



Bjorn Birgisson
PhD, PE, F. ASCE, F. EMI,
Chair, School of Env., Civil,
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Power E-Mobility Distinguished
Professor

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Personal Details:
Born in Iceland • Nationality: American and Icelandic
• Civil Status: Married

Selected Achievements

- Chair of the School of Environmental, Civil, Agricultural and Mechanical Engineering, University of Georgia, one of the fastest growing engineering programs in the United States (2000+ undergraduate students; ca. 200 graduate students), with 29 faculty hires since the beginning of 2022.
- Executive Director of the Georgia Network for Electric Mobility (25 partners across Georgia from industry, academia and government)
- Founding Member and Board Member for the Mississippi, Alabama, Georgia Network for Electric Transportation Technologies (MAGNET) (112 partners from across Georgia, Mississippi and Alabama including industry, academia, and government)
- Foreign Fellow, Royal Swedish Academy of Engineering Sciences.
- Fellow, American Society of Civil Engineers
- Fellow, Engineering Mechanics Institute
- Founding member of the Academy of Pavement Science and Engineering (APSE) that consists of 40+ universities and served on the Board of Governors between 2017 and 2022.
- Demonstrated ability to lead and manage research and innovation activities, with a proven track record in obtaining and serving as a PI and Co-PI on 67 regional and international grants that total over \$58M in funding.
- Led the ca. 300 percent increase in annual research expenditures in the School of Environmental, Civil, Agricultural and Mechanical Engineering since 2021.
- Currently serving as an external reviewer for the 9-year review of the Swedish Strategic Innovation Program.
- Increased new student enrollment by ca 45% and new research grants of 50% while serving as Executive Dean for the School of Engineering and Applied Science at Aston University.
- Led Aston in the Midlands six University Energy Research Accelerator (ERA) bid resulting in \$180 million over five years from the government, along with a significant match from private enterprise.
- Steered an overall research funding increase by ca. 50% at KTH, while serving as Vice President for Research.
- Improved ranking of KTH among European technical universities from # 16 in 2011 to #6 in 2013 (QS and THE rankings).
- Increased EU Horizon 2020 funding to KTH Royal Institute of Technology, resulting in KTH moving from #6 to #1 among Swedish Universities in receiving EU funding.
- While serving as the leader of the KTH Transport Platform, secured a 10-year Strategic Research Area grant of \$4.6M per year.
- Built a whole new division of Highway and Railway Engineering at KTH with an annual turnover of \$5M in 2013.
- Led the development of the US National Roadmap for Nanotechnology for Concrete-Based Materials in collaboration with the National Science Foundation (NSF), Defence Threat Reduction Agency (DTRA), US Corps of Engineers, Federal Highway Administration (FHWA), Transportation Research Board (TRB), Portland Cement Association (PCA), and the National Nanotechnology Coordination Office.

- Previous holder of the prestigious J.L. “Corky” Frank / Marathon Ashland Petroleum, LLC Chair with the Zachry Department of Civil and Environmental Engineering at Texas A&M University.

Education

Doctor of Philosophy in Civil Engineering (1996), Concentration in Geomechanics
University of Minnesota, Minneapolis, MN

Master of Science in Civil Engineering (1991)
Cornell University, Ithaca, NY

Bachelor of Science in Civil Engineering (1986)
Bachelor of Science in Mathematics (1986)
University of North Dakota, Grand Forks, ND

Professional Licenses and Certifications

Professional Engineer License
State of Wisconsin, PE # 32783-6
State of Minnesota, PE # 26019

European Engineer Certificate – EUR ING
European Federation of National Engineering Associations (FEANI) – EUR ING #22174

Chartered Civil Engineer
Country of Iceland

Swedish National Program for Higher University Leaders: Leadership, Management, and Communications Course
Swedish Association of Higher Education, 2011 - 2012

Professional Experience

The University of Georgia, Athens, GA

2022 – Present

Professor and Chair, School of Environmental, Civil, Agricultural and Mechanical Engineering (2022 – Present)

Oversee all aspects of the School, including education, research, innovation and outreach, alumni relations, and government and industry relations. Responsible for Tenure and Promotion processes, hiring, staff annual reviews, course scheduling and overall strategy for quality and growth.

- The School currently has over 2,000 undergraduate students and close to 300 graduate students, and 75 faculty.
- The annual research expenditures have grown over 300 percent since I started.
- Hired 29 academic positions to date, with 4 more searches underway.
- Member of the University Council (2022-2024).
- Member of the College of Engineering Leadership Council.
- Co-established a Living Lab in Manufacturing and a Living Lab in Future Mobility teaming up with industry and select communities.
- Wrote new School Bylaws, steered a curriculum review in Mechanical Engineering.
- Successfully planned multiple new programs in Civil and Environmental Engineering, Mechanical Engineering, Aerospace, Manufacturing and an online MS in Civil engineering.
- Co-wrote the new Promotion and Tenure Criteria for the School.
- Co-wrote the College of Engineering Strategic Growth Plan aimed at bringing the college to number 20-30 among public universities by 2030.
- Member of the University Review Committee for the Physical Sciences.

Executive Director, Georgia Network for Electric Mobility (2024 – Present)

Oversee and lead on all aspects of running the Georgia Network for Electric Mobility (GNEM). GNEM was established in 2022 and is a rapidly growing collaboration between industry, academia, government, and communities to drive EV adoption, create value for all partners, and accelerate the transition to the electric mobility future. The vision for GNEM is a Georgia where electric mobility is accessible for all citizens, and a world where Georgia is a leader in electric mobility innovation. The mission of GNEM includes convening and organizing stakeholders in electric mobility across the state around projects and programs that improve the lives of all citizens through research, education and community partnerships. GNEM has an external board of advisors, as well as an e-mobility executive council serving as the GNEM steering committee. The executive council consists of deans and vice presidents of colleges involved with e-mobility related research and education activities.

- Current Endowment: \$7 million and growing.
- A growing list of partners (24 currently) across Georgia from industry, government and academia.
- Co-launched \$1 million program entitled “Georgia E-Mobility Ready Communities.”
- Planning for a large workforce development program focused on skills and knowledge training in e-mobility for industry and other stakeholders in collaboration with our partners in the University System of Georgia and the Georgia Technical College System.
- Engaged in multiple large proposals in the area of electric mobility research.
- Established an e-mobility living lab in a smart community with the Rowen Foundation.
- Launched the Mississippi, Alabama, Georgia Network for Electric Transportation Technologies (MAGNET) consisting of 112 partners across Georgia, Alabama and Mississippi working on user inspired research, innovation, workforce development and community engagement.

The Texas A&M University System, College Station, TX
Professor, Civil Engineering (2016 – 2022)

2016 – 2021

Taught three courses per year, engage in research and service. I advised five PhD students that graduated between 2021 and 2023 and another one that graduated in 2024. I served as the Graduate Coordinator for the Materials group and serve on the Promotion and Tenure Committee for the Department of Civil and Environmental Engineering.

- Named and served as the J.L. “Corky” Frank / Marathon Ashland Petroleum, LLC Chair (2020– 2021).
- Named and served as a TEES Distinguished Research Professor (2016 – 2018) and TEES Eminent Professor (2018 – 2020).
- Awarded the TEES Distinguished Research Professor Medal in 2017.
- Established a highly interdisciplinary research program that led to \$5.7M+ in research income as PI/Co-PI.

Doctoral Students Supervised at Texas A&M University:

1. Bahrulla Abdullah, Ph.D., 2021
2. Chauncy Cai, Expected Ph.D., 2023
3. Yadong Guo, Expected Ph.D., 2023
4. Umme Zakira, Expected Ph.D., 2022
5. Lena Abu-Ennab, Expected Ph.D., 2022
6. Athindra Pavan, Expected Ph.D., 2024

Inaugural Director, Center for Infrastructure Renewal (2016 – 2018)

Directed the research and facility development of the Center for Infrastructure Renewal (CIR). Managed the development of the research, innovation, and workforce development strategy. Held full profit and loss (P&L) accountability for the operational budget management and fundraising. Oversaw the recruitment and hiring of organizational staff and employees. Built strong working relationships with industry professionals, government agencies, and potential grant-makers and fundraising agencies.

