYU in collaboration with the ITE Northeastern District and MET Section are hosting a student symposium for posters and presentations.

ITE Mid-Colonial District Annual Conference

NYU ITE will travel to Baltimore to take part in the Mid-Colonial District 2020 Conference. The conference will feature distinguished speakers in the transportation field, technical sessions hosted in conjunction with MDOT (and other state departments), as well as a variety of social tours.

TransportationCamp 2020

NYU Tandon campus will be once again hosting the TransportationCamp 2020 and the ITE student chapter would be volunteering with the organization of the event. This time, our former President Jannie and current Vice-President Suzana would be the directors for the event, the first time women are heading a Camp. We hope to see you all to share your transportation passion with a diverse gathering of fellow enthusiasts.