

STAFF PROFILE



ENGR. PROF. FIDELIS ONYEBUCHI OKAFOR is a Professor (Highway and construction materials) in the Department of Civil Engineering, University of Nigeria, Nsukka. He is currently the Head of Department of Civil Engineering, University of Nigeria Nsukka. He obtained B.Sc (Civil Engineering) from the Engineering Academy of Denmark, Lyngby, M.Sc (Civil Engineering) from the Technical University of Denmark, Lyngby and Ph.D (structural materials) from the Department of Civil Engineering, University of Nigeria, Nsukka. Worked with **COWiconsult**, Lyngby, Denmark where he took part in the design of roads, bridges and airports. Corporate member, Nigeria Society of Engineers (NSE). Registered Engineer, Council for the Regulation of Engineering in Nigeria (COREN). Chairman, Nigerian Society of Engineers (NSE) Nsukka Branch 2008 - 2010. His academic, industrial and research experiences span more than 28 years. He has successfully supervised over fifteen Masters and two PhD degree students. He is currently supervising a number of master's students and about ten PhD candidates. He has participated in many local and International conferences where he presented papers. He is currently a Peer Reviewer for some journals, and has over thirty two scientific papers published in local and international journals. Research interests are in the area of soil, cement and concrete Materials.

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LIST OF RESEARCH PUBLICATIONS

1. Peer-Reviewed Journal Papers:

- [1] **F. O. Okafor**, "Palm Kernel Shell as a Lightweight Aggregate for Concrete"; Int. Journal of Cement and Concrete Research, Vol. 18, No.6, Nov. 1988; pp. 901-910.
- [2] **F. O. Okafor**, "An Investigation on the use of Superplasticizer in Palm Kernel Shell Aggregate Concrete"; Int. Journal of Cement and Concrete Research. Vol. 21, 1991; pp. 551 - 557.
- [3] **F. O. Okafor**; O. J. Eze-Uzomaka and N. Egbuniwe, "The Structural Properties and Optimum Mix Proportions of Palm Nut Fibre-Reinforced Mortar Composite"; Int. Journal of Cement and concrete Research, Vol. 26, No.7, 1996; pp. 1045-1055.
- [4] **F. O. Okafor**, "Some Properties of Natural Rubber Latex Modified Concrete": Nigerian Society of Engineers Technical Transactions, Vol. 31, No.1, 1996; pp. 39-46.

- [5] R. C. Okoloekwe and **F. O. Okafor**, “A New Approach to Concrete Mix Design Using Computer Techniques”; Nigerian Journal of Technology, Vol. 26, No. 1, Mar. 2007; pp. 26-36.
- [6] **F. O. Okafor**, “The Potentials of Cassava Flour As a Set-Retarding Admixture in Concrete”; Nigerian Journal of Technology, Vol. 27, No. 1, Mar. 2008; pp. 5-12.
- [7] **F. O. Okafor** and S. Sule, “Models for Prediction of Structural Properties of Palmtree Fibre-Reinforced Cement Mortar Composites”; Nigerian Journal of Technology, Vol. 27, No. 2, 2008, pp. 13-20.
- [8] **F. O. Okafor** and U. N. Okonkwo, “Effects of Rice Husk Ash on Some Geotechnical Properties of Lateritic Soil”; Leonardo Electronic Journal of Practices and Technologies, Vol. 8, No. 15, Jul. – Dec. 2009, pp. 67-74.
- [9] **F. O. Okafor** and O. Oguaghamba, “Effects of Flexural Rigidity of Reinforcement Bars on the Fundamental Natural Frequency of Reinforced Concrete Slabs”; Nigerian Journal of Technology, Vol. 28, No. 2, Sept. 2009; pp. 48-57.
- [10] **F. O. Okafor** and U. N. Okonkwo, “Hydraulic Conductivity of Compacted Lateritic Soil”; The Heartland Engineer, Vol. 4, No. 2, 2009, pp. 7-12.
- [11] **F. O. Okafor**, “Some Mechanical Properties of Concrete Reinforced with Steel Fibres Recycled from Waste Tyre”; Nigerian Journal of Engineering Research and Development, Vol. 8, No. 4, 2009, pp. 31-36.
- [12] **F. O. Okafor** and R. N. Ukaigwe, “Development of Concrete Maturity Meter (CONMAT) For Monitoring Maturity of Concrete”; Nigerian Journal of Industrial and Systems Studies, Vol. 8, No. 4, 2009, pp. 41-47.
- [13] **F. O. Okafor**, “Waste Concrete as a Source of Aggregate for New Concrete”; Nigerian Journal of Technology, Vol. 29, No. 2, 2010; pp. 5-11.
- [14] **F. O. Okafor**, “The Performance of Cassava Flour As A Water-Reducing Admixture For Concrete”; Nigerian Journal of Technology, Vol. 29, No. 2, 2010; pp. 106-112.
- [15] **F. O. Okafor** and S. Sule, “Improved Analytical Models for Prediction of Structural Properties of Palmtree Fibre-reinforced Cement Based Composites”; Journal of Engineering Science and Applications, Vol. 7, No. 1, 2010; pp. 1-10.
- [16] **F. O. Okafor** and O. Oguaghamba, “Procedure for Optimization Using Scheffe’s Models”; Journal of Engineering Science and Applications, Vol. 7, No. 1, 2010; pp. 36-47.
- [17] **F. O. Okafor** and B. O. Mokwugwo, “An Analysis of Beams on Non-Homogeneous Elastic Foundation Using Initial Value Approach”; Journal of Engineering Science and Applications, Vol. 7, No. 1, 2010; pp. 64-75.

