



SAE INTERNATIONAL FELLOW NOMINATION FORM

SAE Fellow Grade of Membership is the highest grade of membership. It recognizes and honors long-term members and volunteers who have made a significant impact on society's mobility technology through leadership, research, and innovation. Election to Fellow is an exceptional professional distinction, administered by the SAE Fellows Committee bestowed on only the most deserving recipients each year.

Nominee's information

Prefix: Name: Nominee Name

Member Number:

Grade:

Years of SAE Membership (if years of membership is less than 10, Appendix A is required):

Title:

Address:

E-mail:

Please select your PRIMARY Sector from the list:

Please select the focus of this nomination:

Nominators Information:

Prefix: Name:

Member Number:

Grade:

Company/Organization/University:

Phone Number:

E-mail:

CITATION

In 50 words, describe the nominee's specific, verifiable accomplishment(s) relating to his/her technical and/or leadership excellence for which you nominated this individual.

XXXXXX provided technical excellence and leadership through pioneering research, development, and innovation in vehicle controls and automation, safety, and driver assistance technologies, and their implementations in tens and millions of vehicles on road.

NOMINATION FORM - Impact Section

Complete this section based on the focus area of this nomination. Nominators who chose technical excellence as the reason for nomination should focus on the technical excellence of their candidate; nominators who chose leadership as the reason for nomination should focus on their candidate's leadership excellence in this section.

XXXXX is currently the Director in Advanced Mechatronics at Vehicle Engineering of Nikola Corporation, responsible for integrating electrical and mechanical systems for Nikola's new energy trucks including battery electric vehicles and full-cell electric vehicles. Prior to his current role, he worked at Ford Motor Company as a technical expert and group leader for 20 years in Global Chassis Core Engineering and in the Research and Advanced Engineering of the following divisions: Global Vehicle Dynamics, Driver Assistance, & Active Safety; Controls Engineering; Autonomous Vehicles and Controls; Controls and Autonomous Systems. XXXX's pioneering contributions are focused on developing and implementing technologies to advance vehicle controls & automation, safety, and performance. His developed technologies has been awarded with more that 150 US patents and numerous international patents. Applications of his contributions can be found in tens of millions of vehicles on road including roll stability control, advanced stability control/curve control, adaptive drive control, post-collision braking, and driver monitoring & modeling. He has published more than 90 technical papers including 12 SAE papers. He was awarded twice with the highest Ford corporate award—the Henry Ford Technology Award for developing and implementing automotive technologies with significant business impact. In the following, I would like to highlight some of his contributions relevant to the Fellow citation.

1. Contributions in Active Safety Technology

Rollover Safety - Roll Stability Control:

Avoiding rollover accidents is of primary importance in automotive safety. While rollovers accouter for only 3% of all crashes, they count for nearly 33% of all death from passenger vehicle crashes (on average, nearly 10000 people die per year in rollover crashes). In 2000, XXXXX joined a team that developed, implemented, and deployed the so-called Roll Stability Control (RSC) which uses vehicle controls to counteract on-road rollovers. He was one of the key developers of RSC system and he developed/implemented more than 8 control algorithm modules for the RSC (US Patent 7027902, 6556908, 7590481, 6799092, 6782315, 7668645, etc.). The RSC system was debuted in 2003 on the Volvo XC90 as the industry-first technology. It has been in production for tens of millions of vehicles on road with brand names including Ford, Lincoln, Mazda, Volvo, and Land Rover since 2003. He was awarded with the Henry Ford Technology Award in 2002 for developing and implementing RSC system.

Curve Driving Safety - Curve Control

Each year there are about 14,000 persons (1/3 of all motor vehicle traffic fatalities) killed in speeding-related crashes. One third of those crashes occurred on curved roads. XXXXX led a team researched and developed the so-called advanced stability control (ASC) from 2003 to 2008. The ASC system enhances the existing Electronic Stability Control (ESC) to deal with over-speed accidents on curved road (such as exit ramps) (US Patent 8296033) together with enhancing ESC on loss of control on slippery road surface. The curve over-speed control was later implemented as Ford's Curve Control debuted on 2010's Ford Explorer.

Secondary Collision Safety - Post-collision Braking:

According to accident studies, about 1/3 of all accidents are involved with multiple collisions where at least one more event follows the initial crash. Fatality increases dramatically for multiple-event crashes. For example, fatality due to two crash events doubled over fatality from one crash event. XXXXX started the research on finding counter measures to prevent multi-collision accidents from happening and invented the so-called post-impact stability control (PISC) and post-impact braking (PIB) technology (US Patent 9604607, 8903618, 8930060, 8712641, 8565993). The PIB was renamed as Post-collision braking and debuted on 2018's Ford Explorer. This technology detects the light collisions and activate the vehicle controls to suppress the unwanted vehicle motions due to the initial impact force applied to the vehicle or redirect the vehicle motion to the safe directions in order to avoid the secondary collision.

2. Contributions in Driver Assistance Technology

Driver Behavior Modeling and Monitoring:

XXXXX has long believed that assisting driver can only be done right if how a driver is driving is understood. He has conducted pioneering work in using real-time driver model to help design better vehicle automation & controls to enhance performance, safety, and ride comfort. He used vehicle responses — as outputs from a closed loop

NOMINATION FORM - impact cont

handling and following maneuvers. His real-time driver behavior monitoring has been applied to applications including: driver workload estimation, driver identification, driver warning, driver behavior adaptation, and vehicle control personalization. He was Ford's primary investigator with several collaborative research efforts including the Co-PI for 2 NSF funded research projects with Georgia Tech (enhancing automotive active safety systems by learning how the expert driver is driving). He was awarded with a Henry Ford Technology Award for implementing his driver behavior modeling for driver workload estimation in 2013. Some of his papers are shown as follows:

- XXXX, D. XXXX and F. XXXX, "Real-time Determination of Driver's Driving Behavior during Car Following," SAE Int. Journal of Passenger Cars - Electronic and Electrical Systems, 2015
- S. XXXX, XXXX, S. XXXX, D. XXXXX, and J. XXXXX, "An Interacting Multiple Model-based Algorithm for Driver Behavior Characterization," IEEE Trans. on Intelligent Transportation Systems, 2016
- C. XXXX, XXXXX, and P. XXXXX, "Nonlinear Driver Parameter Estimation and Driver Steering Behavior Analysis for ADAS Using Field Test Data," IEEE Trans. on Human-Machine Systems, 47(5), pp.686-699, 2017

Vehicle Adaptation:

XXXX co-led the development of adaptive drive control (ADC) which automatically select modes for various control means including chassis and powertrain controls. The ADC adapts subsystem modes to otherwise manually select able individual modes according the detected driver behavior, driver preference, and road condition (US Patents 8600614, 9180890, 9230443, 9333975, 9522586, 9919715). Part of this development has been implemented as an enhancement to Lincoln Drive Control and debuted on 2020's Lincoln Aviator.

Vehicle Automation:

XXXXXXX has contributed significantly to vehicle controls and automation. Many of his research work are being used in enhancing autonomous driving and driver assistance functions. Some of his work can be found below:

- Vehicle Controls (published in Control Handbook: Control System Applications, William S. XXXX, XXXX)
- Autonomous Vehicle Operation Based on Interactive Model Predictive Control (US Patent 10,239,529)
- Off-road autonomous driving (US Patent 10,239,529)
- Autonomous Planning and Control for Intelligent Vehicles in Traffic (published in IEEE Trans. on ITS, 2019)
- Advanced Planning for AV Using Reinforcement Learning and Deep Inverse Reinforcement Learning (published in Robotics and Autonomous Systems, 2019)
- Gated Adversarial Network Based Environmental Enhancement Method for Driving Safety Under Adverse Weather Conditions (published in IEEE Trans. Intelligent Vehicles, 2022)
- Predictive Transmission Shift Schedule for Improving Fuel Economy and Drivability Using Electronic Horizon (published in SAE Int. Journal of Engines, pp. 680-688, 2017).

3. Innovative Vehicle System Technologies

Besides the aforementioned contributions in the specific technologies in vehicle safety and driver assistance technology, he also made contributions in the following areas which lead to numerous patents, findings, implementations, and applications to be implemented:

- Vehicle performance enhancement (US Patent 6654674, 6799092, 7229139, 7647148, 7690737, 9180890, 9256576, 9333828, 9463804, 10292653, 10315481, 10343687)
- Chassis health monitoring (US Patent 6834222, 7729829, 9963143, 9983097, 10417837)
- Connected vehicles (US Patent 8688321, 9047774, 9231998, 9530312, 9109913)
- Vehicle and road condition sensing (US Patent 7590481, 8311706, 6718248, 9454508, 9522586)
- Integrated sensing (US Patent 6631317, 6684140, 7092808, 7373227)
- Real-time robotics and autonomous systems (US Patent 10824155, 10948907, 11099580)
- Real-time system identification (US Patent 7877201, 8219282, 101669800)
- Electrified vehicles (US Patent 8437914, 9096226, 9296391, 10882411, 11077768)

XXXXXX technical expertise and leadership in the areas of vehicle controls and safety technology are well respected and acknowledged by those in industry. He has made significant contribution through technical excellence and leadership. He is the author of 80+ technical papers and inventor of 150+ US patents in vehicle safety, controls and automation, driver assistance technology, performance, and driver modeling. His papers and patents have received about 6935 citations and the H-index of 48 in Google Scholar. Not only inventing and developing technologies, he has implemented many technologies which can be found in tens of millions of vehicles on road.

NOMINATION FORM

SAE ACTIVITIES

Please complete for ALL nominees

List the nominee's SAE participation including administrative committees, boards, councils, elected offices held, technical sessions organized, technical or standards committees served, and/or local section involvement.

For each, list dates of involvement plus give a brief description of nominee's involvement.

