

Dr. John Fisher is professor emeritus of civil engineering at Lehigh University and director emeritus of the ATLSS Engineering Research Center. Dr. Fisher is a graduate of Washington University, St. Louis, Missouri, with M.S.CE and Ph.D. degrees from Lehigh University. A structural engineer, Dr. Fisher is a specialist in structural connections, the fatigue and fracture of riveted, bolted, and welded structures, the behavior and design of composite steel-concrete members, and the performance of steel bridges. In 1986 he was elected a member of the National Academy of Engineering. In 1989 he was elected an Honorary Member of the American Society of Civil Engineers. He was the first academic to receive the Construction-Man-of-the-Year Award from ENR in 1987 and was named one of the 125 engineers identified by ENR editors for outstanding contributions to the construction industry since 1874 in 1999. In 1992 he was awarded the Frank B. Brown medal by the Franklin Institute for his contributions to structural engineering. In 1995 he was awarded the John A. Roebling Medal for lifetime Achievement in Bridge Engineering. In 1997 he was named the Distinguished Lecturer by the Transportation Research Board and the Portevin Lecturer by the International Institute of Welding. In 2000 he was awarded the John Fritz Medal for researching safety and performance of steel structures for the public good, and the Transportation Research Board Roy W. Crum Distinguished Service Award for his contributions to bridge engineering and research. In 2001 the International Association of Bridge and Structural Engineering elected him the Laureate of the International Award of Merit in Structural Engineering. In 2002 the International Association of Bridge Maintenance and Safety awarded him for Bridge Safety. In 2006 he received the Geerhard Haaijer Award for Excellence in Education from the American Institute of Steel Construction. And in 2007 he was awarded the Outstanding Projects and Leaders (OPAL) Lifetime Achievement Award in Education by the American Society of Civil Engineers. Dr. Fisher has published over 275 articles, reports and books in scientific and engineering journals.

Dr. Mazen Wahbeh, P.E., has a Ph.D. in Structural Dynamics, MS in Materials Engineering, MS in Structural Engineering, and B.S in Civil Engineering. Throughout Dr. Wahbeh's career, he has managed and contributed to the completion of many mega size infrastructure projects both nationally and internationally by putting quality first and maintaining the highest regard for technical details. For over 25 years, Dr. Wahbeh's portfolio has included illustrious ventures that are often first of their class and structurally significant. Some of these projects besides the New Bay Bridge are the Alfred Zampa Memorial Bridge, built to replace the seismic problems of the original Carquiñez Bridge, the San Diego-Coronado Bridge, once voted "Most Beautiful Bridge" in 1970 by the American Institute of Steel Construction, the retrofit of the Vincent Thomas Bridge, which claims the title of the first welded suspension bridge in the United States, the Benicia-Martinez Bridge which carries four lanes of traffic as well as a path for pedestrians and bicyclists, the deck replacement of the Verrazano-Narrows Bridge—a double decker suspension bridge which has the longest bridge span in the Americas, and the Boston Central Harbor, third tunnel alignment Project. Additionally, Dr. Wahbeh serves as a Research Professor at the University of Southern California

Douglas E. Williams, P.E., is a consulting metallurgical and welding engineer in the San Francisco Bay Area. He has over 43 years of experience in metalworking industries and specializes in materials, welding, inspection and quality control/assurance of structural steel and piping. Current clients include engineers, fabricators, owners and testing laboratories and cover the range of metallurgical and welding engineering from new bridge design, fabrication and erection, through CWI training and retrofit implementation to weld inspection. Doug is the consultant for welding issues to the T.Y.Lin – Moffatt & Nichol Joint Venture for the design the new East Span of the San Francisco-Oakland Bay Bridge, including the Skyway and Self-Anchored Suspension sections. He was the subcontractor's welding engineer for field welding the orthotropic deck sections of the new Alfred Zampa (Carquinez) Bridge and has worked on other bridges in the Bay Area, Seattle, Mexico and elsewhere. He has worked in varied industries that include nuclear, pipeline, offshore structures, marine vessels, buildings and bridges. Doug has published papers in five major technical conferences including "Codifying Orthotropic Closed Rib Fabrication" for the Third Orthotropic Bridge Conference in 2013. Also, he was Chair for Ch. 6 "Test Methods for Evaluating Welded Joints" of the American Welding Society Welding Handbook, Vol. 1, 9th Ed., 2001. He is a Registered Professional Engineer (Metallurgy) in California, a Registered International Welding Engineer through IIW and an AWS Senior CWI.