- Oversaw the construction of a new \$80M state-of-the-art 138K ft² research facility for the Center for Infrastructure renewal.
- Established collaboration with four Colleges, eight Departments and two State Agencies.
- Developed the CIR Strategic Plan that resulted in over 25% increase in research funding.

Aston University, Birmingham, United Kingdom

Chaired Professor, Transport Science (2014 – 2016)

Pro Vice-Chancellor / Executive Dean, School of Engineering and Applied Science (2014 – 2016)

2014 – 2016

Directed all aspects of the School of Engineering and Applied Science's daily operations. Oversaw personnel management, the hiring and promotion and academic tenure, strategic planning and development, budget management, research and innovation, enterprise development, alumni relations, student experiences, learning and teaching, industry relationship management, and academic fundraising co-management. Supervised the strategies and operations of the Aston Institute of Photonics Technology (AIPT), European Bioenergy Research Institute (EBRI), the System Analytics Research Institute (SARI), and the then newly established Centre for Innovation in STEM Education and Institute for Systems and Logistics. Served as the primary University representative for the School of Engineering and Applied Sciences, responsible for establishing lasting external partnerships to support essential functions. Provided executive-level oversight to the daily operations of the school, to include staff management, hiring, career advancements, student experience management, learning and teaching objectives, operational planning, financial and budget management, alumni relations, and developing a strong school strategy. Encouraged engineering and scientific industry engagement with local, regional, and global professionals to guide advanced research and innovation.

- Steered a 45% increase in new student enrollment for the 2014 through 2016 academic years, along with an improved graduation rate, resulting in an overall enrolment of over 3000 students for 2015-16.
- Co-led a 50% increase in new research grant awards between 2014 and 2016.
- Served as a member of the University Executive Group, the University Senate, and the University Council.
- Functioned as a University liaison to the HS2 Railway College and served as the academic representative on the Birmingham Green City Commission and the Birmingham Smart City Commission to support key regional, national, and international initiatives that included the Energy Research Accelerator (ERA) initiative.
- Led Aston in the Midlands six University Energy Research Accelerator (ERA) bid resulting in \$180M over five years.

KTH Royal Institute of Technology, Stockholm, Sweden

2007 – 2016

Head and Professor, Division of Highway and Railway Engineering (2007 – 2014) and Guest Professor (2015 – 2016)

Managed the productivity and workflow of a total of 38 professors, guest professors, associate professors, assistant professors, adjunct professors, docents, researchers, administrators, and funded doctoral students. Provided divisional academic leadership to support the development and implementation of the academic vision and strategy. Delivered financial oversight to the division's operations, staff management, and budget management. Controlled the staffing and course scheduling of 8 classes focused on highway and railway engineering.

Taught four courses that included Highway and Railway Engineering, Maintenance and Operation of Highways, Advanced Pavement Analysis and Design, and Advanced Rheology of Bituminous Materials. Supervised 26 doctoral and licentiate students and served as an external examiner for 12 doctoral students.

- Built a \$5M per year research program from the ground up.
- Led 23 doctoral students to successfully graduate.
- Helped establish the KTH international Master's program in Infrastructure Engineering that gained 17 applicants for each admission in 2010 and quickly became one of the most popular University programs.
- Competed successfully for ca. \$43M in research funding.

Doctoral and Licentiate Students Supervised at KTH:

1. Karen Edvardsson, Tekn. Lic. 2009, Tekn. Dr., 2010.
2. Hawzheen Karim, Tekn. Lic. 2010, Tekn. Dr., 2011.
3. Adel Abdi, Tech. Lic. 2012, Tekn. Dr. 2013.
4. Åsa Laurell Lyne, Tekh. Lic. 2011, Tekn. Dr. 2013.
5. Tatek Fekadu Yideti, KTH, Tech. Lic. 2012, Tekn. Dr. 2014.
6. Ali Azhar Butt, Tekn. Lic. 2012, Tekn. Dr. 2014.
7. Iman Mirzadeh, Tekn. Lic. 2013, Tekn. Dr. 2014.
8. Prabir Kumar Das, Tekn. Lic. 2012, Tekn. Dr. 2014.
9. Anders Gudmarsson, Tekn. Lic. 2012, Tekn. Dr., 2014. (Co-Chair)
10. May Namutebi, Tekn. Lic. 2011, Tekn. Dr., 2016.
11. Ebrahim Heshami, Tekn. Lic. 2013, Tekn. Dr. 2014.
12. Parisa Khavassefat, Tekn. Lic. 2013, Tekn. Dr. 2014.
13. Bernardita Lira, Tekn. Lic. 2012.
14. Florentina Farcas, Tekn. Lic. 2012.
15. David Gullberg, Tekn. Lic. 2011.
16. Henrik Bjurström, Tekn. Lic. 2014, Tekn. Dr. 2016. (Co-Chair)
17. Ricardo de Frias Lopez, Tekn. Lic. 2014, Tekn. Dr. 2017. (Co-Chair)
18. Yared Dinegdae, Tekn. Lic. 2014, Tekn. Dr. 2016.
19. Feng Chen, Tekn. Lic. 2014, Tekn. Dr. 2016. (Co-Chair)
20. Ibrahim Onifade, Tekn. Lic. 2014, Tekn. Dr. 2016.
21. Peyman Mellat, Tekn. Lic. 2015.
22. Jiqing Zhu, Tekn. Lic. 2015, Tekn. Dr. 2016. (Co-Chair)

- 23. Biruk Hailesilassie, Lic. 2013, Tekn. Dr. 2016. (Co-Chair)
- 24. Farhad Salour, Lic. 2014, Tekn. Dr. 2015. (Co-Chair)
- 25. Mohammad Shafiqur, Tekn. Dr. 2015 (Co-Chair).
- 26. Abie Bekele, Lic. 2016, Tekn. Dr. 2020 (Co-Chair).

Vice President, Research (2009 – 2014)

Provided administrative oversight to maintain the quality of research development and infrastructure, support research and innovation strategy development, and guide strategic research initiatives. Guided the University research communications strategy. Collaborated with faculty to obtain financing, investments, fundraising, and contracts to support new research infrastructure, research centers, and major research programs. Oversaw the management of the KTH Research Portfolio. Supplied ongoing academic leadership to the KTH Research Office to provide regulatory oversight on ethical research practices, operational oversight to research centers, contract management, coordinate Board nominations, and perform quality assessments and evaluations as needed. Collaborated with faculty members and school Deans to identify new research funding opportunities.

- Served as a member of the President’s Group to strategically address graduate educational and research issues and concerns focused on University policies and development.
- Functioned as a member of the KTH Management Group to support the operations and management of the university’s 10 schools.
- Acted as the key point of contact (POC) to funding agencies and research councils across the US, Europe, and Sweden.
- Delivered executive oversight to five multidisciplinary research platforms, 10+ Government Strategic Research Areas, and other strategic research areas.
- Established an integrated research and innovation environment in Transport, Life Science and Technology, Information and Communications Technology, Energy Technology, and Materials Technology; resulting in a 50% growth in external research funding for the University, with \$38M+ in additional 2012 funding.
- Established a highly effective EU Engagement Strategy that led the University to be ranked #1 in Sweden and resulting in EU research and innovation funding in 2014 and 2015.
- Supported the KTH Research Office’s research contract administration needs that included delegating research contract signatures to the School Deans and directing the development of intellectual property rights agreements, cooperation agreements, and EU agreements.
- Coordinated, developed, and implemented the 2012 Research Assessment Exercise for the University that is completed every four years.
- Steered the KTH annual research funding increase by 50% as the result of successful strategic research initiatives and other multidisciplinary research efforts, in addition to increased industry, EU, and external funding.
- Helped increase the University’s ranking among other European technical universities, from #16 in 2011 to #8 in 2012 and #6 by 2013 by the Times Higher Education and QS ranking system.

Coordinator, Transport Platform (2008 – 2009)

Managed the transport coordination for all KTH automotive, infrastructure, transport systems, and policy related research. Established and maintained the organization’s vision and strategy on transport research and development. Functioned as the main POC to research councils, fundraising agencies, and industry professionals for the transport area department.

- Successfully obtained a 10-year Strategic Research Area grant of \$4.6M per year for the Transport Area.