Member of the following SAE Technical task forces, activities, and committee:

- Vice Chair for the SAE Automobile Electronics Activity Committee (2022-)
- SAE Automobile Electronics Activity (2011 -)
- SAE Hybrid EV Committee (2022 -)
- SAE Trust Anchors and Authentication Task (2022 -)
- SAE Truck and Bus Modeling and Simulation Task Force (2022 -)

Speakers and Panelists:

- Panelist, Education and Professional Development in Vehicle Dynamics, SAE Commercial Vehicle Engineering Congress (2010)
- Keynote Speaker, "Intelligent Vehicles for Smart Mobility," SAE Intelligent and Connected Vehicles Symposium, Kunshan, China (2018)
- Panelist, "How Can Autonomous Vehicles Help Shared Mobility?" SAE Intelligent and Connected Vehicles Symposium, Kunshan, China (2018)
- Reviewer, SAE technical papers in the area of Chassis, Electrical Controls, Vehicle Dynamics, and Safety
- Co-Chair for SAE sessions in 2015, 2017, 2018 SAE World Congress

SAE presentations:

- [1] XXXX, et. al., "An Advanced Yaw Stability Control System," SAE Technical Paper 2017-01-1558, 2017.
- [2] XXXX, et. al., "Predictive Transmission Shift Schedule for Improving Fuel Economy and Drivability Using Electronic Horizon," SAE International Journal of Engines, 10(3), pp.680-688, 2017.
- [3] XXXX, et. al., "A System for Autonomous Braking of a Vehicle Following Collision," SAE Technical Paper 2017-03-28, 2017.
- [4] S. XXXXXX, XXXX, S. XXXX, "Real-time Crash Detection and Its Application in Incident Reporting and Accident Reconstruction," SAE Technical Paper 2017-01-1419, 2017.
- [5] T.XXXXX and XXXX, "An Indirect Tire Health Monitoring System Using On-board Motion Sensors," SAE Technical Paper 2017-01-1628, 2017.
- [6] D.XXXX and XXXX, "An Indirect Occupancy Detection and Occupant Counting System Using Motion Sensors," SAE Technical Paper 2017-01-1142, 2017.
- [7] XXXX, D.XXXX and S.XXXX, "Real-time Determination of Driver's Handling Behavior," SAE Technical Paper 2015-01-0257, 2015.
- [8] XXXX, D. XXXX and F. XXXX, "Real-time Determination of Driver's Driving Behavior during Car Following," SAE International Journal of Passenger Cars - Electronic and Electrical Systems, 2015.
- [9] XXXX, D. XXXX, and L. XXXX, "Real-time Tire Imbalance Detection Using ABS Wheel Seed Sensors," SAE International Journal of Materials and Manufacturing, June 2011.
- [10] E. XXXX, P. XXXX and XXXX, "Trail-Braking Driver Input Parameterization for General Corner Geometry," SAE Technical Paper 2008-01-2986, 2008.
- [11] XXXX, D. XXXX and A. XXXX, "Roll Rate Based Stability Control - The Roll Stability Control System," ESV-07-0136, Proc. of the 20th Enhanced Safety of Vehicles Conf., 2007.

NOMINATION FORM

WORK EXPERIENCE

Please fill out in its entirety.

1. Company, Organization, or University Nikola Motor Company

From Jan., 2021 -XXXXX

Position XXXXXXXX Advanced Mechatronics/XXXXXX Technical Specialist

2. Company, Organization, or University Ford Motor Company

From XXXXX - Apr. 2020

Position XXXXXXX Engineer

3. Company, Organization, or University Purdue University

From May, 1993 - XXXXX

Position XXXXX Student Research Assistant

4. Company, Organization, or University Arizona State Univ.

From XXXXX - Apr., 1993

Position XXXX Student Research Assistant

5. Company, Organization, or University

From

Position

Example Only
Nomination Form Template
Updated in 2023

NOMINATION FORM

Reference Letters

List four references, three of which must be either an SAE Member or Fellow grade member and also a supervisor letter of support. Please fill out in its entirety.

1. Name: Nominator Name

Membership Number: Nominator Member Number

Membership Grade: Fellow

E-mail: xxxxx@umich.edu

Phone: (xxx) xxx-xxxx

Company, Organization or University: University of Michigan

Position: Prof. and Director

Address: Nominator Address

2. Name: Nominator Name

Membership Number: Nominator Member Number

Membership Grade: Fellow

E-mail: xxxxx@austin.utexas.edu

Phone: xxx-xxx-xxxx

Company, Organization or University: University of Texas at Austin

Position: Prof. and Director

Address: Nominator Address

3. Name:

Nominator Name

Membership Number:

Nominator Member Number

Membership Grade: Fellow

E-mail: xxxx@comcast.net

Phone: XXX-XXX-XXXX

Company, Organization or University: ON Semiconductor

Position: Director

Address: Nominator Address

4. Name:

Nominator Name

Membership Number: Nominator Member Number

Membership Grade: Fellow

E-mail: xxxxx@prasadengg.com

Phone: xxx-xxx-xxxx

Company, Organization or University: Prasad consulting, LLC

Position: President

Address: Nominator Address

Example Only
Nomination Form Template
Updated in 2023

Supervisor Letter:

Name: Supervisor Name

Membership Number: Supervisor Member Number

E-mail: xxxx@abcde.com

Company, Organization or University: Ford Motor Company

Position: Technical Fellow

Address: Supervisor Address

Membership Grade: Nonmember

Phone: xxx-xxx-xxxx

**Example Only
Nomination Form Template
Updated in 2023**

PRASAD CONSULTING, L.L.C.

XXXXXX Drive
XXXXX, Michigan XXXX
Phone: (XXX) XXX-XXXX
e-mail: xxxxx@prasadengg.com

To: The SAE Fellow election Committee

Date: June 1, 2022

Subject: Supporting Letter for the nomination of XXXXXXXX

Dear Committee Members,

I am writing this letter of support for the election of XXXXX as a Fellow Member of the SAE.

I am a Fellow Member of the SAE (ID xxxxxxxxxxxx), Fellow Member of the AIMBE and Member of the National Academy of Engineering. I was a Henry Ford Technical Fellow in Automotive safety at Ford Motor Company from 1995 to my retirement in 2008. During this period, I was the highest-level technical leader in all aspects of safety – crashworthiness and crash avoidance- for Ford worldwide that included Volvo, Jaguar-Land Rover and Aston martin at the time of my retirement. I was in-charge of research, and development and implementation of safety technologies in future vehicles. From a crash avoidance perspective, rollover prevention was judged to be a high priority in the mid-90's as the fleet in US was moving towards SUV's and light trucks. The accident avoidance group in the Company was challenged to go beyond available electronic stability control to Roll Stability Control (RSC). Ford was the first to implement the technology in a MY 2000 Volvo SUV, and followed up with implementation on other high volume SUV's and light trucks as standard fitment. XXXXX made major contribution in the development of the RSC and received the Henry Ford Technology Award, the highest recognition of breakthrough technology in the Corporation. Incidentally, XXXXXX is among the rare engineers/scientists receiving the Henry Ford Technology Award twice. In the period between 1999 and 2008, XXXXX was a consultant to me on further advancement of stability controls like curve speed control, post-crash stability control and others, too many to mention in this letter. They are listed in his resume. The technologies developed by XXXXXX are in high volume production on Ford vehicles and, I am sure, have saved many lives over the years. In my current work as a consultant in safety, I have followed accident data closely to know the life saving effect of Roll Stability Control in Ford vehicles.

XXXXXhas had a sustained level of contribution to advanced technologies over many years and I expect more from him in future. I wholeheartedly and enthusiastically support the election of XXXXXX to the Fellow Membership of the SAE. Please feel free to contact me for any clarification.

Sincerely yours,



Priya XXXXXX, Ph.D.
President,
XXXXXXXXXX, LLC

**Example Only
Nomination Form Template
Updated in 2023**

XXXXXXXXXX Road
Bloomfield Hills
MI XXXXXXXX2018

May 24, 2022

Professor XXXXX

Robert E. Hord Jr. Professor,
Associate Department Head for Graduate Studies
Virginia Tech
(via E-Mail)

Dear Professor XXXXX,

Subject: Nomination of XXXXXXXX as a Fellow, SAE International

This letter of recommendation is to provide my support for the nomination of XXXXXXXX to the membership grade of Fellow, SAE International.

I have known XXXXXXXX for over 10 years now. We met during my earlier career at Ford Motor Company, during which time I held the positions of Vice President, Global Engineering and most recently, Chief Technical Officer and Vice President Research and Advanced Engineering. My initial association with XXXXXXXX was through his work on various automotive active safety related technologies and innovations. These projects, together with his many accomplishments are documented fully in his nomination package. Most notably, XXXXXXXX has been awarded multiple patents for his work in this area (inventor on 150+ patents), published over 80 papers (including 17 SAE papers) and twice been recognized at the highest level in Ford Motor Company through the Henry Ford Technical Award. XXXXXXXX is a truly accomplished and highly recognized engineer in this area, and I feel confident that this work alone is worthy of recognition at the level of SAE Fellow.

However, in addition to the above, XXXXXXXX has been an active member of SAE, working on a number of technical task forces and committees. He has often presented his work at SAE conferences both here in the US and overseas. Also while at Ford, XXXXXXXX was actively involved in the Ford Chinese Association (of which I was the Executive Champion), and through that, he contributed to various community projects, together with mentoring students and young engineers. Since leaving Ford, I have continued to follow XXXXXXXX's career, and am pleased to see that he is now making a similar substantive contribution to the vehicle development work at Nikola, helping develop breakthrough technologies to ensure safe and sustainable commercial transportation.

Given the above, I fully endorse the nomination of XXXXXXXX to the grade of Fellow, SAE International, and offer my support to the nominations committee should any questions arise or further information be required.

Sincerely

/S/

**Paul XXXXXXXX OBE, C.Eng FIMechE
Fellow and 20XX President, SAE
International**



6/1/2022

Dear Members of SAE Fellow Committee,

I am writing this letter of recommendation in strong support of the election of XXXXXX to SAE Fellow.

I have known XXXXX for over 15 years as a leading technical expert at Ford Motor Company. Over the years, XXXX has produced outstanding research and accomplished remarkable achievements in the fields of control theory and automotive engineering. XX XXXX provided technical excellence and leadership through pioneering research, development, and innovation in vehicle controls and automation, safety, and driver assistance technologies, and their implementations in millions of vehicles on road

I will next briefly introduce myself. I am Senior Henry Ford Technical Fellow at Ford Motor Company. I am a member of the National Academy of Engineering and a Fellow of IEEE. I am conducting research in computational intelligence, AI and control, and their applications to vehicle systems, autonomous driving, and automotive engineering. I have published 4 books, over 200 journal articles and conference papers, and hold over 100 US and foreign patents. I am the recipient of the 2008 Norbert Wiener Award of the IEEE SMC Society and the 2015 Pioneer's Award of the IEEE CIS Society. I am a past president of the IEEE Systems, Man & Cybernetics Society (2016-2017).

Below is a brief evaluation of XXXXXX technical contributions.

XXXXX is currently the Director in Advanced Mechatronics at Vehicle Engineering of Nikola Corporation, responsible for integrating electrical and mechanical systems for Nikola's new energy trucks including battery electric vehicles and full-cell electric vehicles. Prior to his current role, he worked at Ford Motor Company as a technical expert and group leader for 20 years in Global Chassis Core Engineering and in the Research and Advanced Engineering of the following divisions: Global Vehicle Dynamics, Driver Assistance, & Active Safety; Controls Engineering; Autonomous Vehicles and Controls; Controls and Autonomous Systems.

