

AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO

Transportation Vanguard Award Nomination Form

2016

INFORMATION ON NOMINEE:

Last Name:Li	First Name:Ning	Date:July 25, 2016	
Email:ning.li@vdot.virginia.gov		Position Title:Traffic Asset Program Manager	
Department:Virginia Department of Transportation		Phone:804-786-4269	
Street Address:1401 E Broad St	City:Richmond	State:VA	Zipcode:23219
AASHTO Committee Membership (optional)Click here to enter text.			

NOMINATOR INFORMATION:

Last Name:Khoury	First Name: Raymond	Date:July 25, 2016	
Email:Raymond.Khoury@vdot.virginia.gov		Position Title: State Traffic Engineer	
Department:Virginia Department of Transportation		Phone:(804) 786-2965	
Street Address: 1401 E Broad St	City: Richmond	State: VA	Zipcode: 23219
Endorsement of Member Department Secretary/Director: VDOT Commissioner Charlie Kilpatrick, P.E. and executives have endorsed this nomination.			

INSTRUCTIONS:

Using a maximum of 2 additional single-sided pages, please provide reasoning as to why this individual should be selected as the Transportation Vanguard Award recipient. Please include as much specific information about the candidate as possible, including special projects, personal attributes, dedication, etc.

Send nominations by **Monday, July 25, 2016**, via e-mail to mvitale@aaashto.org. Nominations must be submitted as a single file in MS Word format using **TVA2016_Nomination_Nominee_Name.doc** as the file name.

MR. Raymond Khoury, P.E.
State Traffic Engineer
Virginia Department of Transportation
1401 E Broad St, Richmond, VA 23219

Via Electronic Mail

July 24, 2016

RE: Virginia DOT Candidate -Ning Li, PhD, PE, PMP

Dear AASHTO Vanguard Award Selection Panel,

Virginia Department of Transportation (VDOT) would like to nominate **Dr. Ning Li, PE, PMP**, Traffic Asset Program Manager with VDOT Traffic Engineering Division, for your consideration of the distinguished Vanguard Award. We believe that Dr. Li exemplifies Vanguard Award's spirit of staying at the forefront of technology and leading the way in new developments and ideas.

Ning has been with VDOT for ten years and currently oversees the state's traffic asset program. His responsibilities include technical guidance, project delivery support, financial needs assessment, data analysis, and performance management of various traffic assets. Prior to his current role, Ning worked as a Senior Engineer in VDOT's safety program. His previous experience also includes an engineer position with Minnesota DOT in its design, traffic, safety and innovative contracting offices.

Ning has been nationally recognized for his past work and accomplishments by receiving several national awards including the 2009 Institute of Transportation Engineers (ITE) Past President Award for Merit in Transportation and the 2012 National Safety Council Rising Star of Safety Award. He is a Fellow of ITE, a Professional Traffic Operation Engineer (PTOE), and served on multiple expert panels of ITE and the Transportation Research Board (TRB).

As an engineer, Ning has a rare multi-disciplinary education background and earned advanced degrees in diverse areas, including engineering, economics and management. His holistic perspective and understanding of both research and practices give him unique edge to lead innovations that help bridge the gap between the state-of-the-art and the state-of-the-practice.

Ning is passionate about leveraging new ideas and technologies to advance transportation industry practices. For instance, in an effort to develop strategies for reducing Virginia's roadway departure (RD) crashes, Ning identified a serious defect in Virginia's data and proposed a solution by applying advanced queries and spatial analysis. Through collaborating with national peers, Ning verified the national scope of the issue and brought it to the attention of the Federal Highway Administration (FHWA). As a result, FHWA released a new RD crash technical memorandum in 2009 to improve RD crash data. Not only were Ning's suggestions adopted in this memo, FHWA staff also acknowledged his "significant contributions to the important highway safety effort". For this effort, Ning also won the prestigious ITE Past President Award for Merit in Transportation in 2009.

Ning also exemplifies the Vanguard Award's spirit with his continuous self-enrichment to stay at the forefront of new ideas and technologies. With a full time job, he managed to take graduate level

courses to refresh his knowledge and was able to apply latest technologies learned such as mobile application, big data analysis and spatial modeling to solve real-world transportation problems. His recent work on guardrail (GR) management is a great example as detailed below.

Ning led his team and did an outstanding job better managing a \$40M annual investment on guardrail maintenance in VDOT. He led the development of a new GR condition ratings policy, which allows the agency to focus on high risk GRs and achieve over \$2M annual savings by reducing unnecessary GR upgrades. Ning also developed an innovative data driven framework for GR investment strategies by integrating improved Highway Safety Manual (HSM) models, spatial modeling and engineering-economics models. This risk and performance based approach provides new and actionable insights for transportation agencies to make GR investment decisions based on safety benefits of individual guardrail assets. His team also implemented a mobile application for asset data collection to replace the previous paper and pencil method. Not only these projects achieved significant cost savings and efficiency improvement for VDOT, some work has also been published in top journals and earned him a **Ph.D.** degree in transportation engineering from the University of Virginia this year. This is a strong testimonial of the innovation of his work and his dedication to staying at forefront of technology.

Ning is also keen in knowledge sharing and community service. He trained hundreds of co-workers on advanced topics including crash analysis, GIS mapping, ArcGIS story map, and mobile data collection and inspired many to implement new skills at work. He developed and taught the first employees self-organized PE refresher course in VDOT and helped many to pass this important exam. He also shared his professional knowledge through dozens of presentations and journal publications. Outside of work, Ning has engaged in volunteer works helping prepare foods for economically disadvantaged group and paint rooms for seniors and disabled group living in affordable housing community.

Ning has been widely recognized as a dedicated engineer and an innovative leader within VDOT and beyond. He consistently received highest performance ratings on all past and current positions. We have full confidence that he will be a strong contestant for this Award.

Please also note that VDOT Commissioner Charlie Kilpatrick, P.E. has endorsed Ning's nomination.

Your favorable consideration on Dr. Li's nomination is greatly appreciated.

Yours respectfully,

Ray

Raymond Khoury, P.E.

State Traffic Engineer

Virginia Department of Transportation