Department Head, Department of Civil and Architectural Engineering (2008 – 2009)

Directed the daily operations and workflow of 75+ civil and architectural engineering professionals and oversaw the personnel management and hiring of all faculty and staff members. Provided direct oversight and strategic planning to all academic affairs across the department, to include holding full P&L accountability for the department’s academic operations and annual budget. Managed course staffing and scheduling for 400+ engineering majors. Ensure the overall safety and security of the departmental laboratories and facilities.

- Delivered an annual capital turnover rate of \$13.5M.
- Reviewed staff performance outcomes during regular evaluations to assess promotions and pay raises.
- Led the merger of a large Civil Engineering undergraduate education program in Haninge with the main campus program, leading to a 70% increase in the number of students.
- Oversaw a major renovation project and a move of the Department of Civil and Architectural Engineering to a larger building for Civil Engineering.

Associate Professor, Civil Engineering (2004 – 2007) with Tenure
Assistant Professor, Civil Engineering (1998 – 2004)

Taught four courses per year and engaged in research and service. Taught courses on Physical Design of Transportation Elements, Superpave Hot Mix Asphalt Technology, Advanced Soil Mechanics, Soil Dynamics, Mechanics of Civil Engineering Materials, and Rock Mechanics. Served as the Associate Director for the Center for Pavements and Infrastructure Materials (CPIM) and served on the board of the Florida Center for Pavement Excellence (FCPE). Dr. Birgisson wrote the first version of the National Roadmap for Nanotechnology in Concrete while serving on the faculty.

- Secured \$7.2M in competitive research funding.
- Co-launched the Center for Pavements and Infrastructure Materials and served as Associate Director, 2001 – 2007.
- Co-organized and served on the board of the Florida Center for Pavement Excellence (FCPE), 2001 – 2007.
- Won the University of Florida Faculty Merit Award, 1999.

Doctoral Students Supervised at the University of Florida:

1. Elena Romeo, University of Parma & University of Florida, Ph.D., 2008.
 2. Mahir Dham, University of Florida, Ph.D., 2007.
 3. Xiaoyan Zheng, University of Florida, Ph.D., 2007.
 4. Marc Novak, 2007, University of Florida, Ph.D., 2007.
 5. Jaeseung Kim, University of Florida, Ph.D., 2005. (Co-Chair)
 6. Sungho Kim, University of Florida, Ph.D., 2005. (Co-Chair)
 7. Boonchai Sangpetgnam, University of Florida, Ph.D., 2003.
 8. Daniel Darku, University of Florida, Ph.D., 2003.
 9. Booil Kim, University of Florida, Ph.D., 2003. (Co-Chair)
 10. Christos Drakos, University of Florida, Ph.D., 2003. (Co-Chair)
- (In addition, served on the committees of 6 Ph.D. students.)

Additional Experience

Honorary Distinguished Guest Professor, Gdansk University of Technology, Poland	2023 – 2024
Guest Professor, Southeast University, Nanjing, China	2017 – 2020
Honorary Professor, Aston University	2016 – 2019
Chaired Guest Professor, Zhejiang University, Hangzhou, China	2019 – 2020
Honorary Visiting Professor, Research Institute for Highways, Beijing, China	2012 - 2016
Consultant, Construction Division, NCC AB, Stockholm, Sweden	2012
Leader, Transport Area, Swedish University of the Building Sciences, Uppsala, Sweden	2008 - 2011
Adjunct Professor, University of Parma, Italy	2004 – 2007

Journal Editorial Boards Experience

Guest Editor, IEEE Transactions on Intelligent Transportation Systems: Special Issue on Applications and Developments of Novel Technologies in Intelligent Transportation Infrastructure Systems, Vol 23, No 11	2022
Specialty Editor-in-Chief, Frontiers in Built Environment – Construction Materials	2021 – Present
Associate Editor, Buildings Journal	2021 – Present
Associate Editor, Journal of Road Engineering	2021 – Present
Editorial Board, Buildings Journal	2020 – Present
Editorial Board, Advances in Material Research	2017 – Present
Editorial Board Member, International Journal of Pavement Engineering	2014 – Present
Editorial Board Member, Journal of Road Materials and Pavement Design	2006 – 2019
Associate Editor, International Journal of Pavement Research and Technology	2008 – 2010
Guest Editor, Journal of Road Materials and Pavement Design, Special Volume	2007 – 2008

Professional Affiliations

- Academy of Pavement Science and Engineering (APSE)
- Association of Asphalt Paving Technologists (AAPT)
- International Society of Asphalt Pavements (ISAP)
- International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM)
- Transportation Research Board (TRB)
- European Asphalt Pavement Association (EATA)
- American Society of Civil Engineers (ASCE)

Honors and Awards

Fellow, American Society of Civil Engineers (ASCE)	2023 – Present
Fellow, ASCE Engineering Mechanics Institute	2023 - Present
International Fellow, Royal Swedish Academy of the Engineering Sciences	2019 – Present
Fellow, Institution of Civil Engineers, U.K.	2016 – 2017
Fellow, Institute for Science, Technology and Public Policy, Bush School of Government and Public Service.	2017 – Present
Int'l External Examiner: Civil and Environmental Engineering, Petronas Univ. of Tech., Perak, Malaysia	2016 – Present
High-end Foreign Expert, the State Admin. of Foreign Expert Affairs: Tongji University, Shanghai, PRC	2018 – 2019
High-end Foreign Expert, the State Admin. of Foreign Expert Affairs: Center for Materials Service	2017 – 2019
TEES Distinguished Research Professorship Medal	2017
Honorary Visiting Professor, Research Institute of Highways, Beijing, PRC	2012 – 2016
Member: Stockholm Transport Think Tank, Stockholm, Sweden	2014 – 2016
Panel Leader for the Panel Entitled: “Department of Civil Engineering and the School of Architecture,” International Research Assessment Exercise at Tampere University of Science and Technology	2011
Panel Member for the Panel Entitled: “Civil and Architectural Engineering and Planning,” International Research Assessment Exercise at Aalto University	2009
The Medal of the University of Parma, Italy	2004
Honorary Chair: Int'l Conf. on Sustainability in Energy and Building Materials 2012: SEB 2012, Sweden	2012
University of Florida Faculty Merit Award	1999
Sommerfield Fellowship in Civil Engineering: University of Minnesota	1991 – 1992
Larimore-Mathews Scholarship, University of North Dakota	1986
Phi Kappa Phi	1986
Tau Beta	1985
Institute of Int'l Education Scholar, University of North Dakota	1983 – 1986

Best Paper Awards

Best Journal Paper Award in the Springer-Nature Journal of Infrastructure Preservation and Resilience for: Abdulla, B., Kiaghadi, A., Rifai, H.S., and Birgisson, B., “Characterization of vulnerability of road networks to Fluvial flooding using SIS network diffusion model.” J Infrastruct Preserv Resil 1, 6 (2020). https://doi.org/10.1186/s43065-020-00004-z	2020
Best Journal Paper Award in the Springer Journal of Materials and Structures for: “Zhang, D., Birgisson, B., Luo, X., Onifade, I., “A new short-term aging model for asphalt binders based on rheological activation energy,” Materials and Structures, (2019) 52:68. https://doi.org/10.1617/s11527-019-1364-7 .”	2019
Best Paper Award for the Paper: Y. Zhang, X. Luo, F. Guo, B. Birgisson and R.L. Lytton, “Mechanics	2017

Modeling of Viscoplastic Softening of Asphalt Mixtures under Repeated Loading," 2 nd Transportation Research Congress (TRC), Beijing, PRC	
Best Paper Award for the Paper: Onifade, I., Dinegdae, Y., Birgisson, B., "Hierarchical Approach for Fatigue Cracking Performance Evaluation in Asphalt Pavements," Transportation Research Congress (TRC), Beijing, PRC	2016
Best Poster Presentation award for Paper: Onifade, I., Birgisson, B., Kringos, N., "Towards Asphalt Mixture Morphology Evaluation with the Virtual Specimen Approach," Sixth European Asphalt Technology Association (EATA) Conference, Stockholm, Sweden, June 2015.	2015
Runner-up Award for Best Technical Paper: Namutebi, M., Birgisson, B., Bagampadde, U., "Foaming Effects on Binder Chemistry and Aggregate Coatability using Foamed Bitumen," Road Materials and Pavement Design, Vol. 112, No. 4, pp. 821 – 847.	2011
Runner-up Award for Best Technical Paper: Birgisson, B., Sangpetgnam, B., Roque, R., and Wang, J., "Numerical Implementation of a Strain-Energy Based Fracture Model for HMA Materials," Road Materials and Pavement Design, Vol. 8, No. 1, 2007, pp. 7 – 45.	2007
The W.J. Emmons Award from the Association of Asphalt Paving Technologists for Best Technical Paper in the Journal of the Association of the Association of the Asphalt Paving Technologists	2004
Invited Paper: "Influence of Sample Size, In-Situ Testing and Pile/Shaft Model Variability on LRFD Resistance Factors," ASCE GEOTRANS 2004, Los Angeles, CA	2004
Canadian Technical Asphalt Association Editor's Award for Best Technical Paper	2003
Best Student Paper Award: "Evaluation of Geotechnical Variability in the Cone Penetration Test," Proceedings, 41 st Annual Minnesota Geotechnical Engineering Conference, Minneapolis, MN	1993