XXXXX's pioneering contributions are focused on developing and implementing technologies to advance vehicle controls & automation, safety, and performance. His developed technologies has been awarded with more that 150 US patents and numerous international patents. Applications of his contributions can be found in tens of millions of vehicles on road including roll stability control, advanced stability control/curve control, adaptive drive control, post-collision braking, and driver monitoring & modeling. He has published more than 90 technical papers including 12 SAE papers. He was awarded twice

with the highest Ford corporate award—the Henry Ford Technology Award—for developing and implementing automotive technologies with significant business impact. In the following, I would like to highlight some of his contributions relevant to the Fellow citation.

1. Contributions in Active Safety Technology

- Rollover Safety - Roll Stability Control:

Avoiding rollover accidents is of primary importance in automotive safety. While rollovers account for only 3% of all crashes, they count for nearly 33% of all death from passenger vehicle crashes (on average, nearly 10000 people die per year in rollover crashes). In 2000, XXXX joined a team that developed, implemented, and deployed the so-called Roll Stability Control (RSC) which uses vehicle controls to counteract on-road rollovers. He was one of the key developers of RSC system and he developed/implemented more than 8 control algorithm modules for the RSC (US Patent 7027962, 6556908, 7590481, 6799092, 6782315, 7668645, etc.). The RSC system was debuted in 2003 on the Volvo XC90 as the industry-first technology. It has been in production for tens of millions of vehicles on road with brand names including Ford, Lincoln, Mazda, Volvo, and Land Rover since 2003. He was awarded with the Henry Ford Technology Award in 2002 for developing and implementing RSC system.

Reference:

- XXXX, D. XXXXX, A. XXXXX and D. XXXXX, "An Enhancement to an Electronic Stability Control System to Include a Rollover Control Function," SAE Transactions, 116, pp. 303-313, 2007.

- XXXXX, D. XXXXX and XXXXX, "Roll Rate Based Stability Control - The Roll Stability Control System," ESV-07-0136, Proc. of the 20th Enhanced Safety of Vehicles Conf., 2007.

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handling and following maneuvers. His real-time driver behavior monitoring has been applied to applications including: driver workload estimation, driver identification, driver warning, driver behavior adaptation, and vehicle control personalization. He was Ford's primary investigator with several collaborative research efforts including the Co-PI for 2 NSF funded research projects with Georgia Tech (enhancing automotive active safety systems by learning how the expert driver is driving). He was awarded with a Henry Ford Technology Award for implementing his driver behavior modeling for driver workload estimation in 2013.

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- Vehicle Adaptation:

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Reference:

- US8,600,614, System and method for integrated control of vehicle control systems
- US9,180,890, Smart adaptive cruise control.
- US9,333,975, Method and system to detect and mitigate customer dissatisfaction with performance of automatic mode selection system
- US9,522,586, Enhanced road characterization for adaptive mode drive
- US9,919,715, Vehicle mode scheduling with learned user preferences.

- Vehicle Automation:

XXXX has contributed significantly to vehicle controls and automation. Many of his research work are being used in enhancing autonomous driving and driver assistance functions including vehicle motion management, vehicle controls, etc.

Reference:

- Vehicle Controls (published in Control Handbook: Control System Applications, William S. Levine, 2011)
- Autonomous Vehicle Operation Based on Interactive Model Predictive Control (US Patent 10,239,529)
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3. Innovative Vehicle System Technologies

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SERVICES TO SAE

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[3] XXXX, et. al., "A System for Autonomous Braking of a Vehicle Following Collision," SAE Technical Paper 2017-03-28, 2017.

[4] S. XXXXX, XXXX, S. XXXX, "Real-time Crash Detection and Its Application in Incident Reporting and Accident Reconstruction." SAE Technical Paper 2017-01-1419, 2017.

[5] T. XXXXX and XXXX, "An Indirect Tire Health Monitoring System Using On-board Motion Sensors," SAE Technical Paper 2017-01-1628, 2017.

[6] D. XXXX and XXXXX, "An Indirect Occupancy Detection and Occupant Counting System Using Motion Sensors," SAE Technical Paper 2017-01-1442, 2017.

[7] XXXX, D. XXXX and S. XXXX, "Real-time Determination of Driver's Handling Behavior," SAE Technical Paper 2015-01-0257, 2015.

[8] XXXX, D. XXXXX and F, XXXX, "Real-time Determination of Driver's Driving Behavior during Car Following," SAE International Journal of Passenger Cars - Electronic and Electrical Systems, 2015.

[9] XXXX, D. XXXX, and L. XXXXX, "Real-time Tire Imbalance Detection Using ABS Wheel Speed Sensors," SAE International Journal of Materials and Manufacturing, June 2011.

[10] E. XXXXX, P. XXXXX and XXXXX, "Trajectory-Based Driver Input Parameterization for General Corner Geometry," SAE Technical Paper 2008-01-2986, 2008.

[11] XXXX, D. XXXXX and A. XXXXX, "Roll Rate Based Stability Control - The Roll Stability Control System," ESV 07-0136, Proc. of the 20th Enhanced Safety of Vehicles Conf., 2007.

In summary, I strongly believe that XXXXXX has a proven reputation of an exceptional and internationally recognized pioneer, innovator and leader in the field of control theory and automotive engineering, and I strongly recommend him for election to SAE Fellow.

Regards,



Dimitar XXXX PhD.
Senior Henry Ford Technical Fellow, Control & AI



Email: xxxxx@ford.com

Phones: (xxx) xxx-xxxx (office), (xxx) xxx-xxxx (cell)

**Example Only
Nomination Form Template
Updated in 2023**



May 6, 2022

Dear Members of the SAE Fellows Committee:

It is with great pleasure for me to offer a letter of support for XXXXX, for his nomination as an SAE Fellow. I have known XXXX for about 15 years. We had worked together on two research projects supporting Ph.D. students of my lab, with funding provided by the Ford Motor Company. I am going to focus my discussion on the project that was called “post-impact stability control” (later called Post-impact braking when it is commercialized).

The post-impact stability control (PISC) can be understood as an extension of electronic stability control (ESC), which is an active safety system now required on all light-duty vehicles in the US. ESC has been shown to improve safety significantly, and that is why NHTSA mandate it for all light duty vehicles. The PISC was proposed of a research concept because there are many crashes involving a minor side swipe/angled rear-end, which the human driver or classic ESC cannot handle, resulting in significant yaw motions or lateral motions, that eventually lead to a much more serious second crash, such as road departure, rollover, or head-on collision. PISC is proposed by XXXX and I am fortunate to have the opportunity to recruit a Ph.D. student to get involved. The whole concept should be credited to XXXX.

To design PISC, it is necessary to quickly calculate the strength of the impulse input, which is a critical information for deciding what is the target terminal state, and especially the final (target) yaw angle of zero degree, 180 degree, 360 degree, etc. Multiple of 180 degrees is selected to provide adequate passive safety in case of rear-end crash by the following vehicle. This calculation will involve the measurement of initial yaw rate and lateral velocity after the impulse input. Another technical challenge is to estimate the maximum lateral displacement during the mitigation. Aiming for the “wrong” final yaw orientation could mean spill-over into adjacent lanes or road departure, which can be risky, or requiring such a high control input that the brake system simply cannot provide. Once the final target state is determined, the lateral-yaw phase portrait plot is used to guide the control of the yaw motion through differential braking (more efficient) or steering (less efficient).

XXXX immense knowledge on vehicle dynamics and vehicle active safety systems prove to be the key of the success of this new safety concept. We have emulated common minor impacts, including a police-initiated PIT maneuver, to understand the effectiveness of the proposed concept. Selected experiments were also executed, with water canon to emulate a sudden impact creating large yaw rate. The Ph.D. student was able to design the concept under XXXXX guidance and later in 2017 (several years after the Ph.D. student graduated) this concept was implemented in a production vehicle (MY 2018 Ford Explorer). This new concept will not be implemented without the persistent effort by XXXX to continue the refinement of the technology and to convince the Ford leadership it is a worthwhile extension of ESC, and the process took about 10 years.



While this is just one of many projects XXXX worked on, I think it is an excellent example of the innovation and impact of his research. XXXX had played an important role advancing several active safety concepts at Ford, which is nicely summarized in the nomination form. I consider myself lucky to have worked with XXXX and witnessed the innovation needed for active safety. I enthusiastically support his nomination as an SAE Fellow. Please contact me if you have any questions.

Sincerely,



Huei XXXXX, SAE Fellow (xxxxxxx)



xxxxx@umich.edu

Example Only
Nomination Form
Updated in 2023
mplate



The University of Texas at Austin

Walker Department of Mechanical Engineering | Cockrell School of Engineering

Mobility Systems Laboratory |

May 21, 2022

RE: Reference Letter for XXXXX's SAE Fellow Nomination

Dear SAE Fellow Committee:

I have known XXXX since 2010 when I started to work on Ford funded university research projects. I have visited Ford and interacted with XXXX many times through research collaborations. We also worked together on the technical committee of the Intelligent Vehicular Systems and Control, in IEEE Society of Systems, Man, and Cybernetics and other professional activities.

XXXX major contributions to vehicle controls, safety and performance are exemplified by many of his high-impact innovations which have been implemented in Ford production vehicles. His efforts have won him twice the Ford's highest technical achievement awards. He was also awarded with many of Ford's technology innovation awards. He is an inventor or co-inventor of more than 150 U.S. patents, a strong indication of his remarkable technical contribution to the ground mobility and transportation sector.

XXXXX has not only devoted to developing technologies which are practical to production vehicles, but also promoted forward-thinking research. His work had direct impacts on the bottom line of the auto industry and the new directions which are shaping the future automotive systems. He was one of the Ford researchers who led and funded the most collaborative research projects with renowned universities and he had indirectly supervised with several Ph.D. students through those collaborative researches. He published more than 90 research articles focusing on addressing many fundamental questions related to advance human mobility that are not limited to robotics and AI, autonomy solutions, vehicle state sensing, vehicle dynamics and control, and machine learning on automotive applications. He is an author or co-author of a dozen SAE papers.

Out of his many technical contributions, I am particularly impressed by XXXX application of automotive controls to enhance vehicle safety and using driver behavior modeling to advance the ADAS (advanced driver assistance system) function. He has published quite a few high-quality research papers, for example, "An Interesting Multiple Model-based Algorithm for Driver Behavior Characterization" (in the IEEE Trans. on Intelligent Transportation Systems, 2016), "Nonlinear Driver Parameter Estimation and Driver Steering Behavior Analysis for ADAS Using Field Test Data" (in the IEEE Trans. on Human-Machine Systems, 2017). Such work represent a new research direction that can potentially further enhance vehicle driving safety in real-world operations.

XXXXX has an outstanding track record in inventing technologies for automotive systems. Many of such innovations has been widely implemented on vehicles in the market, such as roll stability controls, advanced stability control, adaptive curve control, post-impact braking, etc. I believe that XXXX, as a world leader in automotive system control, has made significant contributions in vehicle controls, performance and safety. I strongly support his SAE Fellow nomination without any reservation.

