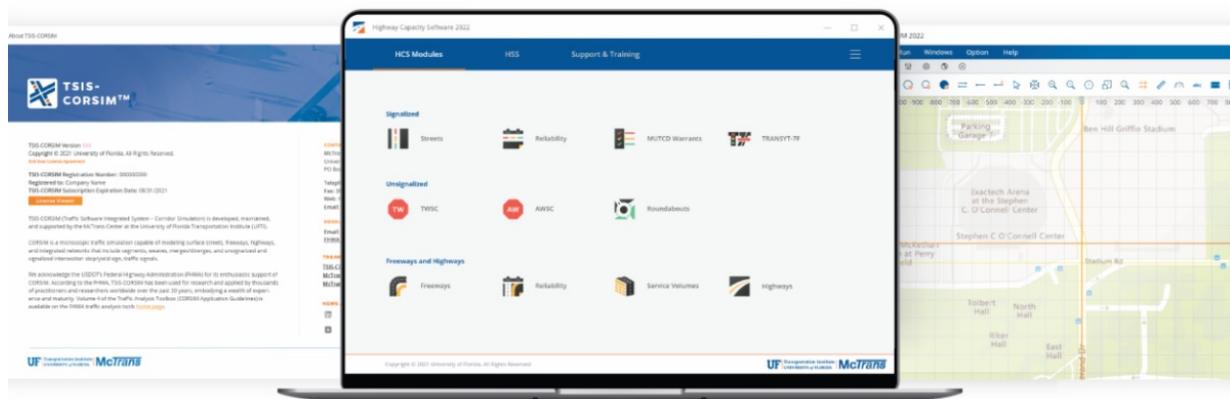


ANNOUNCING
The Next Generation
of Traffic Simulation Software



HCS 2022

The reliable software tool that faithfully implements the methodologies from the HCM

[Learn More >](#)



TSIS-CORSIM 2022

The reliable microsimulation tool that is credible, cost-effective, and easy-to-use

[Learn More >](#)

Our Experience at TRB 2022

We were very excited to be back and in person at the TRB Annual Meeting 2022, despite a high degree of uncertainty among several public health concerns. Even with reduced attendance compared to past years, it was a great opportunity for our team to connect with the transportation community.

Exhibit Booth

Our presence at the TRB Annual Meeting would not be complete without our exhibit booth. Just like previous years, we met many of our clients who gave insightful feedback about our products. Visitors had the opportunity to take a sneak peek at the 2022 release of the Highway Capacity Software, which implements new methods of the Highway Capacity Manual 7th edition. We also provided a firsthand demonstration of the TSIS-CORSIM 2022 release, with a completely redesigned interface with Bing Maps.



UFTI team gathered at McTrans booth

Presentation - What is New in HCM7

Our team was part of the lectern session "What is new in the HCM 7" sharing highlights on the new and improved methodologies of the new Highway Capacity Manual 7th Edition.



Presenters at the "What is New in HCM7" Lectern Session

Committee Activity

Our team members are actively involved in several committees at TRB and ITE and devoted their time volunteering on several committee activities:

Highway Capacity and Quality of Service Committee (ACP40):

- Behzad Aghdashi – Member, Freeways Lead
- Gustavo Andrade – Member, Ramp Terminals and Alternative Intersections Lead: gave presentation proposing errata to HCM7 interrupted flow chapters based on McTrans internal implementation and testing
- Fabio Sasahara – User Liaison Lead

Freeway Operations Committee (ACP20):

- Gustavo Andrade – Liaison from ACP40
- Fabio Sasahara – Social Media Forum

ITE Safety Council:

- Karla Rodrigues Silva – ITE technical brief reviewer

Traffic Simulation Committee (ACP80)

- Gustavo Andrade - In-person runner for the Joint Simulation Subcommittee: SimSub 2.0 meeting, hosted virtually

Safety Performance and Analysis Committee (ACS20):

- Karla Rodrigues Silva – Part C - Practical Approaches task force group

SimCap (Simulation and Capacity) National Group (ITE)

- Behzad Aghdashi – presentation on TSIS-CORSIM updates

Transportation Planning Council (ITE)

- Fabio Sasahara – Executive Committee, Communications Lead

Transportation Safety Management Systems Committee (ACS10):

- Karla Rodrigues Silva – Hot topic contest, 5th place

Compatibility Between HCS Versions

Planning to upgrade to HCS 2022 and concerned about compatibility with older HCS files from your current and past projects?

HCS can convert files from previous versions, enabling users to access their projects while keeping up with the most updated version of the software and HCM. All modules can open files from previous releases back to HCS2010, while Streets and unsignalized intersection modules are compatible further back to HCS+ file formats.