Recent Board Memberships & Committees

- Construction Advisory Board, One Space Technologies, 2023 – Current.
- Board of Governors, Academy for Pavement Science and Engineering (APSE), 2015 - 2022
- European Asphalt Technology Association Board, 2009 – 2017
- Midlands Energy Consortium Development Board, 2016
- Aston Intellectual Property Exploitation Panel, 2015 - 2016
- Birmingham Green City Commission, 2015 – 2016
- Birmingham Smart City Commission, 2014 – 2016
- Board of Optimus, Ltd., 2014 – 2016
- Aston University Council, 2014 – 2016
- Aston University Senate, 2014 – 2016
- Midlands Innovation Energy Research Accelerator Development Board, 2014 – 2016
- Board of Dudley College, 2014 – 2015
- Board of Aston University Engineering Academy, 2014 – 2016
- National Center for Materials Service Safety Scientific Advisory Board, 2013 – 2016
- General Assembly, EU Flagship Emerging Technologies (FET) "Human Brain Project (HBP), 2013 – 2014
- Stockholm Brain Institute, Karolinska Institute, spring 2013 – 2014
- Road2Science Center at KTH, 2012 – 2016
- European Institute of Innovation and Technology InnoEnergy CC Sweden, 2012-2014
- VinnEx Center ProNova (Biotechnical Engineering) at KTH, 2012 – 2014
- VinnEx Center for Sustainable Communications at KTH, 2012 – 2014
- SweGrid Smart Grids Center at KTH, 2012 – 2014
- Center for C-Campus @ Tsinghua and KTH, 2012 – 2014
- Combustion Engine Research Center (CCGx) at KTH, 2011 – 2014
- Chairman, Transport Platform Board, 2011 – 2013
- Chairman, Information and Communications Platform Board, 2011 – 2013
- Chairman, Materials Platform Board, 2011 – 2013
- Chairman, Life Science Technology Platform Board, 2011 – 2013
- Chairman, Energy Platform Board, 2011 – 2013
- KTH School of Engineering Sciences Board, 2009 – 2013
- KTH School of Industrial Technology and Management Board, 2009 – 2013
- KTH School of Architecture and the Built Environment Board, 2009 - 2011

- Stockholm Science for Life Laboratory, 2009 – 2011
- Center for Biomimetics (Biomime), 2009 – 2013

Professional Service

- UGA University Tenure and Promotion Committee, 2023 – Current.
- University Council, University of Georgia, August 2022 – Current.
- Tenure and Promotion Committee, Zachry Dept. of Civil and Env. Eng., 2018 – 2021.
- Graduate Coordinator for the Materials Group, Zachry Dept. of Civil and Env. Eng., 2019 – 2021.
- Education Committee, Zachry Dept. of Civil and Env. Eng., 2019.
- Aston Intellectual Property Exploitation Panel, 2015 – 2016.
- Search Committee: Prof. of Highway Engineering, TU Delft, 2011-2012.
- RILEM TC NBM 231 – Nanotechnology for Bituminous Materials. Chairman (2008 – 2013).
- TRB AFN15T – Task Force on Nanotechnology-Based Concrete. Chairman (2007-2013).
- TRB A2K05 – Committee on Modeling Techniques in Geomechanics (1999-2008).
- TRB A2K05(2) – Subcommittee on Reliability (2000 – 2006).
- TRB A2K06 – Committee on Subsurface Drainage (2000 – 2009).
- TRB A2B03 – Committee on Flexible Pavement Design (2002 – 2010).
- RILEM- Member of Technical Committee on Top-Down Cracking in Pavements (2002-2006).
- ASCE Geo-institute Committee on Geotechnics (2004-2006).
- ASCE Engineering Mechanics Institute Committee on Pavement Mechanics (2012 – 2020).

Organization of Conferences, Workshops and Webinars

- Member of the Scientific Board for the European Asphalt Pavement Association Conference, Ancona, Italy, 2025
- Standing International Advisory Committee and the Scientific Committee of “Advances in Materials and Pavement Performance Prediction Conference, Vienna, Austria, 2025.
- Standing International Advisory Committee and the Scientific Committee of “Advances in Materials and Pavement Performance Prediction Conference, Hong Kong, 2023.
- Sponsor and Co-Organizer, National Webinar Series on Resilience, Institute for Resilient and Sustainable Coastal Infrastructure, InteRaCt, (2020 – 2021). <https://interact.fiu.edu/webinars/webinar-series-sponsors/index.html>
- Member of the Scientific Committee, 2021 International Conference on Resource Sustainability - Sustainable Pavement Technologies (icRS SPT 2021), May 26-28, 2021, All Virtual.
- Member of the Organizing Committee, 2nd International Conference and Exhibition on Nanoscience and Nanotechnology, Naples, Italy, November 13-15, 2021. Nanoscience-Nanotechnology-2021.
- Member of the Executive Board and Chair of the Scientific Committee for the Transportation Research Congress, October, 2021, Hangzhou, China.
- Member of the Advisory Committee, 6th International Conference on Civil, Offshore & Environmental Engineering (ICCOEE2020), July 2021, Kuching, Malaysia.
- Member of the Standing International Advisory Committee, International Symposium on Frontier of Road and Airport Engineering (iFRAE) – 2021 Delft, July 12-14, 2021, Delft, Netherlands.
- Member of the Scientific Committee, ASCE International Airfield and Highway Pavements Conference, June 8 – 10, 2021, Virtual Event.
- Member of the International Advisory Committee for the International Conference on Transportation Infrastructure and Materials (ICTIM2021), Changsha, 2021.
- Standing International Advisory Committee and the Scientific Committee of “Advances in Materials and Pavement Performance Prediction Conference, San Antonio, TX, 2020.
- Member of the International Advisory Committee for the International Conference on “sustainable Pavement Technologies: Focus on Conservation of Resources and Emphasis on Recyclability,” Indian Institute of Technology Tirupati, October 2020.
- Member of the Advisory Committee and the Scientific Committee, 2NCC20 - 2nd International Conference on Nanotechnology of Cement and Concrete, Transportation Research Board, May 20-22, 2020, Irvine, California.
- Standing International Advisory Committee and the Scientific Committee of “Advances in Materials and Pavement Performance Prediction Conference, San Antonio, TX, 2020.
- Member of the Scientific Committee for the 2nd International Conference on 3D Construction Printing (3DcP 2019), Oct. 11-14th, 2019, Tianjin, China.

- Member of the International Advisory Committee for the International Conference on Transportation Infrastructure and Materials (ICTIM2019), Jinan, 2019.
- Member of the Advisory Committee, 1st China-US Symposium on Advances in Civil Infrastructure Intelligence and Sustainability, July 4th, 2019, Jinan, China.
- Member of the Advisory Committee for the 2018 International Seminar on Resilient Roads and Climate Change Adaptation, October, 16-19, Beijing, China.
- Member of the International Scientific Committee, RILEM 252-CMB Symposium on Chemo Mechanical Characterization of Bituminous Materials, Braunschweig, Germany, 17-18 Sept., 2018.
- Member of the Scientific Advisory Committee, International Society for Asphalt Pavements Conference, Fortaleza, Brazil, 2018.
- Scientific Advisory Committee for the Pavement Life-Cycle Assessment Symposium—2017, Urbana-Champaign, Illinois.
- Standing Member, Board of Governing Directors, Transportation Research Congress Meetings, Beijing, China.
- Member of the Scientific Board for the European Asphalt Pavement Association Conference, Zurich, Switzerland, 2017.
- Member of the International Advisory Committee of 2016 International Conference on Transportation Infrastructure and Materials (ICTIM), Xian, China, 2016.
- Member of the Scientific Board for the European Asphalt Pavement Association Conference, Zurich, Switzerland, 2017.
- Member of the Advisory Committee for the Transportation Research Congress, June 2016, Beijing, China.
- Member of the Standing Executive Committee, Chinese American Workshop (CEW2016) on Functional Pavement Design, Delft, June 2016.