Sincerely,

Junmin XXXX, Ph.D.

SAE Fellow | ASME Fellow

Lee Norris & Linda Steen Norris Endowed Professor

Director, Mobility Systems Laboratory

Walker Department of Mechanical Engineering

University of Texas at XXXXX



SAE INTERNATIONAL FELLOW NOMINATION FORM

SAE Fellow Grade of Membership is the highest grade of membership. It recognizes and honors long-term members and volunteers who have made a significant impact on society's mobility technology through leadership, research, and innovation. Election to Fellow is an exceptional professional distinction, administered by the SAE Fellows Committee bestowed on only the most deserving recipients each year.

Nominee's information

Name: Dr. Mr Mrs Nominee Name

Member Number: Nominee Member Number

Grade: Member

Years of SAE Membership (if years of membership is less than 10, Appendix A is required): 9 years

Title: Technical Fellow

Address: Nominee Address

E-mail: xxxx@collins.com

Please select your PRIMARY Sector from the list: Aerospace

Please select the focus of this nomination: Leadership excellence

Nominators Information:

Name: Dr. Mr Mrs Nominator Name

Member Number: Nominator Member Number

Grade: Fellow

Company/Organization/University: Retired, SVP Engineering & Technology Meggitt PLC

Phone Number: XXX-XXX-XXXX

E-mail: xxxx@yahoo.com

CITATION

In 50 words, describe the nominee's specific, verifiable accomplishment(s) relating to his/her technical and/or leadership excellence for which you nominated this individual.

In recognition of her career achievements, extraordinary contributions, and distinguished leadership in the field of Prognostics and Health Management for aircraft, impacting the landscape of PHM in the aerospace industry through her service to SAE and PHM Society, and achieving regulatory acceptance of PHM.

**Example Only
Nomination Form Template
Updated in 2023**

NOMINATION FORM - Impact Section

Complete this section based on the focus area of this nomination. Nominators who chose technical excellence as the reason for nomination should focus on the technical excellence of their candidate; nominators who chose leadership as the reason for nomination should focus on their candidate's leadership excellence in this section.

XXXXXX has demonstrated technical leadership excellence in advancing Prognostics and Health Management (PHM) technologies across the aerospace industry. Her commitment and contributions have led to widespread adoption of PHM by manufacturers, suppliers, and operators and to acceptance by regulators as an alternative means of compliance to scheduled maintenance. Her career achievements have influenced the strategic direction of her employers and the industry. Her external leadership activities in professional organizations have impacted the industry by accelerating the adoption of PHM for systems beyond aircraft engines. Through mentoring, she has impacted the lives of young girls, female engineering students, and early-to-mid career female engineers, personally and professionally.

XXXXXX earned her BS degree in Aeronautical and Astronautical Engineering (AAE) from Purdue University and her MBA from Pepperdine University. In 2020, Purdue recognized her as an Outstanding Aerospace Engineer for her contributions to development of standards and best practices for PHM and for her leadership in SAE and the PHM Society.

Employer Impact:

XXXXXX impact to her employer's strategic direction was evident at each company she worked for. She started her career at the McDonnell Douglas Aircraft Company as an Engine Performance Engineer. She received company recognition for developing a method to assess the impact of off-nominal systems operations on MD-11 engine performance and for developing a flight test data reduction program for the C-17. The significance of her work on the C-17 program was she developed the algorithms and methodology for the flight test data to prove that "thrust equaled drag", an achievement that had never been reached before at the company. In 1995, she joined Northwest Airlines as an Engine Condition Monitoring Engineer, where she established the Flight Operations Quality Assurance (FOQA) program still in use at Delta Airlines today. The FOQA program enabled Delta Airlines to identify undesirable trends in how aircraft were being flown, thus resulting in safer operations.

In 2003, she joined the United Technologies Corporation, now Raytheon Technologies (RTX). For the B787 proposal, she envisioned that PHM could be applied to other aircraft systems and components besides the engines and APU. On her own initiative, she assembled a team of engineers from across RTX to define the PHM data requirements for the onboard aircraft systems, which were implemented and used for the basis of the B787 Airplane Health Management service. In 2010, she convinced senior leadership at RTX to fund the development of the company's first PHM solution: Aircraft System Health Management (ASHM). Through her leadership and technical guidance, ASHM grew from her conceptual drawings to a production tool with predictive analytics and customizable dashboards, used by more than 100 airlines and 1000 users, covering 4 aircraft types (Boeing and Airbus) and more than 7000 aircraft. In 2018, she was promoted to her current role as a Technical Fellow, where she supports development of the next generation PHM solution (Ascentia) and Department of Defense proposals for PHM and predictive maintenance. During her 17 years with RTX, Rhonda has leveraged her experience as an engineer at an airplane manufacturer, an airline, and a supplier to define the future strategy of Collins Connected Aircraft and Intelligent Products initiatives.

While working for RTX, XXXXX was granted four PHM-related patents and has one patent application in process.

- US Patent 7904229 – Method for Determination of Engine Lubrication Oil Consumption, 2011
- US Patent 10,089,294 – System Level Fault Diagnosis for the Air Management Systems of an Aircraft, 2015
- US Patent 10,288,548 – Wavelet-Based Analysis for Fouling Diagnosis of an Aircraft Heat Exchanger, 2015
- US Patent 10,895,523 – Optimal Sensor Selection and Fusion for Heat Exchanger Fouling Diagnosis in Aerospace Systems, 2015
- US Patent Application 131021US01 – Aircraft Selection for Dispatch Optimizer, 2021

The impact of XXXXX technical leadership is evident in her support of SAE International and the PHM Society, in which she has held numerous leadership positions and has chartered new committees focusing on emerging technologies.

NOMINATION FORM - impact cont

In 2004, XXXXX joined the SAE E-32 Committee for Propulsion System Health Management. From her first meeting, she actively participated in the development of committee documents and became the first female chair of that committee in 2008. Recognizing the need to develop standards and best practices for PHM for non-propulsion systems, in 2010 she helped to form the Integrated Vehicle Health Management (IVHM) Steering Group and the HM-1 Committee. She later served as the first female Chair of both committees. In 2017, she was a founding member of the Digital & Data Steering Group (DDSG). While a member of the DDSG, she identified a need for a committee that focused on electronic transactions in aerospace. She approached SAE with her proposal and in 2018, she founded the G-31 Committee and served as its first Chair. The extent of her additional technical leadership contributions to SAE are listed in the next section.

XXXXX is currently a member of the SAE International Board of Directors and Audit & Risk Committee. XXXXX is actively engaged in helping SAE leadership strategically wade through difficult economic times as a result of the COVID pandemic. She is passionate about SAE's mission and is committed to helping SAE to reach their goals. XXXXX is the first and only female Fellow of the PHM Society. She is a member of the Board of Directors and served as the Vice President for five years. She has served as a conference chair, a technical session chair, and a technology demonstration chair in addition to her executive leadership position.

In 2020, XXXXX was invited to join the Maintenance Programs Industry Group where she is collaborating with airlines, aircraft manufacturers, and regulators to revise the minimum scheduled maintenance requirements to include analyzing data from PHM systems as an alternative means of compliance for continued airworthiness. She considers this role to be a pinnacle position in her career as she will influence the integration of PHM into all future commercial and military aircraft, rotorcraft, and existing modern aircraft, such as the B787 and A350. Her involvement on the MPIG was a direct result of her leadership on SAE technical standards committees.

In addition to demonstrating her excellence in technical leadership, XXXXX has contributed significantly to numerous publications as an author, editor, and sponsor. Her most recent work, "Flight Paths to Success: Career Insights from Women Leaders in Aerospace," has been one of the top-selling books for SAE in 2021. She has received numerous invitations to be a speaker at conferences, including the PHM Society, SAE Aerotech, SAE India AeroCon, Women in Aviation International, MROs America, Charlotte Women's Forum, and the Pacific Northwest Aerospace Alliance. She has been a guest lecturer at universities and has been featured in several SAE webcasts, webinars, and podcasts.

Next Generation of Engineers Impact:

XXXXX believes in empowering women to achieve their full potential through mentoring and inspiring the next generation of female engineers. For the last two years, she has led the "Introduce a Girl to Engineering" event for Collins' in Charlotte and has helped with Project Scientist. In 2020, XXXXX participated as a RTX judge for Invention Convention. She is a member of the Industrial Advisory Council for the Purdue AAE School, where she mentors female students each year, provides guidance on senior capstone projects, and provides advice to faculty regarding the curriculum to best prepare students to have successful careers. She is a member of the Society of Women Engineers and a 2021 nominee for the SWE Prism Award (winners have not been announced.) At Collins, she is leading a subcommittee under Leading Inspired Women in Technology (LIFT) Council to develop and retain mid-career female engineers on track to becoming a Technical Fellow. The goal of the subcommittee is to increase the pipeline of female engineers on the Fellows track by engaging them in industry organizations and standards committees.

XXXXX is a long-time member of Toastmasters International. She is a strong believer of the importance of self-confidence through building communication and leadership skills. She has held top District leadership roles in two districts, chartered numerous new clubs (including two at work), and mentored hundreds of members. She has received multiple excellence awards from Toastmasters International for her achievements.

Summary:

XXXXX technical leadership has impacted the strategic direction of her employers through her successful efforts to advance PHM initiatives. Her technical leadership has impacted the aerospace industry through her commitment to develop standards for PHM and achieve regulatory acceptance. She continues to demonstrate her passion to inspire the next generation of engineers through mentoring and supporting SAE's mission.

NOMINATION FORM

SAE ACTIVITIES

Please complete for ALL nominees

List the nominee's SAE participation including administrative committees, boards, councils, elected offices held, technical sessions organized, technical or standards committees served, and/or local section involvement.

For each, list dates of involvement plus give a brief description of nominee's involvement.

