



West Texas A&M  
University™



**Kenneth Leitch, Ph.D., PE**  
Associate Professor of Civil  
Engineering

### Research Areas and Expertise

Structural Analysis  
Materials Testing  
Close-Range Photogrammetry  
3D Modeling Techniques  
Finite Element Analysis  
Green Building Design  
Impact Effects on Steel and  
Other Construction Materials  
Energy Reduction in Heating  
and Cooling

### Contact

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## Civil Engineering

### Wind Turbine Research Interest

Dr. Leitch is interested in 3-D modeling (photogrammetry) where models can be built using a point cloud of spatial data. WTAMU has equipment that can be used to do high-resolution 3-D modeling of the turbine and associated structures. Dr. Leitch can create virtual 3-D models of the structure and also assess the structure from a strength standpoint, anywhere from putting strain gages in the reinforced concrete foundation to structural analysis of the steel turbine.

### Professional Profile

Dr. Leitch joined the School of Engineering, Computer Science, and Mathematics in 2009. He teaches various civil, mechanical, and general engineering topics such as fundamentals of engineering, surveying, statics, mechanics of materials, structural analysis, concrete design, steel design, materials engineering, transportation engineering, introduction to CAD, engineering economics, engineering ethics, and finite element analysis/matrix analysis. Dr. Leitch is a member of the American Society for Engineering Education (ASEE) and the American Society of Civil Engineers (ASCE). He received a B.S. in Civil Engineering with Honors in 1995, an M.S. in Civil Engineering in 1997, and a Ph.D. in Civil Engineering in 2002 all from New Mexico State University.

### Academic Research

Dr. Leitch's research interests include structural analysis, materials testing, close-range photogrammetry, 3-D modeling techniques, finite element analysis, and green building design. Dr. Leitch has specifically researched impact effects on steel and other construction materials, strength characteristics of metals and ceramic materials, deformation effects for steel and concrete structures, and using 3-D modeling techniques to measure structures including deformation effects under structural loads. Dr. Leitch has also collaborated with approximately twenty WTAMU students and two faculty to evaluate greener building construction techniques, such as the use of sustainable materials, water reuse and usage reduction, and energy reduction for heating and cooling.

### Education

- B.S., M.S., Ph.D, New Mexico State University, Civil Engineering

### Publications

Dr. Leitch has co-authored several publications in structural and transportation sub-areas of the civil engineering discipline and in engineering education, a key area of passion and commitment for him.