Prior to Joining Texas A&M University:

- Member of the Scientific Committee for the 8th International RILEM Symposium on the Testing and Characterization of Sustainable & Innovative Bituminous Materials, Ancona, ITALY, Oct. 2015.
- Member of the Scientific Committee for the 4th International Transportation PhD Student Conference, Harbin, China, 2015.
- Member of the Scientific Advisory Committee for the 5th International Symposium on Nanotechnology in Construction (NICOM5), Chicago, USA, 2014.
- Organizer of the 2nd Annual International Transportation PhD Student Conference, Stockholm, 2014.
- Member of the Scientific Board for the European Asphalt Pavement Association Conference, Braunschweig, Germany, 2013.
- Co-organizer of the TRB Workshop entitled “There Is Plenty of Room at the Bottom: Nanotechnology Applications for Asphalt and Concrete Materials,” Jan. 13, 2013.
- Organizer of the Swedish-French Symposium on Energy, Stockholm, 2013.
- Organizer of the Sweden-China International Workshop on Pavement Engineering, Beijing, China, Nov. 2012.
- Organizer of the Swedish-French Symposium on Innovation in Transport, Stockholm, 2012.
- Member of the Scientific Advisory Committee, 4th International Conference on Asphalt Materials, Guangzhou, China, November 6-8, 2013.
- Member of the Steering Committee and the Scientific Board for the European Asphalt Pavement Association Conference, Braunschweig, Germany, 2013.
- Organizer of the International RILEM Symposium for Multiscale Characterization, Modeling and Simulation of Infrastructure Materials, April 2013, Stockholm, Sweden (Organized by the RILEM TC 231 – Nanotechnology for Bituminous Materials).
- Organizer of the Sweden-China International Workshop on Pavement Engineering, Beijing, China, Nov. 2012.
- Organizer for “Education and Research with an Innovation Perspective: A European Symposium in Honor of Dr. Subra Suresh, Director of the National Science Foundation,” Oct. 2011, Stockholm, Sweden.
- Organizer of the KTH International Scientific Advisory Committee Workshop, Stockholm, Sweden, Oct. 2011.
- Member of the Scientific Advisory Committee for the 4th International Symposium on Nanotechnology in Construction (NICOM4), Athens, Greece, 2012.
- Member of the Steering Committee and Scientific Advisory Committee for the 4th European Pavement and Asset Management Conference, Malmo, Sweden, Sept. 2012.
- Member of the Scientific Advisory Committee for the 2nd International Symposium on Asphalt Pavements and the Environment, Fortaleza, Brazil, Oct. 2012.

- Member of the Planning Committee for the Nordic Conference in Transport: Via Nordica 2012 - At a Crossroads, Reykjavik, Iceland, May 2012.
- Organizer for the RILEM Workshop on Nanotechnology for Bituminous Materials, Zurich, Switzerland, 2011.
- Member of the Steering Committee and the Scientific Board for the European Asphalt Pavement Association Conference, Parma, Italy, 2010.
- Organizer for the First International Conference in North America on Nanotechnology-Based Concrete, Irvine, CA, May, 2010. (Sponsored by TRB AFN15T – Nanotechnology for Concrete-Based Materials).
- Organizer for the Nordic Workshop on Heavy Vehicle – Road Interaction,” Stockholm, 2009.
- Member of the Scientific Board for the European Asphalt Pavement Association Conference, Lyon, France, 2008.
- Organizer for the TRB workshop on Nanotechnology-Based Concrete, 2008.
- Member of the Technical Committee for the International Conference on Advanced Characterization of Pavement and Soil Engineering Materials, Athens, Greece, 2007.
- NSF Workshop on Nanotechnology-Based Concrete, Washington, DC 2007.
- NSF Workshop on Nanotechnology for Cement-Based Construction Materials, Gainesville, FL 2006.

Recent Funded Grants and Contracts

At the University of Georgia: \$2,152,652

1. Co-Principal Investigator (Co-PI), Measurement of cement content and layer thickness variation of cement stabilized base and subgrade using ground penetrating radar, (GDOT/FHWA), (\$265,000), 11/2023 – 8/31/2026.
2. Co-PI (Lead for UGA) NSF Engines: Type-1: The MAGNET Engine: A Domestic Supply Chain Ecosystem for Electric Vehicles, \$1,000,000 (\$300,000 to UGA), 9/15/2023 – 9/14/2025.
3. Co-PI and Co-Director (Lead for UGA) Tier 1 UTC Center: Innovative Bridge Technologies/Accelerated Bridge Construction–University Transportation Center (IBT/ABC-UTC), 6/2023 – 5/2029, (\$700,000).
4. Lead Principal Investigator (LPI), “NPRP14C-0920-210017: Proactive Resilience Plan (PRoP): An Integrated Framework Applied to Critical Economic Sectors,” Qatar Research Foundation, (\$4,999,670 with \$610,000 going to UGA), 09/2022 – 08/2027.
5. Co-Principal Investigator (Co-PI), Building Flood Resilience by Building with Nature: Enhancing the Functioning of the Interdependent Natural-Built Infrastructure Systems in Urbanized Coastal Landscapes with Eco-Geomorphological Solutions, National Science Foundation - Geosciences Directorate, (\$67,000 UGA part), 09/2022 – 08/2024.
6. Principal Investigator (PI), “Develop A New Tool for Evaluating Infrastructure and Planning Impacts from Changes in Truck Traffic and Truck Technologies,” Texas Department of Transportation and the Federal Highway Administration (TxDOT/FHWA), (\$510,652), 09/01/2021 – 12/31/2023.

At Texas A&M University: \$5,436,000

7. Co-Principal Investigator (Co-PI), NSF SRS RN: Track 2: Reimagining the Chemical Heartland: Closing the loop on the oil-plastics-recycling nexus to forge a resilient circular economy, National Science Foundation (\$150,000), 08/16/2021 – 12/31/2023.
8. Co-Principal Investigator (Co-PI), “NASA NIAC: Regolith Adaptive Modification System (RAMS),” National Aeronautics and Space Administration (NASA), (\$125,000), 03/01/2021 – 12/31/2021.
9. Co-PI, “Texas A&M Lunar Surface Experiments Program,” Texas A&M University X-Grant Program (\$1.2M+), 2020 – 2023.
10. Co-PI, “CRISP 2.0 Type 2: Anatomy of Coupled Human-Infrastructure Systems Resilience to Urban Flooding: Integrated Assessment of Social, Institutional, and Physical Networks,” National Science Foundation (\$2M), 2019 – 2022.
11. PI, “Implementation of Models for the Degradation and Condition of Roads (Phases I, II, III),” Swedish Transport Administration (\$750,000), 2017 – 2022.
12. PI, “Evaluate Potential Impacts, Benefits, Impediments, and Solutions of Autonomous Trucks and Truck Platooning on Texas Highway Infrastructure,” Texas Department of Transportation (\$474,000), 2018 – 2020.
13. Co-PI, “Multi-functional and sustainable materials for 3D-printing environmentally adaptive resilient building,” Texas A&M University X-Grant Program (\$500,000), 2018 – 2020.
14. Co-PI, “RAPID: Houston in Hurricane Harvey (H3): Establishing Disaster System-of-Systems Requirements for Network-Centric and Data-Enriched Disaster Preparedness and Response Operations,” National Science Foundation (\$49,000), 2017 – 2018.
15. Co-PI, “Assessment of Vulnerability and Resilience in the Coupled Human-Physical Networks of Houston’s Flood Control, Emergency Response, and Transportation Infrastructure Systems in Hurricane Harvey,” National Science Foundation (\$188,000), 2017 – 2018.