Committee Leadership:

International Leadership: SAEI Board of Directors, member at large (2019- 2022)

SAEI Board of Directors Audit & Risk Committee (2019-2022)

Reliability, Maintainability, and Health Management Systems Group

- Founding Member (since 2017), Chair (2017-2019)

G31 Electronic Transactions for Aerospace Committee

- Founding Member (2018), Chair (2018-2020)

Integrated Vehicle Health Management (IVHM) Steering Group

- Founding Member (since 2010), Vice Chair (2013-2015), Chair (2015-2017)

Digital and Data Steering Group

- Founding Member (since 2017)

E32 Aerospace Propulsion Systems Health Management Committee

- Member (since 2004), Vice Chair (2006-2008), Chair (2008-2011)

HM1 Health Management Committee

- Founding Member (since 2010), Current Chair (since 2020)

Aerospace Council Alternative for United Technologies/Raytheon Technologies (since 2017)

Fellows Selection Committee (2015-2017), Chair (2016)

Rodica Baranescu Awards Selection Committee (2020)

Steven Atkins Awards Selection Committee (2011-2016)

Conference Leadership:

AeroTech Strategic Leadership Council (2019, 2020, 2021) - provide guidance for sponsorship, technical content, exhibits, speakers, student events

AeroTech

- Technical Session Organizer (2011, 2013, 2015, 2017, 2019)

- Paper Presenter/Author (2011, 2013, 2015, 2017, 2019)

AeroTech Digital Summit

- Technical Session organizer (2020, 2021)

- Supporting Women in Engineering & Emerging Technologies Panelist (2020) - Technical Paper Presenter/Author (2021)

Aerospace Systems Technology Conference

- Technical Session Organizer (2012, 2014, 2016, 2018)

SAE India AeroCOP Panelist (2020)

SAE India International Workshop Panelist (2014)

WCX Big Data & the Future of Diagnostics & Prognostics Panelist (2018)

Awards & Recognition:

Contributor of the Year Nominee (2019)

Rodica Baranescu Award for Technical & Leadership Excellence (2018)

James M. Crawford Award Technical Standards Board Outstanding Achievement Award (2016)

Significant Publications:

SAE Book "Flight Paths to Success: Career Insights from Women Leaders in Aerospace" (2021)

SAE Edge Research Report "Unsettled Topics Concerning Adopting Blockchain in Aerospace" (2020)

SAE Edge Research Report "Unsettled Topics on the Use of IVHM in the Active Control Loop" (2020)

SAE Book Chapter "Lessons Learned in APU health Management", IVHM Implementation & Lessons Learned (2015)

SAE Book Chapter "The Invaluable Value of Data", IVHM Business Case Theory & Practice (2013)

NOMINATION FORM

WORK EXPERIENCE

Please fill out in its entirety.

1. Company, Organization, or University Collins Aerospace

From 2003 to XXXXX

Position Technical Fellow

2. Company, Organization, or University Northwest Airlines

From XXXX to 2003

Position Project Engineer / XXXXXXXX

3. Company, Organization, or University McDonnell Douglas Aircraft Company

From 1987 - XXXX

Position XXXXXXX Engineer

4. Company, Organization, or University Pepperdine University

From XXXX - 1991

Position XXXXXXXXXX student

5. Company, Organization, or University Purdue University

From 1982-XXXX

Position XXXXXXXXXXXX student

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NOMINATION FORM

Reference Letters

List four references, three of which must be either an SAE Member or Fellow grade member and also a supervisor letter of support. Please fill out in its entirety.

1. Name: Reference Name

Membership Number: Reference member number

Membership Grade: Fellow



E-mail: xxxxx@rolls-royce.com

Phone: +xxx-xxx-xxxx

Company, Organization or University: Rolls-Royce Corporation

Position: Associate Fellow, Systems Engineering

Address: Reference Address

2. Name: Reference Name

Membership Number: Reference Member Number

Membership Grade: Fellow



E-mail: xxxx@cranfield.ac.uk

Phone: xxx-xxx-xxxx

Company, Organization or University: Cranfield University

Position: Professor

Address: Reference Address

3. Name: Reference Name

Membership Number: Reference Member Number

Membership Grade: Fellow

E-mail: xxxxx@dr2-consulting.com

Phone: xxx-xxx-xxxx

Company, Organization or University: DR2 Consulting

Position: Principal Consultant

Address: Reference Address

4. Name: Reference Name

Membership Number: Reference Member Number

Membership Grade: Member

E-mail: xxxx@delta.com

Phone: xxx-xxx-xxxx

Company, Organization or University:

Position: Sr. Principal Engineer, Delta Tech Ops

Address: Reference Address

Supervisor Letter:

Name: Supervisor Name

Membership Number: Supervisor Membership Number

Membership Grade: Nonmember



E-mail: xxxx@collins.com

Phone: xxx-xxx-xxxx

Company, Organization or University: Collins Aerospace

Position: Senior Director, Applied Research & Technology

Address: Supervisor Address

Example Only
Nomination Form Template
Updated in 2023



Professor Ian XXXX
Integrated Vehicle Health
Management Centre

E: xxxxxxx@cranfield.ac.uk
T: +xxxxxxxxxxxxxx
www.cranfield.ac.uk

10th June 2021

Dear Committee members,

Recommendation to make XXXXXXXX an SAE Fellow

It gives me great pleasure to support the nomination of XXXXXXXX, Technical Fellow, Collins Aerospace, to become an SAE Fellow. Having known XXXXXX for over 10 years, her commitment to SAE, her professional knowledge of the PHM field, and her drive and leadership, all combine into a leader who is a dynamic and engaging individual.

I first met XXXXX when she chaired the E32 (Propulsion Health Management) group and got to know her much better when she helped form the IVHM Steering Group (SG) and HM-1 committee in 2010. XXXXX was the second chair of the IVHM SG (2014-2017) and influenced its direction and purpose through this time. She was very active with all these groups and has contributed, both as document champion and as author, to a large number of the documents that were produced. Her involvement with the founding of the Digital Data Steering group (2017) and forming and chairing the G-31 (electronic transactions) group, are further examples of her keeping aligned with trending topics, and reacting for SAE's and the members' benefit. During this time she also became a member of SAE International's Board of Directors. In all of her work with SAE she has shown leadership, in terms of direction and being able to bring people together to solve difficult problems, while doing so in a non-confrontational style that readily gets people aligned with her ideas and direction.

XXXXX, and her industrial colleagues, have conducted research on two of the most important sub-systems that drive aircraft maintenance - the APU (Auxiliary Power Unit) and the ECS (Environmental Control System). In both cases they have addressed the major fault modes, devising algorithms for their detection. With her position inside a major aerospace company (Collins) I'm sure these algorithms have been used to produce business benefit. Alongside these research activities XXXXX has written two chapters for books in the SAE IVHM series. These chapters have been written on the use of data, and experiences with APU monitoring. They both show a knowledge and command of the subject matter that is only possible by someone who understands the research but equally knows about the business climate, identifying where critical steps forward can be taken. This view is complemented by serving as Vice President of the PHM Society, a group she has supported for many years. She has had a number of positions with the PHM Society: Vice President for 5 years and conference chair, along with roles of technical session chair, reviewer and paper contributor.

Lastly, but certainly not least, XXXXX is a passionate advocate of women achieving their full potential in engineering. As with the examples above, she is leading from the front and will surely make a big impact in this important area.

For all the reasons mentioned above I have no hesitation in recommending XXXXX for the position of SAE Fellow.

Yours sincerely



Ian
Technical Director, XXXXXX

Example Only
Nomination Form Template
Updated in 2023

XXXXXX Street

Indianapolis

IN 46202

8 June 2021

To the SAE Fellows Selection Committee

Re: Nomination of XXXXXXXX

Dear Committee Members,

I would like to support the nomination of XXXXXXXX to become an SAE Fellow. XXXXX is a dedicated champion of SAE activities in the area of Prognostics and Health Management. She has been able to become an industry leader in the domain due to her unique **work** experience and set of credentials having worked for an aircraft manufacturer, an airline, and now a supplier to the aerospace industry in a career spanning more than 35 years. Her leadership (including being Chair of several SAE Technical Committees) has been instrumental in developing standards for Prognostics and Health Management and in gaining acceptance of these standards by Industry and by the Regulatory Authorities.

XXXX is also a member at large of the SAE Board of Directors, reflecting her dedication of significant time and effort to support of SAE.

I recommend that XXXXX be appointed an SAE Fellow.

Yours sincerely,



Andrew xxxxxxxxxxxxxxxx
Associate Fellow - Systems Engineering, Rolls-Royce Corporation
SAE Fellow - Membership ID xxxxxxxxxx
Fellow of the Institute of Materials, Minerals and Mining
International Council on Systems Engineering (INCOSSE) XXXXXX

Contact Phone: +xxxx xxxxx

email: xxxxxxx@rolls-royce.com

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Nomination Form Template
Updated in 2023



www.collinsaerospace.com



Ray XXXXXX
Sr Director
Applied Research & Technology

June 15, 2021

SAE Fellow Selection Committee
RE: Letter of recommendation for XXXXXXXX

Dear Fellows Committee:

As a Senior Director within the Applied Research & Technology organization of Collins Aerospace, it is my privilege to recommend XXXXXXXX for recognition as an SAE Fellow. XXXXXXXX is currently on my staff as a Technical Fellow at Collins Aerospace, a role reserved for the top 1% of engineers who have demonstrated technical excellence and contributed significant impact to our business. She has also made a significant impact on the aerospace and defense industry through her technical leadership, publishing, innovation, and volunteering – the key traits of SAE Fellows.

I have known XXXXXXXX for more than five years beginning with our mutual participation on the Purdue School of Aeronautics and Astronautics Industrial Advisory Council. At the time, XXXXXXXX represented UTC Aerospace Systems while I worked for Rockwell Collins. In this capacity, XXXXXXXX actively contributes her insights to improve the mission of the School. As a testament to her engagement and achievements, XXXXXXXX received the Purdue University Outstanding Aerospace Engineer Award in 2020. After the merger of Rockwell Collins and UTC Aerospace Systems, XXXXXXXX and I have worked together in the field of Prognostics and Health Management (PHM) at Collins Aerospace.

Early in her career, XXXXXXXX was employed as an engineer at Northwest Airlines working in engine condition monitoring and flight operations quality assurance. This formed the foundation for her in PHM. After joining UTC, she expanded her contributions to the PHM community by engaging in SAE technical standards committees, writing technical standards and best practices, and reaching out to regulatory authorities to gain industry-wide acceptance of integrated aircraft health management. In 2008, she was nominated for *Engineer of the Year* and was the lead for the *Engineering Team of the Year*.

Over the last decade, she managed a team of software engineers and data scientists to develop the Collins' Aircraft Systems Health Management (ASHM) application that enabled near real-time analysis of aircraft data. ASHM was Collins' first generation PHM service offering. XXXXXXXX led the customer engagement efforts which resulted in more than 200 airlines sharing data with Collins from over 3000 aircraft. Her collaborative approach to developing engineering solutions and fostering strong customer relationships drove the advancement of PHM technologies at Collins. Her profound understanding of airline maintenance operations and her anticipation of future customer requirements and regulatory changes helped to drive an adaptable architecture for the advancement of PHM technologies at Collins, allowing for a continuous expansion to the next generation PHM service solution, Ascentia. She holds four PHM-related patents and numerous publications.

While her work was been instrumental in driving PHM forward at Collins, she has also been driving change in the industry through her work on the Maintenance Programs Industry Group (MPIG). The MPIG is responsible for publishing the Maintenance Steering Group 3 (MSG-3) analysis which provides minimum requirements for aircraft scheduled maintenance and inspection requirements. Her direct involvement on the MPIG is to introduce integrated aircraft health management as an alternative means of compliance to the scheduled maintenance tasks. Once approved, operators and airframe manufacturers will be able to modify their maintenance programs to use PHM data analysis to determine when maintenance should be performed. This will fundamentally change the way maintenance is performed on today's modern commercial transport aircraft and all aircraft of the future.

