PROFESSIONAL DEVELOPMENT SERIES – UPCOMING APRIL EVENTS:

April 4: David Darwin: Concrete Durability

When designing or evaluating concrete structures, engineers and inspectors often place major emphasis on concrete compressive strength, even though exceedingly few concrete structures fail due to low strength. Most failures, rather, occur due to a lack of durability, which is often manifested in the form of reduced service life. This presentation covers the basis for each of the principal causes of low durability and the methods that are available to the engineer to limit durability problems and design and build long-lasting structures.

David Darwin, Ph.D., P.E., is the Dean E. Ackers Distinguished Professor and Chair of the Department of Civil, Environmental and Architectural Engineering Department at KU. He is a Fellow and past President of the American Concrete Institute, a Fellow and Distinguished Member of the American Society of Civil Engineers, a Fellow and former member of the Board of Governors of the Structural Engineering Institute, and former Editor of the Journal of Structural Engineering. His major research areas are the behavior and durability of reinforced concrete structures, cracking in reinforced concrete structures, bond between concrete and reinforcing steel, and corrosion of reinforcing steel.

April 11: Elaina J Sutley: Preventing Natural Hazards from Becoming Natural Disasters

Preventing natural hazards from becoming natural disasters has become a key goal in efforts by national-level agencies, such as FEMA, the NSF, and NIST. As engineers, how can we prevent natural hazards from becoming natural disasters? A state-of-the art review on characterizing and modeling environmental loadings relevant to the area (e.g., earthquakes and aftershocks, riverine flooding, tornadoes, and wildfires) will be presented. Followed by a holistic perspective on achieving community resilience through modeling social, economic and physical infrastructure systems.

Elaina J. Sutley, Ph.D., is an assistant professor of structural engineering in the KU CEAE Department. Elaina specializes in the design of wood structures, and is an expert in incorporating social and economic metrics into community-level retrofit planning for natural hazards. Elaina is regularly teaching the undergraduate course on structural analysis, currently teaching the graduate course on the design of wood structures, and is in the process of developing a new graduate-level course on community resilience to natural disasters.

April 18: John Shelley: Reservoir Sediment Management

Sediment accumulation in water-supply reservoirs is a growing problem that requires innovative solutions. Students will see examples of strategies that have been successfully applied at reservoirs around the world and learn methods for selecting from among potential strategies.

John E. Shelley, Ph.D., P.E., is a Hydraulic Engineer with the U.S Army Corps of Engineers. He works in the River Engineering and Restoration Section of USACE’s Kansas City District. John earned a Ph.D. in civil engineering from KU in 2012. John is an expert in river hydraulics, mobile-bed modeling, quantitative geomorphology and stream restoration design.
April 25: Heather McCain: *Team Dynamics*

This course offers a short overview of team dynamics and managing change. Topics include team initiation, stages, facilitation techniques, organizational roadblocks, negotiation and conflict resolution techniques, and motivation techniques.

**Heather McCain** is currently a Professor of the Practice in Engineering Management and Project Management at KU Edwards Campus. She has more than 25 years of experience in quality engineering and management. Recently she was the Quality Manager for Consumer Product at Garmin International. Prior to joining Garmin, Heather was with Hallmark Cards and AlliedSignal (now Honeywell) Aerospace and Automotive. Heather is a senior member of American Society for Quality (ASQ) and past President of Joint Engineering Council of Kansas City as the past president. She is a Certified Quality Engineer and Certified Manager of Quality/Organizational Excellence.

**PDH Credit:** Participants will earn 2.0 hours of PDH credit for each session attended.

**Time and Location:** All programs are presented 4-6 p.m. at Burns & McDonnell World Headquarters, 9300 Ward Parkway in Kansas City.

**Cost:** $60 per event

**To order tickets, contact Susan Scott at sbscott@ku.edu.** Tickets will be picked up at each event to confirm attendance and verify the 2.0 PDH credit. Tickets are transferrable among participants and sessions; please inform Susan Scott of changes prior to the session.