At Aston University: \$496,000

16. Co-PI, "From Citizen to Co-innovator, from City Council to Facilitator: Integrating Urban Systems to Provide Better Outcomes for People," Innovate U.K. (\$496K), 2015 – 2018.

At KTH Royal Institute of Technology: \$43,525,000

17. PI, "Equipment for characterization of fracture, damage and permanent deformation of Materials," Knut and Alice Wallenberg Foundation (\$2,3M), 2008 – 2011.
18. PI, "Packing-based model for permanent deformation and stability of unbound materials," The Swedish Transport Administration (\$794K), 2008 – 2012.
19. PI, "Winter services of roads and highways: contracting, support and performance evaluation," The Swedish Transport Administration (\$794K), 2008 – 2012.
20. PI, "Implementation of the Superpave Indirect Tension Test in Sweden," The Swedish Transport Administration (\$159K) 2008 – 2010.
21. PI, "Development of mechanics-based purchasing criteria for roads," The Swedish Transport Administration (\$1,2M) 2008 – 2013.
22. PI, "Development of a new fundamental model for evaluating moisture damage in asphalt pavements," The Swedish Transport Administration (\$560K), 2008 – 2013.
23. PI, "Effects of packing characteristics and mixing sequence on the performance of asphalt mixtures," The Swedish Transport Administration (\$530K), 2008 – 2013.
24. PI, "Development of guidelines for evaluating the effect of heavy truck traffic on roads," The Swedish Transport Administration (\$794K), 2009 – 2014.
25. PI, "Purchasing and contracting of pavement projects using performance-based criteria," The Swedish Fund for the Development of the Construction Industry (\$477K), 2008 – 2013.
26. PI, "Evaluation of the effect of packing and mix sequence on the viscosity of asphalt mixtures," Akzo-Nobel Corporation (\$335K), 2009 – 2013.
27. PI, "Development of a new surface chemistry based evaluation system for moisture damage in asphalt mixtures," The Swedish Fund for the Development of the Construction Industry (\$477K), 2009 – 2013.
28. Co-PI, "RIQE: Real time evaluation of in-situ construction quality of pavements," The Swedish Transport Administration (\$794K), 2010 – 2015.
29. Co-PI, "In-situ determination of construction variability of flexible pavements," The Swedish Fund for the Development of the Construction Industry (\$238K), 2011 – 2013.
30. PI, "Development of a new design procedure for bituminous foam stabilization of road bases, Part I," Swedish International Development Cooperation Agency (\$187K), 2008 – 2014.
31. Co-PI, "Development of geologic and ecologic criteria for the evaluation of sustainable roads within an environmental perspective," The Swedish Research Council – FORMAS (\$2,6M+), 2010 – 2013.
32. Co-PI, "Fundamental model for blister formation on bridge decks," ASTRA – The Swiss Road Administration (\$143K), 2010 – 2012.
33. Co-PI, "Non-destructive laboratory evaluation of modulus, creep properties, and strain energy-based fracture criteria for asphalt mixtures," The Swedish Fund for the Development of the Construction Industry (88K), 2010 – 2012.
34. PI, "Non-destructive evaluation of asphalt paving materials," PEAB Construction AB (\$310K), 2010 – 2015.
35. PI, "Determination of the relationship between construction variability and service life of flexible pavements," Swedish Transport Administration (\$905K), 2010 – 2015.
36. PI, "Non-destructive Measurement and Characterization of Healing in Asphalt Mixtures," The Swedish Transport Administration (\$770K), 2013 – 2017.
37. PI, "Implementation of a New System for Assessment of Moisture Damage Potential of Asphalt Mixtures," Swedish Transport Administration (\$231K), 2013 – 2015.
38. PI, "Development of Mechanistic-Empirical Railway Track Design," The Swedish Transport Administration (\$770K), 2012 – 2016.
39. PI, "Atomic Force Microscopy Characterization of the Bitumen," The Swedish Transport Administration and NYNAS AB (\$46K), 2012 – 2013.
40. PI, "Permittivity Measurements of Bitumen and Aggregates," The Swedish Transport Administration (\$23K), 2012 – 2013.
41. Co-PI, "TRENOP – Transport Research with Novel Perspectives," The Swedish Government Strategic Research Area Program (\$28M+), 2010 – 2015.

At the University of Florida: \$7,170,000

42. PI, "Digital X-Ray Tomography System for Characterization of Asphalt Concrete, Portland Cement Concrete, Soil Specimens and Limestone Cores," Florida Dept. of Transportation /University of Florida (\$762K+), 2006 – 2007.
43. PI, "Development of Design Parameters for Mass Concrete Using Finite Element Analysis," Florida Dept. of Transportation (\$300K), 2005 – 2008.
44. PI, "Development of Windows-Based Layered Elastic System," Florida Dept. of Transportation (\$65K), 2005 – 2007.
45. PI, "Nano-modification Workshop on Cementitious Materials, Defence Threat Reduction Agency (\$20K), 2006.

46. PI, "NSF Workshop on Nano-modification of Cementitious Materials," National Science Foundation (\$40K), 2005 - 2006.
47. PI, "DTRA Student Associate Research Program," Defence Threat Reduction Agency (\$18K+), 2005 - 2008.
48. Co-PI, "Evaluation of the Potential of Hybrid Asphalt Binders Using GTR," Florida Department of Transportation (\$235K), 2006 - 2008.
49. PI, "Introduction of Fracture Resistance to the Design and Evaluation of Open Graded Friction Courses in Florida," Florida Dept. of Transportation/ Federal Highway Administration (\$295K), 2005 - 2008.
50. Co-PI, "Time-Dependent Changes in the Strength of Base Course Materials, Florida Dept. of Transportation/ Federal Highway Administration (\$200K), 2004 - 2007.
51. PI, "Rock Mass Modelling of Explosive Effects," Defence Threat Reduction Agency (\$175K), 2004 - 2006.
52. PI, "Evaluation of Superpave Mixtures Using Accelerated Pavement Testing, Florida Dept. of Transportation (\$286K), 2005 - 2008.
53. Co-PI, "Development of Mix Design Guidelines For Improved Performance Of Asphalt Mixtures," Florida Dept. of Transportation (\$160K), 2003 - 2005.
54. Co-PI, "Utilization of Phosphatic Clay Waste in Florida," Florida Institute of Phosphate Research (\$520K), 2004 - 2007.
55. PI, "Implementation of the Florida Cracking Model into the AASHTO 2002 Mechanistic-Empirical Pavement Design," Florida Department of Transportation (\$149K), 2004 - 2005.
56. PI, "Evaluation of Thick Open Graded and Bonded Friction Courses for Florida," Florida Dept. of Transportation/ Federal Highway Administration (\$427K), 2002 - 2005.
57. Co-PI, "Guidelines for use of Modified Binders with Superpave," Florida Dept. of Transportation / Federal Highway Administration (\$60K+), 2002 - 2004.
58. Co-PI, "Non-destructive Testing for Advanced Monitoring and Evaluation of Damage in Concrete Materials," Florida Dept. of Transportation/ Federal Highway Administration (\$305K+), 2001 - 2003.
59. PI, "Evaluation of Water Flow Through Pavement Systems," Minnesota Department of Transportation (\$42K), 2000 - 2002.
60. PI, "The use of Complex Modulus to Characterize the Performance of Asphalt Mixtures and Pavements in Florida," Florida Dept. of Transportation/ Federal Highway Administration (\$358K), 2000 - 2003.
61. PI, In-Situ Rock Modulus Apparatus," Florida Dept. of Transportation (\$125K), 1999 - 2003.
62. PI, "Development and Evaluation of Test Methods to Evaluate Water Damage and Effectiveness of Anti-Stripping Agents," Florida Dept. of Transportation/ Federal Highway Administration (\$353K), 1999 - 2003.
63. Co-PI, "Guidelines for Use of Modifiers in Superpave Mixtures," Florida Dept. of Transportation (\$310K), 1999 - 2003.
64. Co-PI, "Development of Compaction Quality Control Guidelines that Account for Variability in Pavement Embankments in Florida," Florida Dept. of Transportation (\$76K), 1999 - 2001.
65. Co-PI, "Comprehensive Monitoring of Field Performance of Superpave Projects," Florida Dept. of Transportation (\$1.4M), 1996 - 2004.
66. Co-PI, "Evaluation of Surface Initiated Longitudinal Cracking in Pavements," Florida Dept. of Transportation (\$308K), 1996 - 2004.
67. PI, "Field Measurement of Granular Base Drainage Characteristics," Univ. of Minnesota/MN Dept. of Transportation (\$55K), 1999 - 2000.
68. PI, "Evaluation of Liquefaction Potential for the Western Dams at Hibbing Taconite Company," Gale-Tec Engineering/ Hibbing Taconite Company (\$94K), 1999 - 2000.
69. PI, "Evaluation of Wick Drain Design for the Western Dams at Hibbing Taconite Company," Gale-Tec Engineering/ Hibbing Taconite Company (\$32K), 1999 - 2000.