Example Only
Nominations From Template
Updated in 2023

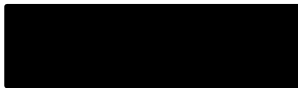


XXXX leadership is recognized throughout the industry. She currently sits on the Board of Directors of SAE International and the PHM Society. She has held numerous leadership roles on SAE technical standards committees, and she is the first female Fellow of the PHM Society. XXXXX received the SAE Rodica Baranescu Award for Technical Excellence & Leadership, and the SAE James M. Crawford Technical Standards Board Outstanding Achievement Award.

XXXXX is passionate about developing and supporting the next generation of engineers. She is currently mentoring four early career minority engineers at Collins and female students at Purdue University. She is spearheading an initiative through Leading Inspired Females in Technology (LIFT) to engage early career female engineers in industry standards committees. For the last two years, she has led the Introduce a Girl to Engineering event for our Charlotte, North Carolina, site, aimed at motivating 5th and 6th grade girls to study STEM. She has participated in Project Scientist and Invention Convention as well as a myriad of other forums to inspire the next generation of engineers. Recently, she co-edited an SAE book, "Flight Paths to Success: Career Insights from Women Leaders in Aerospace."

Through my professional experience with XXXX and as her supervisor, she has always demonstrated outstanding leadership resulting in a positive impact to both Collins and the PHM industry at large. Her passion for and contributions to the aviation industry give me great confidence that she is worthy of recognition as an SAE Fellow.

Sincerely,



Ray XXXXXX
Sr. Director Applied Research & Technology

Example Only
Nomination Form Template
Updated in 2023



David XXXXXXXX
Sr. Principal Engineer

Delta Air Lines, Inc.
XXXXXXXXXX
Atlanta, GA 30354
T. +XXXXXXXXXX
M. +XXXXXXXXXX
XXXXXXXX@delta.com

SAE
400 Commonwealth Drive
Warrendale, PA 15096

Subject: XXXXXX Nomination for SAE Fellow

It is my pleasure and an honor to support the nomination of XXXXXXXX of Collins Aerospace for the SAE Fellows. I have known XXXXX for over 5 years while working on several SAE Committees. The HM-1 and G-31 Committees and IVHM Steering Group in particular have been very active and her leadership and technical guidance have been invaluable.

She possess many unique skills worthy of consideration for SAE Fellow. Technically, she is top-notch, holding many Health Monitoring patents and being a Technical Fellow for Collins. She has great leadership skills which has enabled several SAE Committees to thrive, including her most recent post of Chair of HM-1. XXXXX also is able to reach into the academic realm by serving on Industry Advisory Council at Purdue University, and mentor young women in Engineering at Collins and at Purdue. Further showing her commitment to mentoring and outreach, she recently decided to lead an effort to highlight successful women serving in technical roles across the aerospace industry titled "Flight Paths to Success: Career Insights from Women Leaders in Aerospace".

Her leadership has enabled the cross-committee collaboration and discussions with regulators which are required for the next steps in IVHM. Delta appreciates these efforts as we look to accelerate progress in this area.

As a SAE Member and participant on five SAE technical committees (K, CACRC, HM-1, IVHM-SG, and AISC-SHM), I have interacted with XXXXX quite a bit. As Vice-chair of the AISC-SHM, I have looked to her for guidance on leading committees, motivating people, and encouraging world-wide collaboration.

I highly endorse XXXXXXXX for SAE Fellow.

Sincerely,

[Redacted Signature]

David XXXXXXXX
Senior Principal Engineer
Delta TechOps
SAE Member #XXXXXXXXXX

Example Only
Nomination Form Template
Updated in 2023

June 15, 2021

To

The Fellows Selection Committee
SAE International
Warrendale, PA 15096

Re: Letter of Reference for XXXXXXXX

It gives me great pleasure to support the nomination of XXXXXXXX to be elected Fellow of SAE International.

My professional career in aerospace has spanned more than three decades which gives me a good perspective on what leadership consists of. I have held various technical leadership roles in many organizations, starting with GE, then UTRC, P&W, and Meggitt, and I am now working as an independent consultant in the field. I have been associated with SAE International for many years in various capacities, as an active member of several technical committees, chair of the IVHM SG, as the Editor-in-Chief of the Journal of Aerospace, and I currently serve as a board member on the Executive Standards Committee. I am an elected Fellow of SAE as well (member no: XXXXXXXX).

XXXXXX is an acknowledged leader in the aerospace industry, who has had a significant influence on PHM solutions at Collins Aerospace and in the larger PHM community. She is the visionary leader behind the Aircraft System Health Management (ASHM) offering, which was one of the first commercial PHM solutions in aviation. Through her leadership and technical guidance, ASHM grew from conceptual drawings to a production tool, used by more than 100 airlines worldwide. She drew on her experience from working in the Systems Operation Control Center at Northwest Airlines to develop a tool that would provide airline customers with the information they needed to make operational and maintenance decisions about the current and future state of their fleet. Outside of work, through her activities in SAE International and in the PHM Society – she serves or has recently served on both their boards of directors – XXXXX has been actively engaged in the development of PHM standards and the dissemination of information through conferences and publications.

I am especially keen on highlighting the leadership XXXXX has shown in bridging the gap between the theory of PHM and its application in the maintenance of aircraft systems. Without making sure that this connection is well understood and well governed, it will be next to impossible to realize the gains that health management can bring to the industry. Towards this end, XXXXX has joined the MPIG, which is the premier consortium developing definitive maintenance guidance for the aviation industry in the US and abroad. By her leadership she is bringing the two communities (PHM and MPIG) together so that the solutions we come up with in the technical sphere gets easily applied in the field. This is enormously important and having XXXXX lead this effort is key because of the experience and expertise she brings to the table.

I will not discuss the many SAE leadership roles she has taken on, because that is all very well known to you, but I would like to point out that she did a tremendous job as the founding chair of the G-31 committee and

ensured that it got the right start in the right direction. Thanks to her, it seems well on its way, developing standards for the digitalization of the aerospace ecosystem.

Finally, I would like to point out that she is demonstrating true leadership in working with women in the aerospace industry, mentoring young ones, promoting their careers, even highlighting some of their life stories in a book published by SAE International Press.

In summary, I believe XXXX is well deserving of this honor and I fully endorse her nomination to be recognized as an SAE Fellow. Please do not hesitate to contact me for any further assistance in this matter.

Regards



Ravi XXXXXXX PhD, FSAE, FIMechE

Editor-in-Chief, SAE International Journal of Aerospace
XXXX, IVHM Steering Group, SAE International
XXXXX, Executive Standards Committee, SAE International Principal
Consultant, drR2 consulting
t: +xxxxxxxxx
e: xxxxx@drR2-consulting.com

Example Only
Nomination Form Template
Updated in 2023



SAE INTERNATIONAL FELLOW NOMINATION FORM

SAE Fellow Grade of Membership is the highest grade of membership. It recognizes and honors long-term members and volunteers who have made a significant impact on society's mobility technology through leadership, research, and innovation. Election to Fellow is an exceptional professional distinction, administered by the SAE Fellows Committee bestowed on only the most deserving recipients each year.

Nominee's information

Prefix: Ms. Name: Nominee Name

Member Number: Nominee Member Number

Grade: Member

Years of SAE Membership (if years of membership is less than 10, Appendix A is required):

Title: Executive Director- Electronics, Cummins Inc.

Address: Nominee Address

E-mail: xxxxx@yahoo.com

Please select your PRIMARY Sector from the list: Off Highway

Please select the focus of this nomination Leadership excellence

Nominators Information:

Prefix: Dr. Name: Nominator Name

Member Number: Nominator Member Number

Grade: Fellow

Company/Organization/University: Cummins Inc.

Phone Number: xxx-xxx-xxxx

E-mail: xxxxxxx@cummins.com

CITATION

In 50 words, describe the nominee's specific, verifiable accomplishment(s) relating to his/her technical and/or leadership excellence for which you nominated this individual.

For repeated success in growing diverse, inclusive, winning technical teams in the areas of advanced controls and electronics while acting as an inspirational role model of technical excellence, innovation, and inclusion.

NOMINATION FORM - Impact Section

Complete this section based on the focus area of this nomination. Nominators who chose technical excellence as the reason for nomination should focus on the technical excellence of their candidate; nominators who chose leadership as the reason for nomination should focus on their candidate's leadership excellence in this section.

XXXX has demonstrated great passion for both technical development and leadership of technical personnel over her career at Cummins. Her leadership in crafting the global strategic and tactical technical roadmaps in core and emerging business units at Cummins, governmental agencies, and non-industry related organizations has been recognized industry wide. XXXX continues to work at the cutting edge of global technology development at Cummins while focusing on key societal issues in the workplace like inclusion and diversity.

XXXX has shown deep belief in the values, mission and purpose of SAE. In her time on the SAE Board she has contributed to expanding the DE&I vision of SAE working with the executive team. She published a book showcasing the career paths of 26 women leaders in the Commercial Vehicle industry as a way of encouraging women to enter or continue in engineering by seeing examples of other women in the field to whom they can relate. This book and it's featured leaders bring together key members of SAE as well as senior members including a past president and a board member of Society of Women Engineers to link these networks through influential members of both organizations across both SAE Committees and AWIM work. Through XXXX engagement with Girls Inc. she connected to SAE and initiated running of a summer camp using a new AWIM curriculum on electric vehicles for a group of middle-school aged girls in a disadvantaged neighborhood of Indianapolis. XXXX and has joined the SAE Foundation as a Trustee and is active on the nominating committee and CV subcommittees. XXXX would be an asset to the SAE Fellow community for both recognition of her leadership accomplishments as well as being an impactful role model in this community for the current and future membership base.

XXXX contributions and impact over her career are focused mainly on the following:

1. Strategic Vision. XXXX has shown a strong ability to accurately discern industry trends, technological maturities, technological and business opportunities. This capability flows throughout her resume accomplishments and has been enhanced by domestic and global industry experience.
2. Leadership Experience. XXXX leads a global technical organization of 400+ technical staff members in an area of increasing importance to SAE, has been invited to provide US DOE with technical leadership for clean energy in an Ambassador role, and leads a variety of local non-profit activities focused on STEM education.
3. Creative Thinking. With several roles where the title includes "Innovation", XXXX brings broad success and industry experience in challenging roles that have always required innovation, business development, and strategic growth to the challenges of the global mobility industry.
4. Passion for Education. XXXX is heavily engaged with STEM focused activities at national levels through IEEE, SWE, and recently SAE Foundation and at the local level through her community involvement. Her involvement around introducing youngsters to wonders of a STEM education, grooming young engineers for success, and the on-going professional development of her organization at Cummins reflects a true personal passion that would be an asset to the SAE Fellows community.

