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July 2016

Rail News: People

Rising Star: Rapik Saat, Association of American Railroads

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Rapik Saat, 36

Director of Operations Analysis**Association of American Railroads***By [Daniel Niepow](#), Associate Editor*

While Rapik Saat was an undergraduate student at the University of Illinois at Urbana-Champaign (UIUC), he wanted to get involved in engineering research in some capacity. His interests in chemistry and transportation led him to the school's [Rail Transportation and Engineering Center](#) (RailTEC), where he secured an undergraduate research assistant position under Christopher Barkan, a civil and environmental engineering professor.

The role involved gathering information about rail accidents to support ongoing tank-car safety research co-sponsored by the Railway Supply Institute and the [Association of American Railroads](#) (AAR). Intrigued by the work and the field of rail transportation in general, Saat in 2003 earned his bachelor's degree in civil and environmental engineering at UIUC. He went on to receive his master's degree in 2009

and a Ph.D. in 2013 from the same university, where he most recently served as a research assistant professor.

"I'm a big picture guy," says Saat, 36. "In what I do, sometimes it's easy to get drowned in the data, but I like to see the big picture — to start with the end in mind and be proactive."

In April, Saat accepted a position as director of operations analysis in the AAR's policy and economics department.

Through his extensive research on tank-car safety and hazardous materials transportation at UIUC, Saat is an invaluable resource in the rail industry, according to the nine individuals who submitted Rising Stars nominations for him. For example, Saat's model for an optimized tank-car safety design has become the standard approach the AAR uses to evaluate new designs, wrote UIUC's Barkan.

In addition, the AAR used Saat's model to develop a petition for an interim standard design for toxic inhalation hazard materials.

"Saat is regarded as the pre-eminent statistical analyst in the area of railroad transportation of hazardous materials and tank-car safety," wrote Patrick Student, retired director of hazardous materials at [Union Pacific Railroad](#), in nominating Saat. "His research is indeed important, impactful and national in scope."

As a professor, Saat also played a role in nurturing the next generation of rail industry talent.

"His success in motivating and educating top caliber students to pursue studies and careers in rail transport is another important way that he is contributing to advance the field," UIUC's Barkan wrote.

A native of Malaysia, Saat earned a full scholarship to study civil engineering from Tenaga Nasional Berhad, the country's electric utility company. The son of a bus driver, Saat says it would've been impossible for him to come to the United States without the scholarship award.

"It's been an interesting and humbling journey in the past 16 years in the U.S.," he adds.

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