Invited Lectures

- Plenary Lecture: "Resilient Transportation Infrastructure – A Way Forward," Presented at a Special Academy of Pavement Science and Engineering Symposium in honor of Prof. Bjorn Birgisson, Prof. Baoshan Huang and Prof. Tom Skarpas, at the AM3P Conference, Hong Kong, May 22-24.
- Plenary Lecture: International Forum on Resilience of Critical Infrastructure Systems: "New Vulnerability and Resilience Strategy Framework for Highway Infrastructure," November 18-20, 2022, Shanghai, China.
- Plenary Lecture: International Conference on Civil, Structural and Environmental Engineering, Webinar: "Resilient Infrastructure: A Way Forward," March 10-11, 2022
- National Webinar: "Resilient Pavements – A Way Forward," The Center for Integrated Asset Management for Multi-Modal Transportation Infrastructure Systems (CIAMTIS) – US DOT University Transportation Center, December 2021.
- Keynote Lecture: "Resilience of Transportation Infrastructure – A Way Forward," 2021 International Forum on Innovation and Emerging Industries Development (IEID 2021), Session on Modern Transportation Technology & Industry, Shanghai, December 2021.
- Opening Plenary Presentation at the Transportation Research Congress: "Resilient Pavements – A Way Forward," Hangzhou, China, October 2021.
- Forum Panellist at the World Engineering, Science and Technology Congress 2021, July 13-15, Kuching, Malaysia.

- Invited Keynote Lecture: “The Merging of Artificial Intelligence and Automation for Future Transportation Infrastructure.” At the International Forum on Innovation and Emerging Industries Development: Modern Transportation Technology & Industry, Shanghai, Sept. 15-16, 2020.
- Invited Keynote Lecture: “New Intelligent Decision Support System for Flexible Pavements.” At Annual Workshop of the International Association of Chinese Infrastructure Professionals (IACIP), Washington DC, January 2020.
- Autodesk University Round Table Lecture: “Freedom from Convention: Rethinking Design, Materials and Construction with 3D Printing, Online, November 20, 2020.
- Invited Keynote Lecture: “The Merging of Artificial Intelligence and Automation for Future Transportation Infrastructure.” At the International Forum on Innovation and Emerging Industries Development: Modern Transportation Technology & Industry, Shanghai, Sept. 15-16, 2020.
- Invited Speaker: The 7th International Conference on Durability of Concrete Structures, going to be held in Jinan, China from June 3-5, 2020.
- “A Unified Framework for Healing and Cracking in Asphalt Pavements,” Keynote Lecture, 4th International Conference on Transportation Infrastructure and Materials, Jinan, China, July 1-4, 2019.
- “Mechanics-Based Intelligent Decision Support System,” Keynote Lecture, Transportation Research Congress Workshop, National Center for Material Service Safety, Beijing, China, July 5th, 2019.
- “A Unified Fracture-Damage-Healing-Aging Framework for Asphalt Pavements,” Intelligent Decision Support System for Flexible Pavements,” Keynote Lecture, 1st China-US Symposium on Advances in Civil Infrastructure Intelligence and Sustainability, which will be held on July 4th, 2019.
- “New Mechanics-Based Pavement Analysis System,” VIP Lecture, 19th COTA International Conference of Transportation Professionals (CICTP2019), July 6-8, 2019. Nanjing, China
- “The Role of Infrastructure Resilience-Based Systems of Systems Analysis to Improve Mitigation And Adaptation of Coastal Communities due to Global Warming,” A Keynote Lecture at the International Seminar on Resilient Roads and Climate Change Adaptation, Beijing, October 16-19, 2018.
- “New Approach in Pavement Design,” A Keynote Lecture at the annual Summer Meeting of the Nordic Road Association (NVF), May 27-29, Reykjavik, Iceland.
- “Mechanics-based Pavement Design with a Multi-scale Perspective,” A Keynote Lecture at the 3rd International Conference on Transportation Infrastructure and Materials: Smart and Sustainable Transportation Infrastructure (ICTIM2018), June 1-4, Tianjin, China.
- “A Low Carbon Pavement Design Framework,” A Keynote Lecture at the Workshop on Sustainability Innovation in Transportation Infrastructure, University of Tennessee, Knoxville, TN, 2017.
- “Understanding Adhesion and Moisture Damage: A Fundamental Approach,” A Keynote Lecture at a Pavement Technology Symposium in Honor of Professor Robert Lytton, The 2nd Transportation Research Congress, Beijing, China, 2017.
- “Effect of Asphalt Mixture Sequencing on Sustainability,” A Keynote Lecture at The 2nd Transportation Research Congress, Beijing, China, 2017.
- “The Center for Infrastructure Renewal – A New Paradigm,” A Keynote Lecture at the 3rd International Symposium on Frontiers Road and Airport Engineering: Safer Road Infrastructure and Operations Management, Tongji University, Shanghai, 2017.
- “The Center for Infrastructure Renewal at Texas A&M,” An Invited Lecture, 2017 Transportation Engineering Conference, Hot Springs, Arkansas.
- “Center for Infrastructure Research – key Research Themes,” A Keynote Lecture at an International Workshop on Research Frontiers and Reviews, University of Science and Technology, Beijing, China, May 23, 2017.
- “A New Mechanics-Based Pavement Analysis and Design Framework,” A Keynote Lecture for the Transportation Research Congress 1st Meeting, Beijing, China, 2016.

Prior to Joining Texas A&M University:

- “Morphology-Based Model for Unbound and Bound Road Materials,” A Key Note Lecture at the 4th International Transportation PhD Student Conference, Harbin, China, 2015.
- “Toward Sustainable Roads,” Invited Lecture at the PSKLM International Expressway Conference & Exhibition (PIECE 2015), Kuala Lumpur, Malaysia, May 2015.
- “Managing Risks in Road Projects,” A Key Note Lecture at the PSKLM International Expressway Conference & Exhibition (PIECE 2015), Kuala Lumpur, Malaysia, May 2015.
- “New technologies in road building to suit the challenges of the Asian Environment,” PSKLM International Expressway Conference & Exhibition (PIECE 2013), Johor, Malaysia, Sept. 2013.
- “How green technology benefits the highway industry,” PSKLM International Expressway Conference & Exhibition (PIECE 2013), Johor, Malaysia, Sept. 2013.
- “Leveraging GIS for Improved Maintenance of Highways,” PSKLM International Expressway Conference & Exhibition (PIECE 2013), Johor, Malaysia, Sept. 2013.
- “Development of a New Mechanics-based Design Framework for Asphalt Pavements,” 2nd International Transportation PhD Student Symposium arranged by University of Illinois, Urbana-Champaign, Sept. 2013.