Dr. Herbert E. Townsend received a BS in Metallurgical Engineering from Drexel University in 1963, and a Ph.D. in Materials Science and Engineering from the University of Pennsylvania in 1967. He is a registered Professional Engineer, a Fellow of NACE and ASTM, and has authored or coauthored over 85 publications 19 US Patents. From 1967 to 2001, he worked in the research department of Bethlehem Steel Corporation where he held the positions of Engineer, Supervisor, Manager, and Senior Consultant, and was generally active in the development of corrosion-resistant steel products. Significant achievements included: advancing our understanding of the stress corrosion cracking and hydrogen embrittlement of steel fasteners, wire, plate, and pipelines, and establishing the long-term atmospheric corrosion performance of galvanized, Galvalume, and weathering steels. He provided leadership in establishing Bethlehem's laboratory capabilities in electrochemical testing and surface analysis, including EIS, Auger, XPS, and Raman spectroscopies. A major accomplishment was to lead a research team in developing the relationships between processing, microstructure, and properties that led to the technical and commercial success of Bethlehem's proprietary, hot-dip 55% Al-Zn-alloy coated sheet, Galvalume. He also chaired a joint automotive/steel task force in the successful development of the SAE J2334 accelerated laboratory corrosion test for coated sheet steel automobile body panels. He has been active in AISI, ASTM, NACE, and SAE, and has received numerous awards, including the prestigious NACE Speller Award for significant contributions to corrosion engineering. Upon retirement from Bethlehem Steel in 2001, he founded Townsend Corrosion Consultants, Inc., which provides consulting and expert testimony on the corrosion performance of low-alloy and coated steels for the construction and automotive industries.

Dr. Louis Raymond has been a pioneer leading the way to a safer world for the past 40 years by incorporating aerospace technology into non-aerospace industries. He received his B.S., and M.S. in Mechanical Engineering and Stress Analysis from Carnegie Mellon University in '54, 56 and his PhD Metallurgy, UC Berkeley in 1963. Dr. Raymond, FASTM, FIAE, worked for 20 years in the R & D Laboratories of the Aerospace Corporation and served as chairman of ASTM Committee F07 on Aerospace and Aircraft and Subcommittee F07.04 on Hydrogen Embrittlement. In 1980, he formed his own company, LRA Engineering Consulting and R&D Labs that specializes in fastener material selection, design and analysis. He has consulted on several bridge projects, including recent work on California's Carquinez Bridge regarding zinc plated bolts, DOT Wisconsin Bridges (Prairie du Chien and Milwaukee Harbor Bridges), and DOI (Offshore Platforms). His company, LRA Engineering Consulting and R & D Labs, specializes in fastener material selection, design and analysis. In 2006, Dr. Raymond received the Industrial Fasteners Institute (IFI) Roy B. Trowbridge Technology Award, in recognition of significant contributions toward the understanding of hydrogen embrittlement through years of research into accelerated methods for measuring threshold stress and development of the incremental step load technique as a practical means for quantifying and controlling hydrogen embrittlement in fasteners.

Dr. Jeffrey Gorman is a consultant assisting the Bay Area Toll Authority in monitoring the anchor rod situation. He was a founder of Dominion Engineering, Inc. in 1980, a consulting engineering firm. He specializes in materials, corrosion, and failure analysis questions. He obtained his PhD in Engineering Science in 1968 from CalTech.

Dr. Karl H. Frank is professor emeritus of The University of Texas and Chief Engineer of Hirschfeld Industries, the largest steel bridge fabricator in the U.S. He has over 40 years of experience in the design and behavior of steel bridges. His research formed the basis of the design of bolted and welded connections, composite plate girders, and fatigue behavior of connections and cables in bridges. He has been awarded by ASCE the J. James R. Croes Medal for his work on the corrosion protection of cable stays and the Raymond C. Reese Research Prize for his work on the fatigue behavior of fillet welds. He recently received a life time achievement award from the American Institute of Steel Construction for his work on the fatigue and fracture of steel structures. He was the director of the Ferguson Structural Engineering Laboratory and while at FHWA helped develop the fracture toughness requirements for bridge steels. He was a consultant on the I-35 Bridge collapse and the Sabo Bridge cable connection failure in Minneapolis, stress corrosion anchor bolt failures at the Doha airport, and fracture behavior of the BART tube during a seismic event. He currently serves on the peer review panel on the retrofit of the main span of the Golden Gate Bridge.

