

Mayrai Gindy



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Research Interests

- Structural Health Monitoring
- Sensors and Sensor Networks
- Non-destructive Testing
- Structural Safety and Reliability
- Extreme Event Theory
- Structural Risk Analysis

Current Projects

- Prediction of Bridge Deflection from Measured Acceleration
Research Group: Mayrai Gindy, Ph.D. and Jana Velde
- Integration of GIS and Infrastructure Sensing Technologies for Bridge Condition Assessment and Management – A Developmental Study
Research Group: Mayrai Gindy, Ph.D. and Andrew Prezioso
- Site-Specific Stochastic Study of Multiple Truck Presence on Highway Bridges
Research Group: Mayrai Gindy, Ph.D., Chris DeTurk and Varinia Luzzi

Honors & Awards

- National Science Foundation ADVANCE Award (2004-2007)
- National Science Foundation Graduate Research Fellow (2001-2004)
- USDOT University Transportation Research Center (UTRC) Fellow (2000-2001)
- UTRC (Region II) Student of the Year (2001 and 2002)
- Center for Advanced Infrastructure and Transportation (CAIT) Fellow (2000-2001)
- NSF Alliance of Graduate Education and Professoriate (AGEP) NorthEast Alliance (NEA) Representative (2003)
- Edward Fuller Brooks Memorial Award in recognition of outstanding scholastic record for attaining the highest cumulative grade point average in all engineering subjects, Rutgers University (2000)
- Outstanding Engineering Scholar Award from the Engineering Society of Rutgers Alumni Association in recognition of attaining a grade point average of 4.0 (2000)
- Edward G. Nawy Prize for Excellence in Concrete Structures & Technology (2000)

Professional Associations

American Concrete Institute (ACI), Structural Safety Committee, Voting Member
American Society of Civil Engineers (ASCE), Associate Member
Transportation Research Board (TRB), Member
Chi Epsilon - Civil Engineering Honor Society, Member
Sigma Xi - The Scientific Research Society, Member
Society of Women Engineers (SWE), Member

Publications

Journals

Nassif, H., Gindy, M. and Davis, J. (2005). "Comparison of Laser Doppler Vibrometer with Contact Sensors for Monitoring Bridge Deflection and Vibration," *Non-Destructive Testing and Evaluation International Journal (NDT&E International Journal)*, Volume 38, Issue 3, pp 213-218.

Conference Proceedings

Gindy, M. and Nassif, H. (2005). "Application of Extreme Value Theory for the Prediction of Maximum Bridge Live Load Effects," *International Conference on Structural Safety and Reliability (ICOSSAR)*, Rome, Italy 2005.
Gindy, M. and Nassif, H. (2005). "Reliability-Based Live Load Model for Serviceability Limit States," *International Conference on Structural Safety and Reliability (ICOSSAR)*, Rome, Italy 2005.
Gindy, M., Yuksel, D. and Nassif, H. (2004). "Dynamic Analysis and Testing of Continuous Span Bridges Under Multiple Trucks," *International Association for Bridge Maintenance and Safety Conference (IABMAS)*, Kyoto, Japan.
Nassif, H., Gindy, M., and Davis, J. (2003). "Monitoring of Bridge Girder Deflection Using Laser Doppler Vibrometer," *Structural Faults and Repair*, London, UK.
Gindy, M. and Nassif, H. (2002). "Development of a Reliability-Based Model for Deflection Limit State in Girder Bridges," *International Association for Bridge Maintenance and Safety Conference (IABMAS)*, Barcelona, Spain.
Gindy, M., Davis, J. and Nassif, H. (2002). "Laser Doppler Vibrometer for Measuring Deflections," *Ninth Annual International Conference on Composites Engineering (ICCE/9)*, San Diego, California.

Conference Presentations

Gindy, M. and Nassif, H. (2004), "Measurements of Girder Deflection in Continuous Span Bridges," *Transportation Research Board 83rd Annual Meeting*, Washington, D.C.
Nassif, H., Suksawang, N., Gindy, M., Abu-Amra, T., and Davis, J. (2003), "Instrumentation and Field Testing of the Doremus Avenue Bridge," *Transportation Research Board 82nd Annual Meeting*, Washington, D.C.
Nassif, H. and Gindy, M. (2002). "Instrumentation and Monitoring of the Doremus Avenue Bridge," *Transportation Research Board 81st Annual Meeting, Dynamic and Field Testing of Bridges Committee (A2Co5)*, Washington, D.C.

Technical Reports

Nassif, H., Gucunski, N., Abu-Amra, T., Gindy, M. and Balic, M. (2002). "Analytical Modeling and Instrumentation Planning of the Doremus Avenue Bridge," *Final Report, FHWA-NJ-2002-08*.

Book Contributions

"Handbook of Structural Engineering," 2nd ed., CRC Press (2005). Contributed to Chapter 8 – Prestressed Concrete.
"Reinforced Concrete: A Fundamental Approach – ACI 318-05 Edition," 5th ed., Prentice Hall (2005). Revised and updated to comply with the ACI 318-05 Code.
"Reinforced Concrete: A Fundamental Approach," 5th ed., Prentice Hall (2003). Revised and updated to comply with the ACI 318-02 Code.
"Prestressed Concrete: A Fundamental Approach," 4th ed., Prentice Hall (2003). Revised and updated to comply with the ACI 318-05 Code.
"Reinforced Concrete: A Fundamental Approach – Solutions Manual," 5th ed., Prentice Hall (2003). Wrote the solutions manual.
"Prestressed Concrete: A Fundamental Approach – Solutions Manual," 4th ed., Prentice Hall (2003). Wrote the solutions manual.