- “Roadmap for the Future,” Conference for the National Program on Strategic Vehicle Research Program (FFI), Stockholm, 2012.
- “Technology Integration for Smart and Resilient Transportation Infrastructure,” Keynote Lecture, NSF International Workshop on Smart and Resilient Transportation Infrastructure, Virginia Tech, Blacksburg, VA, April 2012.
- “The fourth power law: fact or fiction?,” Transport Forum, Linköping, Sweden, Jan. 2011.
- “American Roadmap for Nanotechnology in Concrete,” Closing presentation at the First International Conference in America on Nanotechnology-Based Concrete, Irvine, CA, May 2010.
- “Understanding the Benefits of Nanotechnology in Road Construction,” PSKLM International Conference & Exhibition, PSKLM International Expressway Conference & Exhibition (PIECE 2010), Kuala Lumpur, Malaysia, April 2010.
- “Trends in Engineering Education,” Invited Lecture at the 100 year Anniversary of the Icelandic Society of Engineering Technology, Reykjavik, Iceland, Oct. 2010.
- Panelists and Presenter “Scenarios for the 21st Century Expressway, PIECE 2010, Kuala Lumpur, Malaysia, April 2010.
- “The Future of Transport – A KTH Perspective,” Swedish-Swiss Innovation and Clean Tech Forum, Stockholm, 2009.
- Keynote Lecture entitled “Transport System of the Future,” the Technology and Growth (Teknik & Tillväxt) Conference, Stockholm, 2009.
- Panelist for the keynote panel on “The Transport Industry – An Industry for the Future!” the Technology and Growth (Teknik & Tillväxt) Conference, Stockholm, 2009.
- “New Concept in Pavement Design-From Research to Implementation,” Transport Forum, Sweden, Linköping, Jan. 2008.
- “Modeling and characterization of the microstructure of asphalt mixtures, The 2nd International Workshop on Microstructure and Micromechanics of Stone-based Infrastructure Materials, October 17-18, 2008.
- “Roadmap for Research: Nanotechnology for Concrete-Based Materials,” NSF Workshop, Washington, DC, Oct. 2007.
- “Nanomodification of Cement Paste to Improve Bulk Properties of Concrete,” NSF Workshop, Gainesville, FL, Aug. 2006.
- Panelist and Presenter: Industry/Agency Challenges and Solutions using Nanotechnology, NSF Workshop, Gainesville, FL, Aug. 2006.
- Keynote Lecture entitled “Updated Roadmap for Research for Nanotechnology in Cementitious Materials, including Portland Cement Concrete and Asphalt Concrete,” NSF Workshop, Gainesville, FL, Aug. 2006.
- “Advantages and Limitations of the Displacement Discontinuity Method with Tessellations for Representing the Microstructure of Geomaterials,” NSF International Workshop, Virginia Tech, Blacksburg, VA, 2006.
- “Evaluation of Higher Order 3-Node Triangular Elements for Gradient Elastoplasticity,” presented at the Mini-Symposium on Computational Plasticity at the Third MIT Conference on Computational Fluid and Solid Mechanics, Massachusetts Institute of Technology, Cambridge, MA, 2005.
- “The Displacement Discontinuity Method for Modeling Fracture in the Semi-Circular Bending Test,” Presented at the Third MIT Conference on Computational Fluid and Solid Mechanics, Massachusetts Institute of Technology, Cambridge, MA, 2005.
- “Implementation of the Florida Cracking Model into the AASHTO 2002 ME Pavement Design Framework,” TRB Workshop on Advances in the Modeling and Characterization of Asphalt Concrete Materials, Washington, DC. 2005.
- “Evaluation of Gradation Effects on Dynamic Modulus,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2005.
- “Evaluation of Predicted Dynamic Modulus for Florida Mixtures,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2005.
- “A Performance-Based Fracture Criterion for the Evaluation of Moisture Susceptibility in Hot Mix Asphalt,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2004.
- “The Need for Inducing Shear Instability to Obtain Relevant Parameters for HMA Rut-Resistance,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2004.
- “Effects Of One-Way And Two-Way Directional Heavy Vehicle Simulator Loading On Rutting In Hot Mix Asphalt Pavements,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2004.
- “A Multi-Layer Boundary Element Method for the Evaluation of Top-Down Cracking in Hot Mix Asphalt Pavements,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2004.
- “Development and Field Evaluation of Energy-Based Criteria for Top-Down Cracking Performance of Hot Mix Asphalt,” Invited Presentation at the Department of Civil Engineering, University of Parma, Italy, 2004.
- “Development and Evaluation of a Viscoelastic Boundary Element Method to Predict Asphalt Pavement Cracking,” Invited Presentation at the Department of Civil Engineering, University of Parma, Italy, 2004.
- “Prediction of Top-Down Crack Initiation and Crack Growth in Hot Mix Asphalt Pavements,” First International RILEM Conference on Cracking in Pavements – Mitigation, Risk Assessment and Prevention, Limoges, France, 2004.
- “Nanomodification of Hydrated Portland Cement Concrete Paste,” Presented at the First International Symposium on Nanofabrication, Dunkalk, Ireland, 2004.

- “Simulation of Fracture Initiation in Hot Mix Asphalt Mixtures,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2003.
- “Evaluation of Water Damage Using Hot Mix Asphalt Fracture Mechanics,” Annual Meeting of the Association of Asphalt Paving Technologists, Louisville, Kentucky, 2003.
- “Improved Performance by Consideration of Terrain Conditions: Soils, Drainage, and Climate,” Presented at the Eighth International Conference on Low Volume Roads, Reno, Nevada, 2003.
- “Ultrasonic Pulse Wave Velocity Test as Tool for Monitoring Changes in HMA Mixture Integrity due to Exposure to Moisture,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2003.
- “Simulation of Fracture Initiation in Hot Mix Asphalt Mixtures,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2003.
- “Development of an Efficient Hot Mix Asphalt Fracture Mechanics-Based Crack Growth Simulator,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2003.
- “Near Surface Stress States in Flexible Pavements Using Measured Radial Tire Contact Stresses and ADINA,” Presented at the Second MIT Conference on Computational Fluid and Solid Mechanics, Massachusetts Institute of Technology, Cambridge, MA, 2003.
- “Superpave Gyrotory Compactor with Shear Measurements as an Index Test for Instability Rutting Potential of Mixtures,” Presented at the 48th Annual Meeting of the Canadian Technical Asphalt Association, 2003.
- “Mechanisms of Instability Rutting in Hot Mix Asphalt Pavements,” Presented at the 47th Annual Meeting of the Canadian Technical Asphalt Association, 2002.
- “Evaluation of Stability and Sensitivity of Hot Mix Asphalt Mixtures Using Gyrotory Shear Strength,” Eighth International Conference on Asphalt Pavements, Copenhagen, Denmark, 2002.
- “The Mechanics of Crack Initiation and Crack Growth in Hot Mix Asphalt Mixtures,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2002.
- “Asphalt Mixture Analyses to Evaluate Gradation Effects,” Presented at the 46th Annual Meeting of the Canadian Technical Asphalt Association, 2001.
- “Structural Properties of Granular Base Materials Using Gyrotory Test Procedures,” First International Conference on the World of Asphalt Pavements, Sydney, Australia, 2000.
- “Prediction of the Viscoelastic Response and Crack Growth in Asphalt Mixtures using the Boundary Element Method,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2002.
- “Uncertainty in LRFD Phi Factors for Driven Prestressed Concrete Piles,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2002.
- “Mix Asphalt Fracture Mechanics: A Fundamental Crack Growth Law for Asphalt Mixtures,” Presented at a Technical Symposium at the Annual Meeting of the Association of Asphalt Paving Technologists, Colorado Springs, CO, 2002.
- “Simulation of Cracking Behavior of Asphalt Mixtures Using Random Assemblies of Displacement Discontinuity Boundary Elements,” Presented at the Sixteenth ASCE Engineering Mechanics Conference, New York, NY, 2002.
- “Asphalt Mixture and Loading Effects on Top-Down Cracking of Pavements,” Florida Department of Transportation (FDOT) “FICE and FDOT Design Conference 2002,” Orlando, Florida, August, 2002.
- “Development of Tentative Guidelines for the Selection of Aggregate Gradations in Hot Mix Asphalt,” Presented at the Annual Meeting of the American Society of Testing and Materials, Orlando, FL, 2000.
- “Predictions of Seasonal Variations in Flexible Pavements at the Mn/ROAD Site,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2000.
- “Drainage of Pavement Material: Design and Construction Issues,” Presented at the Annual Meeting of the Transportation Research Board, Washington, D.C., 2000.
- “Numerical Stability Properties of Elastodynamic Direct Boundary Element Methods,” Presented at the Fourteenth Engineering Mechanics Conference, Austin, TX, 2000.
- “Use of Modifiers in Hot-Mix Asphalt in Florida,” Florida Department of Transportation (FDOT) “FICE and FDOT Design Conference 2000,” Orlando, Florida, August 8, 2000.
- “An Overview of Operational Aspects Relating to Volumetric Design and Construction of Asphalt Paving Mixtures,” Presented at the 44th Annual Meeting of Canadian Technical Asphalt Association, 1999.
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