Dr. Alan W. Pense received a BA from Cornell University and M.S. and Ph.D. Degree from Cornell University. He joined the faculty of Lehigh University and served the university as Department Chair, Dean of Engineering and as Provost and Vice President. He is a specialist in physical and mechanical metallurgy and his teaching and research are in these areas. He retired as Provost in 1997 and joined the staff of the staff of the Center for Advanced Technology for Large Structural Systems, a Center he helped create. He remains a Professor Emeritus at Lehigh University. He is an active member of the ASM International and the American Welding Society. He was elected a Fellow of both societies. During his career he has also received awards from both societies for his technical publications and lectures. He also received awards from Lehigh University for his teaching and leadership during his career as a faculty member and administrator. He has had an active career as consultant to government agencies and private companies, has served as an expert witness in court and has been a consultant to Universities in the US and overseas. He was elected to the National Academy of Engineering in 1992

Dr. Sheldon W. Dean, Jr., received his doctorate from MIT in chemical engineering. He was employed by the International Nickel Company in their Bayonne Research Laboratory in the Corrosion Section for 3 years investigating the stress corrosion-cracking behavior of maraging steels, nickel alloys for nuclear power plant applications and several other projects. He then joined the Olin Metals Research Laboratory in New Haven where he served in several positions including supervising the Corrosion Group. Thereafter he joined Air Products and Chemicals, Inc. in Allentown, PA, in the Corporate Engineering and Safety Department where he headed the Corrosion and Materials Group for 26 years. He is currently the president of Dean Corrosion Technology, Inc., a consulting company specializing in corrosion in industry. Dr. Dean has been author of 109 articles on a variety of subjects mainly in the corrosion field. He has also been the editor or coeditor of ten books on corrosion and has written three monographs on subjects related to corrosion and corrosion testing. He was also the first editor of the Journal of ASTM International. He has twelve US patents, and has been the primary author of ten standards. He is a fellow of the following organizations: AIChE, ASTM International, NACE International, the Materials Technology Institute, and the American Institute of Chemists. He is a Professional Engineer certified by the State of Connecticut, and he is certified as a Corrosion Specialist by NACE International. He has won several prestigious awards including the NACE Frank Newman Speller Award for excellence in corrosion engineering, the ASTM Committee G-1 Francis LaQue Award for contributions in corrosion standards development, the ASTM Award of Merit, and the ASTM William Cavanaugh Award for contributions to the world-wide standardization process.

Dr. Robert Heidersbach is a metallurgical engineer with an undergraduate degree from the Colorado School of Mines and a PhD from the University of Florida. He is a registered Professional Engineer in California in both metallurgical and corrosion engineering. He has worked in the construction industry as an Army Corps of Engineers officer in Germany and Vietnam, and, after graduate school, he was the corrosion and failure analysis metallurgist for the Corps at the Construction Engineering Research Laboratory (CERL) in Champaign, Illinois. He was responsible for the installation of the first scanning electron microscope at a Corps of Engineers laboratory. While at CERL he became involved in consulting and recommendations associated with high-strength steel fasteners for a variety of structures as well as becoming the founding chair of the National Association of Corrosion Engineers' Corrosion of Metals in Concrete Committee. In 1974 he became a faculty member in Ocean Engineering at the University of Rhode Island before moving to Oklahoma State University in 1981. He left OSU in 1986 to become the department head of the Materials Engineering program at Cal Poly-San Luis Obispo, where he retired in 2002. Ever since leaving his government job in Illinois, he has been actively involved in corrosion-related consulting and failure analysis. This includes consulting on five continents about a variety of issues and on structures ranging from corrosion in masonry buildings, highway bridges, the Statue of Liberty, and the NASA Kennedy Space Center. He is the author of one book, *Metallurgy and Corrosion Control in the Oil and Gas Industry*, and is recognized as a NACE Fellow for his research on corrosion.

Dr. Thomas Langill received his BS and MS in Physics from John Carroll University, and his Ph.D. in Materials Science and Engineering from Northwestern University in 1980. Dr. Langill has been involved in the designing, building and testing of laser systems for use in military systems. He provided the materials research for the design of the first production laser diode array for use in a spacecraft laser communications systems. He has written many process specifications for military program materials and production sequences. Dr. Langill has been with the American Galvanizers Association for 20 years as its Technical Director. He has been active in helping shape the research programs for galvanizing programs. He has provided technical support for many Specifiers and engineers who have technical questions about galvanized steel or its use in a particular environment. He writes a regular feature in the American Galvanizers Association Magazine on problems related to hot dip galvanizing. He has authored and presents a seminar series on Processing Details in the Hot Dip Galvanizing Industry. He is the Chairman of the ASTM Subcommittee A05.13 that authors and edits specifications on hot-dip galvanizing of steel articles. He is a member of NACE, ASM, SSPC, ASCE, SME, ISS, and AWS. He is active in presenting papers on hot-dip galvanized steel as well as editing reference articles in ASM volumes and NACE publications on the galvanizing process. He has designed and written a course in training inspectors of hot-dip galvanized articles.