Two-Lane Highway with passing lane

The screenshot displays the HCS software interface with a blue arrow pointing from the HCS 2010 version to the HCS7/HCS2022 version. The HCS 2010 window shows the 'Passing Lane Analysis' input data for a two-lane highway with a passing lane. The diagram illustrates the highway layout with segments: L_u (upstream), L_{pl} (passing lane including tapers), L_{de} (downstream), and L_d (downstream). The total length is L_t . Input parameters include: Total Length of Analysis Segment, L_t (0.0 mi); Length of Two-Lane Highway Upstream of the Passing Lane, L_u (0.0 mi); Length of Passing Lane Including Tapers, L_{pl} (2.4 mi); Average Travel Speed, ATS_d (52.8 mi/h); Percent Time-Spent-Following, $PTSF_d$ (66.8); and Level of Service, LOS_d (D).

The HCS7/HCS2022 window shows the 'Segments Input' table and a 'Facility' diagram. The 'Segments Input' table is as follows:

Type	Name	Length, ft	Speed Limit, mi/h	Directional Demand, veh	Opposing Demand, veh/h	PHF
1	Passing Lanes	12795	63	513	-	0.88
2	Passing Constrained	5249	63	513	-	0.88

The 'Facility' diagram shows a cross-section of the highway with segments 1 and 2, and a passing lane (PL) and passing constrained (PC) section.



STAFF SPOTLIGHT

Shen Dong

Development Team Lead

“Why are you interested in the job at McTrans?” was a question I prepared for the interview in Spring 2015. It is straightforward for me to answer it. My interests in both traffic engineering and software development led me to McTrans.

After I graduated from Huazhong University of Science and Technology with a bachelor’s degree in Traffic Science & Engineering and Computer Science & Technology, I pursued a Ph.D. in Civil Engineering at Tsinghua University. During the first year, Professor Qixin Shi and Professor Huapu Lu introduced me to a project team to develop a new transportation planning software (Planhorn) for transportation engineers in China. We were excited to explore new technology boosted in the Internet age. The team selected C# as the programming language with version control, online task management, and automated tests. However, modern technology didn’t make it successful on the path toward commercialization. Besides technology, was there anything else we need to consider? I had to wait for eight years to get an answer.

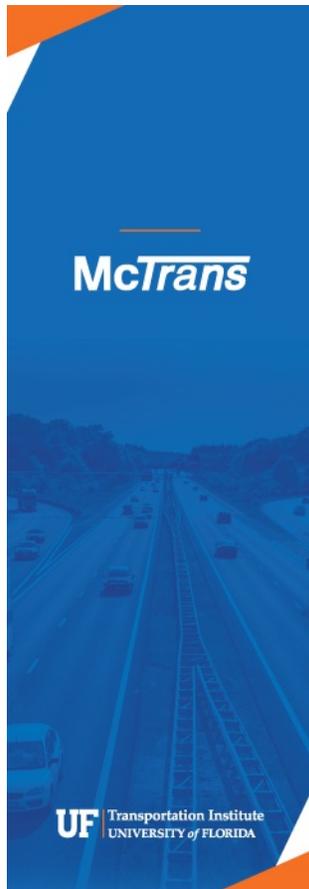
On my research journey, I focused on some topics related to data analysis, such as the combined traffic flow forecast model based on cell probe data, data analysis on eye movement, and incident data for civil aviation safety at several universities.

In August 2015, I joined McTrans as a full-time employee after graduating from the University of Florida with a master’s degree in Computer Science. With the trust and support of Mr. Bill Sampson and Mr. Vishal Khanapure, I became the primary developer of the new HCS7 Freeways module. In the age of HCS7, I continued to design, implement, and provide customer support on several new modules for HCS7 such as Multilane, Freeways Reliability, Service Volume, Highways Safety Software, Two-lane Highways, and Network tool for NCHRP 15-57 (Chapter 38 of the Highway Capacity Manual). Those

projects changed my vision of building a commercialized software product. I could see how good customer support and continuous maintenance made McTrans successfully serve customers on the market for decades.

The transition of leadership at McTrans met with the pandemic. With the support of Dr. Lily Elefteriadou and the new Director, Dr. Behzad Aghdashi, I'm thankful for the opportunity to lead the development team in a manager role. New leadership and members also bring new ideas. Our growing team significantly improved the interface design and models and upgraded the deployment process for software products.

The new HCS suites (HCS 2022) are now released. I'm grateful to McTrans for the opportunity to learn and practice engineering, research, and management. I also want to thank all my current and former colleagues at McTrans.



Upcoming Virtual Training

What is New in the 7th Edition of HCM?^{NEW} (1.5 PDHs)

This new webinar is developed for transportation professionals who want to understand the major changes in the methods published in the 7th Edition (2022) of the Highway Capacity Manual (HCM).

Mar 02, 2022 12 - 1:30 PM ET

Apr 07, 2022 3 - 4:30 PM ET

Highway Capacity Analysis (12 PDHs)

Mar 08 - 10, 2022 1 - 5 PM ET

May 03 - 05, 2022 1 - 5 PM ET

Highway Safety Analysis (8 PDHs)

Feb 22 - 23, 2022 1 - 5 PM ET

Apr 05 - 06, 2022 1 - 5 PM ET

May 24 - 25, 2022 1 - 5 PM ET

Ready to Register?

Visit us at mctrans.ce.ufl.edu/training/.

Have questions or want to learn more?

Send us an email at mctrans@ce.ufl.edu.



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