GOKHAN PEKCAN, Ph.D.

Current Affiliation
Assistant Professor

Contact Information

Department of Civil and Environmental Engineering

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Education

YEAR	DEGREE	UNIVERSITY
1998	Ph.D	State University of New York at Buffalo, NY
1994	M.Sc.	State University of New York at Buffalo, NY
1990	B.Sc	Bogazici University, Istanbul, Turkey

Research Interests

Theoretical and experimental aspects of earthquake engineering and structural dynamics, focusing on earthquake hazard mitigation by passive supplementary energy dissipating systems. Experimental and analytical studies of seismic performance, design and retrofit of buildings and bridges with/without earthquake protective systems.

Recent Publications

- Abdel-Mohti, A. and Pekcan, G. (2008), “Seismic response of skewed RC box-girder bridges.” Journal of Earthquake Engineering and Engineering Vibration, IEM and MCEER, (in press).
- Pekcan, G., Linke, C., and Itani, A.M. (2008), “Damage Avoidance Design of Special Truss Moment Frames with Energy Dissipating Devices.” Journal of Constructional Steel Research, Elsevier, (in press).
- Carden L.P., Pekcan G., and Itani A.M., (2008), “Investigation of

Flange Local Bending under Flexible Patch Loading." Engineering Journal, AISC., 1st Quarter.

- Carden, L., Pekcan, G., and Itani, A., (2007), "Web Yielding, Crippling and Lateral Buckling Under Post Loading." Journal of Structural Engineering, ASCE, 133(5), 665-673.
- Carden, L.P., Pekcan G., Itani, A.M., (2007), "Flange and Web Limit States in Beams subjected to Patch Loading." Journal of Constructional Steel Research, Elsevier, 63(1), 45-54.
- Pekcan G., Itani A.M., and Carden L.P., (2006), "Design of Bridge Falsework for Gravity Loads." Journal of Bridge Engineering, Taylor and Francis, 2(3), 155-168.
- Cantrell, P., Pekcan, G., Itani, A., Valesquez, N., (2006), "The Effect of Engineering Modules on Student Learning in Middle School Classrooms." Journal of Engineering Education, ASEE, 95(4), 301-309.
- Ajrab, J., Pekcan, G., and Mander, J.B., (2005), "Rocking Wall-Frame Structures with Supplemental Tendon Systems," Journal of Structural Engineering, ASCE, 130(6), 895-903.
- Pekcan, G., Mander, J.B., and Chen, S.S., (2002), "Seismic Retrofit Of Steel Deck-Truss Bridges: Experimental Investigation," Advances in Structural Engineering – An International Journal, V.5, No.3, pp.173-183.
- Pekcan, G., Mander, J.B., and Chen, S.S., (2000), "Balancing Lateral Loads Using a Tendon-Based Supplemental Damping System," Journal of Structural Engineering, ASCE, V.126, No. 8, pp.896-907.
- Pekcan, G., Mander, J.B., and Chen, S.S., (2000), "Experiments on a Steel MRF Building with a Supplementary Tendon System," Journal of Structural Engineering, ASCE, V.126, No. 4, pp.437-444.
- Pekcan, G., Mander, J.B., and Chen, S.S., (1999), "Fundamental Considerations for the Design of Nonlinear Viscous Dampers," Earthquake Engineering and Structural Dynamics, V.28, No.11, pp.1405-1425.

Courses Taught

Course Code	Course Title
CEE 371	Numerical Methods in Civil Engineering
CEE 381	Structural Analysis I
CEE 486	Structural Analysis II
CEE 482	Design of Timber Structures
CEE 704	Applied Finite Element Analysis
CEE 724	Applied Elasticity I
CEE 771	Experimental Methods in Civil Engineering
CE 731	Advanced Dynamics of Structures
CS 241	Introduction to Computer Methods for Engineers

CI 681/CEE 771	Special Problems in Curriculum and Instruction / Special Engrg Problems

Other Activities within Engineering and Teaching Professions

- Member, ASCE, EERI, CUREE, NEES, ASEE, TRB
- Contributor to ATC-58 - Interim Shake Table Test Protocol For Quantifying Seismic Fragility of Motion-Sensitive Nonstructural Components.
- Project Manager for NEES – Earthquake Engineering data model and metadata development in collaboration with the NEES System Integrators, NCSA.
- NEES Site and Project Manager at the University of Nevada, Reno – Development of Telepresence functions and infrastructure for remote participation and research collaboration.
- Experimental and analytical investigation of steel STMF systems.
- Experimental and analytical investigation of seismic response characteristics of skewed highway bridges.
- Experimental evaluation and seismic qualification testing of various non-structural systems.
- Experimental investigation of seismic response of timber bridges.
- Experimental and analytical investigation of the seismic response of a 1:3 scale sway frame of a deck-truss bridge with and without supplementary damping systems.
- Ambient (traffic) vibration tests on the North Grand Island deck-truss bridge.
- Quick release (snap back) experiments and system identification of two-three span slab-on-girder highway bridges with seismic isolation elements.
- Development of seismic design methodologies for linear and nonlinear viscous damping devices.
- Experimental and analytical investigation of the seismic response of a 1:4 scale steel model structures retrofitted with and without tension-only supplementary damping systems.

- Experimental and analytical investigation of the seismic response of a 1:3 scale reinforced concrete model structures retrofitted with and without supplementary damping systems.

- Quasi-static and dynamic testing of steel beam-column connections.

- Development of a nonlinear computational models and implementation in Drain-2DX.

- Instructor of record for course offered through the College of Extended Studies on the development of curriculum and teaching modules with engineering content for K7-9 students and teachers.