## SHORT COURSE 1 VIBRATION PROBLEMS and SOLUTIONS in PUMPS and TURBOMACHINERY



**Bill Marscher, P.E.,** is President and Technical Director of Mechanical Solutions, Inc., where he and other staff perform design, analysis, testing, and troubleshooting of pumps and miscellaneous turbomachinery. Bill has over 40 years of hands-on as well as design experience with rotating machinery in the aerospace, power, and process industries. Bill is presently one of the US representatives to the ANSI/ ISO Machinery Acoustics and Vibration Standards Committee ISO TC108/S2, is past Board Chair of the Society for Machinery Failure Prevention Technology (MFPT), and is past President of the Society of Tribologists & Lubrication Engineers (STLE). He is an Hydraulic Institute Standards Partner, and is a ten-year veteran of the TAMU Pump Symposium Advisory Committee.

**Eric J. Olson** is the VP of Engineering at Mechanical Solutions, Incorporated. He's a graduate marine engineer with about thirty years of experience in turbomachinery. Previously he was a field engineer and then regional manager at Dresser Industries.



**Maki M. Onari** is Manager of Turbomachinery Testing at Mechanical Solutions, Inc. (MSI), in Whippany, New Jersey. He is responsible for field vibration testing involving ODS and Modal analysis. His career spans more than 16 years primarily working with rotating equipment analysis and troubleshooting in the petrochemical, refinery, and power generation industries. Prior to joining MSI, Mr. Onari was a Rotating Equipment Engineer in PDVSA-Venezuela responsible for the predictive maintenance of one of the largest petrochemical complexes in Latin America. Mr. Onari received his B.S degree (Mechanical Engineering, 1996) from the Zulia University in Venezuela. He is a member of ASME and the ISO TC108/S2 Standards Committee for Machinery Vibration.