Ayodele O. Abatan

Chair and Professor
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EDUCATION

PhD	Civil Engineering, Virginia Polytechnic Institute and State University	1976
MS	Civil Engineering, University of Illinois, Urbana, Illinois	1973
BS	Civil Engineering, Ahmadu Bello University, Zaria, Nigeria	1971

PROFESSIONAL EXPERIENCE

2006 – Present	Professor and Chair, Engineering Technology, Miami University
2001 - 2006	Director, Systems Science PhD Program, Clark Atlanta University (CAU)
1994 - 2004	Professor and Chair, Department of Engineering, CAU
1993 - 2006	Director, Laboratory for Intelligent Material Systems, CAU
1993 - 1999	Associate Director, High Performance Polymers and Composites Center, CAU
1992 - 1993	Visiting Professor, Virginia Military Institute
1991 - 1992	Visiting Professor, Virginia Polytechnic Institute & State University
1984 - 1991	Professor & Chair of Civil Engineering, Ahmadu Bello University
1981 - 1982	Visiting Professor, Virginia Polytechnic Institute & State University
1976 - 1984	Assistant/Associate Professor, Ahmadu Bello University, Nigeria
1974 - 1976	Research Fellow, Virginia Polytechnic Institute & State University
1973 - 1974	Structural Engineer, Westenhoff & Novick Consulting Engineers, Chicago
1971 - 1973	Research Fellow, University of Illinois at Urbana - Champaign

RESEARCH INTERESTS

- Smart Materials, Machines and Structures
- Impact Dynamics of Composites
- Composites in Infrastructure
- Durability of Advanced Materials in Structures
- Integrity Monitoring and Non-Destructive Evaluation of Structures
- Computational and Nonlinear Structural Mechanics
- Static and Dynamic Stability of Shells
- Alternative Construction Materials
- Computer-Assisted Instruction/Learning
- Damage Assessment and Monitoring

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Member, American Society of Civil Engineers (ASCE)
- Charter Member, Structural Engineering Institute (SEI)
- Member, International Association for Structural Control (IASC)
- Member, American Society for Composites (ASC)
- Member, International Association for Shell and Spatial Structures (IASS)
- Member, American Society for Engineering Education (ASEE)
- Member, Canadian Association for Composite Structures and Materials (CACSMA)
- Member, American Society of Mechanical Engineers (ASME)

SYNERGISTIC ACTIVITIES

1. Reviewer, NSF Graduate Fellowship Awards, 2001-2006.
2. Reviewer for the following Journals: Computers and Structures; Composites for Construction-ASCE; Materials in Civil Engineering-ASCE; Intelligent Material Systems; Thermoplastic Composite Materials; Engineering Mechanics-ASCE; Composite Science and Technology; and Journal of Engineering Technology..
3. Instructional Excellence Civil Engineering Award, Clark Atlanta University, May 2003.
4. Professor of the Year Award, Engineering and Science, Clark Atlanta University, May 2005.
5. Research Product Development Team Award for Smart Structural Systems Team, US Army Construction Engineering Research Laboratory, ERDC-CERL, Champaign, 1997 and 2000.
6. Consultant for Civil, Structural, and Mechanical Engineering Companies.

