



# A LEADING VOICE IN PANDEMIC-DRIVEN PROBLEM-SOLVING

World-renowned transportation and logistics expert Hani Mahmassani employs well-honed communications skills to improve public understanding of complex issues.

# "WHILE IT'S AN ENGINEERING DISCIPLINE, ON A DAY-TO-DAY BASIS, TRANSPORTATION IS INTERTWINED WITH EVERYTHING WE HUMANS DO."

**HANI MAHMASSANI** William A. Patterson Distinguished Chair in Transportation and Professor of Civil and Environmental Engineering

## **The COVID-19 pandemic triggered some of the greatest supply-chain challenges in recent history.**

Hani Mahmassani, internationally known logistics expert, took on those challenges by doing what he does best—innovating and communicating.

Mahmassani, William A. Patterson Distinguished Chair in Transportation and professor of civil and environmental engineering at Northwestern Engineering, has spent the past 18-plus months working with industry on innovative ideas to move products efficiently, including COVID-19 vaccines, while exhibiting a knack for explaining it all in plain language to the public.

"Transportation is so closely tied to society, to our everyday life, in many ways," says Mahmassani, who also serves as director of the Northwestern University Transportation Center (NUTC), a leading interdisciplinary education and research center serving industry, the government, and the public. "While it's an engineering discipline, on a day-to-day basis, transportation is intertwined with everything we humans do."

## **Strategic collaboration to meet demand**

In early 2020, public panic spread quickly over the availability of soap and toilet paper, upending distribution patterns and spiking interest in supply chains. That prompted Mahmassani and NUTC's Business Advisory Council (BAC) to convene nine weekly roundtables to look into the state of supply chains.

Through these events, BAC members—representing shipping, transportation, logistics, and other related industry sectors—helped formulate strategies to get needed products into the hands of consumers. By leveraging real-time data, suppliers could identify and anticipate problem areas, intensify communication with all actors along the supply chain, and engage in collaborative arrangements, even among competitors.

"Our center always has been at the vanguard of developments in terms of professional outreach as well as engagement, but that is especially true now," says Mahmassani, who was elected to the National Academy of Engineering earlier this year.

Mahmassani and Karen Smilowitz, James N. and Margie M. Krebs Professor in Industrial Engineering and Management Sciences, also have launched a research initiative on how best to deploy COVID-19 vaccines.

They received a National Science Foundation Grant for Rapid Response Research (RAPID) to track vaccine distribution and tap the expertise of major shipping and transportation company leaders. The award will help them create interim guidance for the evolving vaccine deployment process while developing a robust logistics design for similarly extreme deployment issues that may arise in the future.

## **Communicating solutions to the public**

Fluent in Arabic, French, and English, Mahmassani is also highly skilled at communicating complex ideas to the public. When the Suez Canal was blocked in March by a grounded container ship, international media outlets sought out Mahmassani for his expertise.

When lockdowns began in 2020, he explained in media appearances that supply chains were hit hard because there had been so little time to plan for the pandemic's impact. He also noted later that industry and governments were better at rolling out the vaccines because they had more time to prepare.

Mahmassani sharpened his communication skills in the classroom, where he has taught students adaptability, resilience, and confidence in problem-solving. His teachings included remaining aware of one's surroundings and addressing timely issues using the core knowledge and toolset that a Northwestern education provides.

"Hani is an important asset for Northwestern and for the field of transportation and logistics," says Joseph Schofer, professor emeritus of civil and environmental engineering and an expert in transportation. "A big part of that is his ability to blend a broad skill set with a ton of enthusiasm."

BRIAN SANDALOW