



BIOGRAPHIES

AFTAB A. MUFTI, C.M. Ph.D., P.Eng., FRSC, FCAE, FEIC, FCSC, FASCE, FISHMII, FIFCC, FIABSE, FRSA



Dr. Aftab A. Mufti is an Emeritus Professor of Civil Engineering at the University of Manitoba, Winnipeg, Manitoba, Canada. He is also the former Scientific Director and President of the Innovative Structures with Intelligent Sensing Canada Research Network, a Network of Centres of Excellence. His research interests include FRPs, FOSs, FEM, bridge engineering, Structural Health Monitoring (SHM). At the University of Manitoba he introduced new research area of Civionics Engineering to monitor deteriorating infrastructure. He has authored or co-authored 5 books, plus provided chapters for 2 others, edited 9 books, and written more than 350 technical publications. Dr. Mufti is the recipient of 24 awards. He is the holder of several patents on the steel-free bridge deck concept, of which he is the principal developer. He has been involved in the writing of bridge design codes since 1992, and was the Chair of the Technical Sub-Committee on the Fibre Reinforced Structures of the Canadian Highway Bridge Design Code, published in 2006. He is a fellow of 9 societies. On November 2013 he was elected as a Fellow of the Royal Society of Canada (FRSC) and on July 1, 2010 he was appointed as a Member of the Order of Canada, highest civilian honour bestowed on Canadian citizens, for his contribution to and leadership in the field of civil engineering, notably for researching the use of advanced composite materials and fibre optic sensors in the construction and monitoring of bridges and other infrastructures.

DOUGLAS THOMSON, Ph.D, P.Eng.



Dr. Douglas Thomson is a Professor in the Department of Electrical and Computer Engineering at the University of Manitoba. He received his Ph.D. from Stanford University (1986). He has held positions as Chief Technology Officer and member of the Board of Directors at MFI Technologies (1997-2000), Associate Dean Research (1999-2004, 2011-2017), Director (2009-2011) and Associate Director (2011 to present) of SIMTReC (previously the ISIS Canada Resource Centre). He has been a member of the International Society of Structural Health Monitoring of Intelligent Infrastructure (ISHMII) council member (2006-present). ISHMII is the only international society devoted to the structural health monitoring of civil infrastructure); Member of the ISIS Canada (NCE) Research Management Committee (2003-2009) - ISIS Canada is a research network dedicated to finding solutions to Canada's civil infrastructure problems.

Recently developed wireless sensor technology, two patents on this technology have been granted and a license has been granted to a Canadian company, which has manufactured over 4000 of these sensors for use the rail industry. He is the co- inventor of a number of instrumentation systems, including a record setting capacitance sensor and a passive wireless sensor for use in monitoring civil structures. He has published over 110 journal papers, is co-inventor on 7 patents. His present research interests are sensors for civil structures monitoring, wireless sensors and biomaterial sensing in micro-fluidics systems.

CHAD KLOWAK, PhD, P.Eng.



Dr. Chad Klowak is the structures lab manager for the W.R. McQuade Heavy Structures Laboratory and the IKO Construction Materials Testing Facility in the Department of Civil Engineering at the University of Manitoba. Chad received his B. Sc. Degree in civil engineering from the University of Manitoba in 2001. While working as an engineer for the facility, he pursued his M. Sc. degree specializing in structures on a part time basis. He completed that degree in 2007 as well as assumed the position of laboratory manager. Chad completed obtained his Ph. D. from the University of Manitoba in 2015. His research included the important discovery that cantilever slab overhangs, subjected to concentrated wheel loads, exhibit arching-action. Chad has over 16 years of research and testing experience, consisting of full-scale destructive testing as well as material properties testing. He has over 25 publications including invited and keynote papers as well as 6 publications in refereed scientific journals. Chad has a passion for the use of innovative new materials in structures and the application of civionics and structural health monitoring demonstrated by his practical experience on several high profile real structure projects.

CYRUS SHAFAI, Ph.D, P.Eng.



Cyrus Shafai (S'11–M'90) received the B.Sc. degree in electrical engineering from the University of Manitoba in 1990, and the M.Sc. degree from the University of Manitoba in 1993. He received the Ph.D. degree in electrical engineering from the University of Alberta in 1997. Research included scanning probe techniques for microscopy and surface analysis, and thin film thermoelectric materials and devices.

In 1998 he joined the Department of Electrical and Computer Engineering, University of Manitoba, and holds the rank of Professor. His contributions to undergraduate electrical engineering education was instrumental in him receiving an Associate NSERC Design Chair in 2012. He established the University of Manitoba Nano-Systems Fabrication laboratory, and has worked to foster university and industry collaboration in micro-system development. He has received several awards for his research, including the University of Manitoba

Rh Award for Applied Sciences in 2006. His research has covered many topics in the microfabrication and MEMS area, and has included close collaboration with many industrial partners. His research has included MEMS technologies and sensors, sensors for monitoring high voltage infrastructure, smart agricultural sensors, genetic algorithms for MEMS design, RF MEMS and engineered RF surfaces, MEMS optics and adaptive optics, and micro-fluidic cooling

BAIDAR BAKHT, C.M, D.Sc., P.Eng.



Currently Adjunct Professor of civil engineering at the University of Manitoba, Canada, Baidar Bakht retired from the Ontario Ministry of Transportation (MTO), Canada, in 1997 as its Principal Research Engineer. He has been involved in the writing of bridge design codes since 1976, and was the chair of the Technical Committee of the first edition of Canadian Highway Bridge Design Code, published in 2000.