XXX 24 year career at Cummins and leadership impact can be grouped in 5 main areas:

First, she applied her MSEE background (from The Ohio State working with Center For Automotive Research) to improve engine performance through developing engine speed and air-flow controls, which allowed lower emissions in diesel engines through the addition of Exhaust Gas Recirculation (EGR). She worked as a key contributor on teams that developed an aftertreatment performance logic for each of Cummins' aftertreatment architectures in production: Selective Catalytic Reduction, Particulate Filters, Oxidation Catalysts and the NOx Adsorber used on some of our engines. Through each of these challenges, she sought and listened to experts who understood pieces of the puzzle and progressively took leadership roles in bringing these pieces of information and experts together to solve tough issues, while at the same time contributing as an expert in the design of multi-variable controls or diagnostics logic leveraging her MSEE background in controls and mechatronics. During this portion of her career, she worked in Current Product Support, New Product Development, and Research and Technology organizations in the Electronics Controls; Combustion, Performance and Emissions disciplines. During this phase she learned and demonstrated that significant positive influence was possible without authority, by listening to relevant voices, understanding the most important problems and articulating the needs to solve them.

NOMINATION FORM - impact cont

In the third phase of her career, she stepped out of her area of deep technical expertise to become more broadly interested in technology at Cummins. She led Technology Strategy across Cummins working for XXXXX who was then Cummins CTO. She got to know many of the Cummins leaders across all functions and regions and understood how Cummins made decisions. She wrote papers and gave presentations plus created opportunities for dialog which clearly articulated challenges in ways various audiences could easily engage, understand and align on next steps in technology strategy across regions.

During this phase, she learned to look through the day-to-day challenges many technical organizations face and identify the basic transformational trade-offs that can become strategic focus areas. She had opportunities to engage in strategic leadership level interactions with key customers and suppliers which in some cases shifted significantly the day-to-day experience of the working-level engineers while driving shifts in key capabilities of each tech center towards future needs.

In her 4th career phase, she took on leading the development of High Horse Power engine systems to meet stringent Tier4 emission legislation in North America. In this role, she had a chance once again to lead and develop a team. She also developed a series of customer relationships and progressed these over time and through difficult product development and new technology launch issues.

She brought her technical expertise to the role in areas that were different than much of the team, who had mechanical development background. She continued listening and learning from others and started to hear voices from many disparate areas that were worried about the aftertreatment system which was the key point of the programs. She took a few months of hearing these voices before trusting her technical expertise and intuition to make a call to pivot the programs architecture to a different path. She worked across Cummins to create an alternate path that addressed the

issues and re-steered the Tier 4 set of programs in a new direction. She learned that in large new product development programs and sets of programs it is

possible for many people to have a very similar worry but express it in different ways such that it takes some time to hear. She developed from this experience an empathetic and systemic listening approach as a technical organizational leader which seeks and distills voices coming in from across extended teams combined with her technical expertise and intuition to be a strategic leader with significant followership in areas of change and technical complexity.

In the merger of Cummins High Horse Power and Power Generation businesses in 2015, she had a unique opportunity to work with the engineering and business leadership teams to significantly restructure engineering.

This was an extremely difficult time with multiple layoffs due to difficult business conditions and two substantial engineering organization re-organizations. Her empathetic listening, creativity and technical insight during this difficult time allowed her to get to know hundreds of engineering team

members while talking to them about their hopes, dreams, and contributions. Through this challenge she not only make personal connections with many technical employees, but also was able to match capable people to roles which aligned with what they were good at, loved to do and wanted to learn. Through this significant change, she also got to know quite a few capable technical women and was able to elevate many to either leadership or more visible technical expert roles across the organization, visibly changing the demographics of many teams.

Through all these learning experiences, she measures the value of her day by the number and depth of meaningful connections she makes. These can be in different realms. Often, it's a personal connection to a person she talks with. It can also be a connection between a customer issue and a technology concept, or between two areas of technology with a combined relevance.

In her role as Power Systems Engineering Executive Director-Platform 3, she led the launch of a set of market-leading high-horsepower engines that met the stringent Tier4 emission requirements for North America while at the same time making product improvements to address top quality issues seen in current products. She completed work on many short-cycle time Power Generation market segment programs including key products for China, India, Europe, Middle-East and US markets. She continued to develop and evolve relationships with customers across markets including Commercial Marine, Oil and Gas, Mining, Power Generation and Passenger Locomotive. She was courageous to go wherever necessary to learn and connect to customer needs and issues in many cases going into tough sites which had seen few if any women.

Her 5th phase and current role of Executive Director- Cummins Electronics leverages her expertise in electronics and controls as well as strategy, external connections and organizational leadership at a time when electronics have an unprecedented focus in our industry. From chip shortages, CyberSecurity regulations to an expanded product portfolio including lower carbon footprint electrified products and software defined product features,

NOMINATION FORM

SAE ACTIVITIES

Please complete for ALL nominees

List the nominee's SAE participation including administrative committees, boards, councils, elected offices held, technical sessions organized, technical or standards committees served, and/or local section involvement.

For each, list dates of involvement plus give a brief description of nominee's involvement.

SAE Board Member 2021-2024

SAE Foundation Trustee 2022-2024- Filling Board Liaison role, Member of nominating committee, member of CV committee.

Published book through SAE entitled "Doing the Hard Work, Women Leading the Commercial Vehicle Industry" which tells career stories of 26 women leaders in the CV segment of SAE building on prior books by Carla XXX and Rondha XXXXX who each wrote a book covering Automotive and Aerospace industries respectively.

Active engagement in COMVEC over multiple years. For 2022 COMVEC working to bring local AWIM students to showcase their learnings and highlight impact of AWIM for underrepresented middle-school girls from downtown Indianapolis.

SAE OBD Symposium speaker on challenges and progress in applying Advanced Controls and diagnostics techniques to the OBD requirements for Heavy Duty Diesel engines as these requirements were in early stages.

Academic Advisory Board member for Pune, India based Cummins College for Women. This role included curriculum advising to improve placement and impact of students as well as mentoring members of their all-women SAE Baja team who in 2019 traveled from India to US to compete in the global competition with some members of the team staying for internships at The Ohio State Center for Automotive Research then bringing learnings on electric vehicle development back to their university in Pune.

Other industry engagement or leadership activities relevant to SAE mission, vision and values are listed below

1. Contributor to Ohio State Center for Automotive Research Industrial Advisory Board
2. Invited Faculty for Purdue College of Engineering as Industrial reviewer for student Master's Degree Thesis
3. Founding member of Technical Women's Initiative at Cummins whose goals are to attract, develop and retain technical women across all levels within all regions. Later expanded this effort to more broadly address Diversity, Equity, Inclusion and Belonging across many dimensions of diversity with particular focus on US under-represented racial groups as well as women in technical.
3. Led development and roll-out of training to mitigate "unconscious bias" in Cummins' college recruiting process and with technical interviewers.
4. Tripled the number of technical women in Power Systems Technical organization in UK during 2014-18. With UK having one of the lowest % of graduating female mechanical engineers of any country in the world, sponsored change across recruiting and technical employee training approach to expand the degrees/disciplines hired to increase the % of women in qualified talent pool.
5. Invited Ambassador and active contributor to US Department of Energy's Clean Energy, Education and Empowerment (CEE) initiative seeking to inspire and create role models for mid-career women working in various aspects of clean energy. Facilitated a panel discussion on Emerging Technologies at MIT during a C3E Symposium in 2016.
6. Served a two-year term 2016-2017 on the World Economic Forum's Global Futures Council on Energy.
7. Active member of IEEE and SWE including being an invited panelist at "Beyond Robots and Jetpacks" panel at WE Local Amsterdam in 2018 and "Empowering Women to Power Up the Executive Ranks" at 2019 IEEE Women in Engineering International Leadership Conference (WIE ILC)
8. Delivered motivational speeches at many events with a goal to be a role model and inspire others to see themselves as leaders, and take on challenges to create positive change. Served as a mentor to over 100 technical women.
9. Coached youth soccer for 10+ years focusing on inspiring girls ages 5-12 to take risks and work as a team.
10. Mentored Columbus North High School FIRST Robotics Team
11. Member then Chair of Ivy Tech Engineering Advisory Board in Columbus IN for 3 then 2 year terms, expanded the program as well as expanding the % of women and other underrepresented groups in the Ivy Tech Engineering program including department chair and faculty roles as well as Advisory Board membership Engineering programs through focused community outreach programs.

NOMINATION FORM

WORK EXPERIENCE

Please fill out in its entirety.

1. Company, Organization, or University CUMMINS INC.

From 2019 to XXXX

Position EXECUTIVE DIRECTOR-CUMMINS ELECTRONICS

2. Company, Organization, or University CUMMINS INC.

From XXXX to 2018

Position POWER SYSTEMS TECHNICAL EXECUTIVE XXXXXX PLATFORM 3

3. Company, Organization, or University CUMMINS INC.

From 2014 to XXXX

Position HIGH HORSEPOWER ENGINE SYSTEMS XXXXX ENGINEER AND PROGRAM XXXXX

4. Company, Organization, or University CUMMINS INC.

From XXXX to 2013

Position XXXXX- TECHNOLOGY STRATEGY AND INNOVATION

5. Company, Organization, or University CUMMINS INC.

From 1998 to XXXX

Position Various roles in Control Systems from Diesel engine controls engineer to DIRECTOR-DYNAMIC SYSTEM

Example Only
Nomination Form Template
Updated in 2023

NOMINATION FORM

Reference Letters

List four references, three of which must be either an SAE Member or Fellow grade member and also a supervisor letter of support. Please fill out in its entirety.

1. Name: Giorgio (Last Name)

Membership Number: Reference
Member
Number

Membership Grade: Fellow

E-mail: xxxxxx@osu.edu

Phone: XXX-XXX-XXXX

Company, Organization or University: The Ohio State University

Position: Chair in EM Systems; Director, Center for Automotive Resea

Address: Nominator Address

2. Name: Nominator Name

Membership Number: Nominator Membership Number

Membership Grade: Nonmember

E-mail: xxxx@cbs.dk

Phone: xxx-xxx-xxxx

Company, Organization or University: Copenhagen Business School/MIT

Position: Associate Professor of Strategy and Innovation

Address: Nominator Address

3. Name: Nominator Name

Membership Number: Nominator Membership Number

Membership Grade: Nonmember

E-mail: xxx@ideenergy.com

Phone: xxx-xxx-xxxx

Company, Organization or University: Ide Energy and Strategy

Position: President

Address: Nominator Address

4. Name: Nominator Name

Membership Number: Nominator Membership Number

Membership Grade: Fellow

E-mail: xxxxx@yahoo.com

Phone: xxx-xxx-xxxx

Company, Organization or University: SAE

Position: Retired - former SAE President and Chairman of the Board

Address: Nominator Address

Supervisor Letter:

Name: Supervisor Name

Membership Number: Supervisor Member Number

Membership Grade: Fellow

E-mail: xxxxxxx@cummins.com

Phone: +xxx-xxx-xxxx

Company, Organization or University: Cummins Inc.