SELECTED PUBLICATIONS

- Lin, M. W., Berman, J. B., Khoshbakht, M., Feickert, C. A., **Abatan, A. O., 2006**, "Modeling of Moisture Migration in an FRP Reinforced Masonry Structure," *Building and Environment*, Vol. 41, Issue 5, pp. 646-656.
- Lin, M.W., Thaduri, J., and **Abatan, A.O., 2005**, "Development of an ETDR Distributed Strain Sensor," *Measurement Science and Technology*, Vol. 16, pp. 1495-1505.
- **Abatan, A.**, **2005** "Attenuation and Sensitivity Studies on Electrical Time Domain Reflectometry (ETDR) Composite Sensors for Infrastructure Damage Monitoring," Proceedings, *ICCE-12, International Conference on Composites/Nano Engineering*, Tenerife, Spain, August 1-6.
- **Abatan, A.**, and Harruna, I., **2004** "Durability Issues Regarding Using FRP Composites for Strengthening Masonry Structures," *ICCE-11*, Hilton Head, South Carolina, August 8-14, pp. 1-2.
- Hu, H., Badir, A., and **Abatan, A.**, **2003,** "Buckling of a Graphite/Epoxy Composite Plate under Parabolic Variation of Axial Loads," *International Journal of Mechanical Sciences*, Vol. 45, pp. 1135-1147.
- Feickert, C. A., Lin, M. W., Trovillion, J. C., **Abatan, A. O**., Berman, J. B., **2003**, "Hygrothermal Modeling in the Application of Fiber-Reinforced Polymers for Structural Upgrade of Unreinforced Masonry Walls," US Army Corps of Engineers, *ERDC/CERL TR-03-20, pp. 1-55.*
- **Abatan, A**., Harruna, I., Nyankamawu, M., Lin, M., and Berman J., **2003**, "Durability of Fiber Reinforced Polymer Composites Under Varying Environmental Behavior, Proc. *CANCOM 2003*, 4th Canadian-International Composites Conference, August 19-22, 2003, Ottawa, Canada
- **Abatan, A**., and Hu, H., **2002**, "Effect of Cross Section Material Distribution on Impact Response of Hybrid Composites," *Thermoplastic Composite Materials*, Vol. 15, No. 5, pp. 375-387.
- Baffour, R., and **Abatan**, **A**., **2002**, "Developing an Underground Infrastructure Management System Using GPR, GPS and GIS." Proceedings, *International Association of Science and Technology for Development (IASTED) Conference on Information and Knowledge Sharing*, St. Thomas, US Virgin Islands, November 2002.
- Lin, M. W.; Berman, J.B.; Khoshbakht, M.; Feickert, C.A; **Abatan, A.O**., **2002**, "Nonlinear Finite Element Modeling of Moisture Migration in a Masonry Structure with FRP Upgrade"; Proceeding

of the 2nd Canadian Conference on Nonlinear Solid Mechanics, Vancouver, BC, Canada, June 19-23, 2002, pp. 387-397

- Danjaji, M. B., **Abatan, A.O.,** and Lin, M. W, **2000**, "On the Characterization of ETDR Polyethylene-Based Sensors for Stress Intensity Monitoring," *Polymeric Materials: Science and Engineering*, Vol. 83, pp.369-370.
- Lin, M.W., **Abatan, A.O**., and Zhou, Y.M., **2000**, "Transverse Shear Response Monitoring of Concrete Cylinder Using Embedded High-Sensitivity ETDR Sensor," *SPIE*, Vol. 3988, pp. 319-328.
- Lin, M.W., **Abatan, A.O**., and Zhou, Y.M., **2000**, "High Sensitivity ETDR Distributed Strain Sensor," *SPIE*, Vol. 3986, pp. 463-471.
- Hu, H. and **Abatan, A**., **1999**, "Effect of Resin Interlayer on Fracture Behavior of Composite Laminates," *Reinforced Plastics and Composites*, Vol. 18, No. 13, pp. 1186-1196
- **Abatan, A.,** and Hu, H., **1999,** "Buckling Behavior of Anisotropic Plates under Linearly Varying Loading," *Proceedings of the American Society for Composites, 14th Technical Conference*, Technomic Publishing Co. Inc., pp. 959-967.
- Lin, M.W., **Abatan, A.O.,** and Zhang, W.M., **1999**, "Crack Damage Detection of Concrete Structures Using Distributed Electrical Time Domain Reflectometry (ETDR) Sensors," *SPIE*, Vol. 3671, pp. 297-304.
- Danjaji, M. B., **Abatan, A.O**., and Lin, M. W, **1999**, "Experimental characterization of ETDR Sensors for Crack Monitoring in Concrete Structures," *SPIE*, Vol. 3852, pp.54-65.
- **Abatan, A.O**., Hu, H., and Olowokere, D., **1998**, "Impact Resistance Modeling of Hybrid Laminated Composites," *Journal of Thermoplastic Composite Materials*, Vol. 11, No. 3, May 1998, pp. 249-260.
- **Abatan, A.**, Malluck, J.F., and Tang, Z., **1998**, "Using Coupled-Field Finite Elements to Characterize Piezoelectric Materials," *Sensors*, Vol. 15, No. 6, pp. 46-52.