With a D.Sc. from London University, Baidar Bakht has written and edited several books on various aspects of bridge engineering, including 'Bridges: analysis, design, structural health monitoring' (Springer International Publishing, Switzerland). His many publications in bridge engineering include those dealing with bridge analysis, structural health monitoring, soil-steel bridges, timber bridges and the use of fibre reinforced concrete in bridges. During his tenure with MTO and later, he has monitored the performance

of least two hundred well-instrumented highway bridges. In 2014, he was appointed as a member of the Order of Canada.

KATHRYN ATAMANCHUK, P.Eng., MBA, PMP



Kathryn Atamanchuk is an Engineer-in-Residence and the Industry Partnerships Facilitator for the Faculty of Engineering at the University of Manitoba. In these roles, Kathryn develops and delivers industry related courses (focused on aerospace) and acts as a facilitator to help strengthen collaborations between the University and industry partners. Prior to joining the University, Kathryn worked at StandardAero for 13 years in various project engineering and technical leadership roles.

ANDREW (ANDY) HOROSKO, B.E., MSc.



Andrew (Andy) Horosko, B.E., MSc, President, Beau-Bay Consulting Ltd and volunteer with the Structural Innovation and Monitoring Technologies Resource Centre (SIMTReC) at the University of Manitoba.

Andy graduated with a diploma in Civil Technology from the Manitoba Institute of Technology in 1968, received a Bachelor of Science in Civil Engineering (with Great Distinction) from the University of Saskatchewan in 1974 and a Master of Science in Civil Engineering from the University of Saskatchewan in 1981. Throughout his career Andy maintained an up to date knowledge of the transportation industry through many associations, societies, conferences, research activities and journals.

Andy has been active nationally and internationally in the transportation community. His accomplishments include serving as President and a long standing member of the Board of Directors of the Transportation Association of Canada, chair of the Canadian Council of Deputy Ministers responsible for Transportation and Highway Safety and founding chair of their Engineering and Research Support Committee, Canada's representative on the SHRP 2 Oversight Committee and the American Association of State Highway and Transportation Officials Standing Committee on Research, Vice-President of the tri-national North American Super Corridor Coalition, and a member of the Board of Directors, the Research Management Committee and the Technology Transfer Committee of ISIS Canada (a Canadian Network of Centres of Excellence).

Andy worked with Chevron Standard, the University of Saskatchewan and the public sector in both Saskatchewan and Manitoba. While on staff with Saskatchewan Highway and Transportation, he spent two years in Washington DC as a visiting researcher from Canada to the US Strategic Highway Research Program. Of particular note, Andy was Deputy Minister of Highways and Transportation / Infrastructure and Transportation in the province of Manitoba from 1993 to 2009. Upon retirement from a 33-year career in the public sector, Andy established Beau-Bay Consulting Limited with the National Academies of Science in Washington DC. as a major client from 2009 through to 2015.

Andy's contribution to the advancement of transportation at the provincial, national and international level was recognized at the 2009 Canadian Transportation Awards ceremony in Vancouver BC where Andy was named Canada's Transportation Person of the Year for 2009. In 2011, he was recognized at the Canadian Society of Civil Engineers annual meeting where he was presented the Sanford Fleming Award for outstanding contribution to the development and practice of transportation engineering in Canada.

KAREN BOOTH



Winnipeg born, Karen's interest in engineering began early when her inventor, engineer, entrepreneur father took her with him when he toured gravel pits and construction sites. Her mother, an artist and gallery owner, steeped her in the creative arts. In time, this combination developed a lifelong interest in building – both initiatives and organizations – and a passion for supporting the arts and sciences.

Adventure and new opportunities led Karen to the UK for 16 years where she continued her path, holding senior roles in the non-profit and private sectors. At the National Museum of Science & Industry (UK), Karen helped to execute major changes in the culture of the museum resulting in significant increases in revenue and a patron focused approach. Joining the Royal Albert Hall (UK) at a time of major change and redevelopment, she helped transition the venue into a customer focused and dynamic organization – significantly increasing event revenue and developing highly successful co-promotions with organizations including the Bolshoi Ballet and Cirque du Soleil. Moving to the private sector, as partner and COO for UK communications company, Carlyle Media Group, Karen co-founded the Internet professional services division and created the expansion strategy which put Carlyle into the top ten corporate communications companies in London. With her partners, she engineered a buy-out from global Nasdaq traded internet services company Rare Medium, becoming VP Operations of the London office.

Returning to Canada, Karen went on to join Mitacs (Canadian not-for-profit organization supporting industrial and social research and innovation), where she contributed to the growth of the organization for thirteen years. As Executive Vice President Strategic Enterprises she led new initiatives with government, universities, organizations, and industry sectors across Canada, working within all disciplines and sectors from education and health to agriculture and food, mining, and construction.

Karen now utilizes her broad experience in management, business development, marketing, and operations gained over 30 years in both the private and non-profit sectors, for the benefit of her clients. She specializes in advising on and facilitating strategic and operational planning, government relations, and communications; identifying and negotiating partnerships; and the creation, development and implementation of new and innovative initiatives that help advance the goals of an organization. Joining SIMTReC as Strategic Consultant in 2016, she is helping to secure success for the next phase of the Centre's expansion.

Karen is married to her Oscar-winning film producer-writer husband, Dale Hartleben. They have lived for the past 16 years in BC, recently choosing to move and live in Winnipeg to be close to family and cottage. Karen has a BA from the University of Winnipeg and a Diploma of Public History from Simon Fraser University.

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LINKS:

For more information about SIMTReC, see www.simtrec.ca

If you would like more information about this topic, please contact

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