Position: COO and President

Address: Supervisor Address

Example Only
Nomination Form Template
Updated in 2023



Columbus, June 27th, 2022

To: SAE International, Fellows Committee

It is with great pleasure that I write this letter in connection with XXXXX nomination for elevation to SAE Fellow grade. I have known XXXX since 1996, when she enrolled as a M.S. student in Electrical Engineering at the Ohio State University. XXXX took my graduate course in Powertrain Dynamics, ME 781, and completed her M.S. Thesis under the supervision of Prof. Stephen XXXXX in EE, with me serving on her thesis committee. Her research focused on model-based methods for idle speed control in internal combustion engines, and she carried out all of the experimental work in my powertrain laboratory, instrumenting a prototype controller on a Ford modular V8 engine, developing a family of algorithms, and designing various methods for introducing disturbances to evaluate and validate the performance of her controllers. It was very clear to me at the time that XXXX would go far. Her dedication, intellectual capacity, and outstanding personality clearly stood out.

Since those days, I have been in regular contact with XXXX because of my long-standing research collaboration with Cummins, and also because of our activities within SAE, most recently related to COMVEC. XXXX has also represented Cummins on the External Advisory Board of the OSU Center for Automotive Research and was very active in recruiting talent at Ohio State on behalf of Cummins early in her career. I saw XXXX most recently at SAE WCX last April, where I attended her book signing event with Jennifer XXXXX and Karen XXXX. I had the pleasure of assisting XXXX in connecting with other women leaders as she was editing the book, *Doing the Hard Work: Insights from Women Leading the Commercial Vehicle Industry*, SAE, 2022, and I know how passionate she is about women in science and technology – a couple of years ago she took the time to give personal insights and advice to my daughter – an industrial designer.

XXXX is a natural leader, and her accomplishments at Cummins over the span of nearly 25 years are truly remarkable, first in control systems – culminating in her position as Director of Dynamic Systems and Control Research and Technology in 2014, and more recently taking on the responsibility to lead Cummins Electronics in 2019. XXXX has consistently achieved technical excellence by creating diverse teams to achieve outstanding results and has fostered a culture of inclusion and excellence.

XXXXXX is a role model for SAE for her accomplishments as an executive leader at Cummins, as well as for her impact on our profession in attracting and growing a diverse workforce and serving as a role model for young women engineers. I have no hesitation in recommending that SAE recognize XXXXs remarkable leadership by elevating her to Fellow grade of membership.

Yours Truly,



Giorgio XXXXX
Fellow, Society of Automotive Engineers (ID XXXXXXXX)
Fellow, Institute of Electrical and Electronic Engineers
Fellow, American Society of Mechanical Engineers
The Ford Motor Company Chair in Electromechanical Systems
Director and Senior Fellow, **Center for Automotive Research**
Professor, **Department of Mechanical and Aerospace Engineering**
Professor, **Department of Electrical and Computer Engineering**
The Ohio State University

June 26, 2022

To: Society of Automotive Engineers (SAE)
Subject: Nomination of XXXXX as SAE Fellow

Dear Committee:

I am a Professor of Strategy and Innovation at Copenhagen Business School and a Research Scientist at Massachusetts Institute of Technology (MIT). My research focuses on the relationship between the regional business environment and the performance of inventors, firms, regions, and countries. My work has been published in top economic, policy, and strategy journals. I have received a number of prestigious research grants, including a recent National Science Foundation grant (2018-2021) on Mapping the Inventor Gender Gap: Analyzing Regional & Organization Variation in the Inclusivity of the Innovation Economy. I also served as a lead researcher on the U.S. Cluster Mapping Project: Mapping a Nation of Regional Clusters.

Most of my teaching and research has focused on strategy, innovation and entrepreneurship, so I am qualified to assess XXXXX capacity as a top inventor and leader promoting inclusivity in the innovation economy, and in the automotive sector in particular.

I met XXXXX at a Policy Forum on Advancing Economic Development and Workforce Readiness in Micropolitan Areas, organized by the National Academies of Sciences Engineering and Medicine (NASEM) and Indiana University Public Policy Institute in 2018. She participated as a speaker and discussed innovation in Automotive in the context of Cummins.

During that policy forum, I introduced some of my research at MIT about the important role that top inventors (like XXX) can play on promoting new inventors within their organizations, and on advancing the inventor career of women. Since 2018, with the leadership of XXXXX, we have collaborated with several business units in Cummins to assess the presence of new inventors and promote female inventors. In 2021, I had the pleasure to participate in a Society of Women Engineers panel lead by XXXX to discuss best practices and data analytics to enhance the engagement of women and minorities in patenting in the automotive context.

XXXXX is exceptionally talented as an innovator, engineer, leader and manager, and on a mission to improve inclusion and diversity in innovation. XXXX has shown repeated success in growing diverse winning technical teams in the areas of advanced controls and electronics, acting as an example of technical excellence, innovation, and inclusion. Therefore, I fully support the nomination of XXXXX as SAE Fellow.

Sincerely,

Mercedes XXXX

Associate Professor of Strategy and Innovation at Copenhagen Business School

Research Scientist at MIT

Email: xxxxx@cbs.dk. Web: xxxxxxxxx

Aleksey XXXXX

From: Britt XXXX <xxx@ideenergy.com>
Sent: Wednesday, June 29, 2022 10:29 AM
To: AlekseyXXXXX
Subject: Re: Support to XXXXX nomination for SAE Fellow

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL SENDER: This email originated outside of Cummins. Do not click links or open attachments unless you verify the sender and know the content is safe.

I'm traveling and cannot do a formal letter but hopefully this email letter will suffice:

Alex,
It is my true pleasure to support XXXXX nomination. I have worked with XXXX for ten years as fellow Ambassadors for the US Department of Energy's Clean Energy, Education, and Empowerment (C3E) in collaboration with Stanford, MIT, and Texas A&M. Each year, XXXX dedicates significant time to evaluating outstanding women in clean energy to award multiple awards across disciplines to mid-career leaders to further their recognition and success.

XXXX is amazing and an inspiration to me and our fellow ambassadors. She is a successful leader and engineer at Cummins, deeply involved in the industry for diversity (including SWE, SAE Foundation, and more), AND is an amazing, engaged mother of five children! She models work-life balance.

XXXXX cares about diversity broadly. I live in Montana and she introduced me to the SAE's STEM diversity work. I look forward to connecting them with efforts to support STEM from education in the Mountain states, especially with Native American students.

Finally, XXXXX is a wonderful person. She's gracious, kind, giving, and fun. Her broad and deep accomplishments make her an ideal nominee for the SAE Fellow award!

Britt XXXX
President
Ide Energy & Strategy
xxx.xxx.xxxx

Example Only
Nomination Form Template
Updated in 2023

To: SAE Fellows Committee
Date: July 1, 2022

Subject: Nomination of XXXXX to Fellows Grade

I am pleased to recommend XXXXX to SAE International membership grade of Fellow. I have known XXXX for over 10 years as a colleague at Cummins Inc before my retirement. During that time I observed her many contributions to the technical work of Cummins Inc and to the commercial vehicle industry. Since my retirement I have maintained contact with XXXX through her work in support of SAE International and nonprofit organizations.

XXXXX has demonstrated outstanding leadership at Cummins through her technical work in advanced controls and electronics in the development of effective and collaborative teams. She has developed a broad range of experience in her career by being willing to accept new challenges in a variety of areas extending beyond the technical area with organizational structuring and strategic initiatives work. She has a passion to share her knowledge and experiences with others to help foster both personal and career growth. She has pursued this passion for sharing outside her Cummins work through organization panels, committees and online webinars with SAE International and industry forums. She has as a result served as an inspirational role model of technical excellence, innovation, and inclusion. She has supported and participated in providing leadership in collaboration with government agencies, industry forums and SAE International World Congress and Comvec Congress.

I was pleased to recommend her for the SAE International Board of Directors as a candidate to the Executive Nominating Committee, which they recognized her value to the leadership of SAE and selected her for the position.

XXXX has not only been a strong leader within her company work but also beyond. She is very passionate about helping others and in her work she has demonstrated the characteristics of an SAE Fellow. Her mentoring and coaching of young engineers as well as her service to the SAE International community, as noted in her Fellow application form Impact section further supports her deserving of being selected as an SAE Fellow.

[Redacted Signature]

Richard XXXXX

Vice President Global On Highway Business Cummins Inc - retired
20XX President SAE International
SAE Fellow



July 1st, 2022

Dear SAE Fellows Committee:

I am proud to support the nomination of XXXXX for the high distinction of SAE fellow, based on her remarkable success as an inspirational engineering and organization leader, who had direct and tangible impact on a variety of clean mobility technologies.

As the COO and President of Cummins, a global leader in clean mobility and power, I have worked closely with XXXX for over 20 years, as she progressed through a variety of technical roles, and then assumed ever increasing leadership responsibilities.

Today XXXX is leading and developing a 700+ person global engineering organization, that drives innovation in the areas of electronics and controls across our product line, from mobile on-highway vehicles to mining, marine, and other off-highway applications. An accomplished inventor in her own right, XXXX always leads by example. Her repeated leadership successes are underpinned by her passion for talent development and inclusion.

XXXX's leadership impact transcends her Cummins role, as she is actively involved in a variety of outreach, educational and advocacy activities. Among these, I would like to highlight her service as Invited Ambassador and active contributor for US Department of Energy's Clean Energy, Education and Empowerment initiative (<https://www.c3eawards.org>), advisory board of Joint Institute for Strategic Energy Analysis (JISEA), and with the Society of Women Engineers (SWE) and International Society of Electric and Electronic Engineers (IEEE). XXXX also served a two-year term on the World Economic Forum's Global Futures Council on Energy. In the educational arena, XXXX served as the Advisory Board Chair for Ivy Tech Engineering programs, and as a member of advisory council to Center for Automotive Research at the Ohio State University.

Throughout her illustrious career, XXXX has been active in service to the SAE, first as a technical contributor and more recently in her roles with the SAE Board and SAE Foundation.

Based on these outstanding accomplishments, I strongly support XXXX's nomination.

Jennifer XXXX, XXXX Fellow

COO and President, Cummins Inc.

Cummins Inc.
XXXXXX Street Columbus, IN
47201 USA
Phone xxxxxxxxx
cummins.com