- [18] **F. O. Okafor**, "Performance of Recycled Asphalt Pavement as Coarse Aggregate in Concrete"; Leonardo Electronic Journal of Practices and Technologies, Vol. 9, No. 17, Jul. – Dec. 2010, pp. 47-58.
- [19] **F. O. Okafor** and O. Oguaghamba, "Optimization of Flexural Strength of Palm Nut Fibre Reinforced Mortar (PFRM) Using Scheffe's Second Order Polynomial"; The Heartland Engineer, Vol. 5, No. 1, 2010, pp. 43-52.
- [20] **F. O. Okafor** and N. R. Ukaigwe, "Non-Destructive Test of Compressive Strength of Concrete Using Maturity Concept"; Nigerian Journal of Engineering, Vol. 17, No. 1, 2010, pp. 37-41.
- [21] **F. O. Okafor** and U. N. Okonkwo, "Geotechnical Properties of Crude Oil-Contaminated Lateritic Soil"; Nigerian Journal of Engineering, Vol. 17, No. 1, 2010, pp. 42-46.
- [22] C. N. Mama and **F. O. Okafor**, "Siltation in Reservoirs"; Nigerian Journal of Technology, Vol. 30, No. 1, Mar. 2011, pp. 85-90.
- [23] **F. O. Okafor** and O. A. Onuh, "Technical Staff Index as a Management Tool in Engineering Projects", Nigerian Journal of Engineering Management, Vol. 12, No. 2, April - June 2011, pp. 10-16.
- [24] **F. O. Okafor** and C. G. Okonkwo, "The Application of Classical Finite Strip Method: A Case Study of Rectangular Plate with All Round Simply Supported Ends", Journal of Engineering Science and Applications, Vol. 7, No. 2, June 2011, pp. 1-13.
- [25] **F. O. Okafor** and D. E. Ewa, "Predicting the Compressive Strength of Obudu Earth Blocks Stabilized With Cement Kiln Dust", Nigerian Journal of Technology, Vol. 31, No. 2, Jul. 2012, pp. 149-155.
- [26] K. C. Onyelowe; **F. O. Okafor** and D. G. Nwachukwu, "Geophysical Use of Quarry Dust (As Admixture) As Applied to Soil Stabilization and Modification - A Review", ARPJ Journal of Earth Sciences, Vol. 1, No. 1, Oct. 2012, pp. 6-8.
- [27] K. C. Onyelowe and **F. O. Okafor**, "A Comparative Review of Soil Modification Methods", ARPJ Journal of Earth Sciences, Vol. 1, No. 2, Nov. 2012, pp. 36-41.
- [28] **F. O. Okafor** and E. A. Egbe, "Potentials of Cement Kiln Dust In Sub-grade Improvement", Nigerian Journal of Technology, Vol. 32, No. 1, Mar. 2013, pp. 109-116.
- [29] K. C. Onyelowe and **F. O. Okafor**, "Portland Cement/Quarry Dust Improvement of Olokoro Laterite for Road Base", World Journal of Engineering Science, Vol. 1, No. 4, Aug. 2013, pp. 133-143.
- [30] **F. O. Okafor**; S. A. Uwa and I. N. Obeta, "Modeling the Strength and Economic Parameters Involved in Recycling Waste Concrete Material in Fresh Concrete", International Journal of Current Research, Vol. 5, No. 12, Dec. 2013, pp. 3691-3696.

- [31] K. C. Onyelowe and **F. O. Okafor**, "Modeling of the Effect of Critical Seepage Force on the Aquifer Soil Medium of a Borehole", *Electronic Journal of Geotechnical Engineering (EJGE)*, Vol. 20, No. 6, 2015, pp. 1617-1629.
- [32] K. C. Onyelowe and **F. O. Okafor**, "Modeling the Effect of Contact and Seepage Forces At Equilibrium on the Failure of Water Borehole", *Nigerian Journal of Technology*, Vol. 34, No. 3, Jul. 2015, pp. 650 – 663.
- [33] K. C. Onyelowe and **F. O. Okafor**, "Review of the synthesis of Nano-sized Ash from Local Waste for Use as Admixture or Filler in Engineering Soil Stabilization and Concrete Production", *J. Environ Nanotechnol*, Vol. 4, No. 4, 2015, pp. 23-27.
- [34] **F. O. Okafor** and D. E. Ewa, "Estimating Formwork Striking Time for Concrete Mixes", *Nigerian Journal of Technology*, Vol. 35, No. 1, Jan. 2016, pp. 1 - 7.
- [35] K. O. Kusimo and **F. O. Okafor**, "Comparative Analysis of Mechanical and Manual Modes of Traffic Survey for Traffic Load Determination", *Nigerian Journal of Technology*, Vol. 35, No. 2, Apr. 2016, pp. 226 - 233.

2 Refereed Conference Articles:

- [36] **F. O. Okafor**, "Pavement Failures Along Enugu - Port Harcourt Expressway"; Proc. 1st. Int. Conf. On Soil Movement and Their control. CRDC, University of Nigeria, Nsukka. June 20 - 22, 1988; pp. 39 - 49.
- [37] **F. O. Okafor**, "Some Properties of Clay-Sawdust Bricks"; Proc. Int. Conf. On 3rd World Strategies for Tech. Dev. Federal University of Technology, Yola, Nigeria; Aug. 20 - 26, 1989, pp. 368 -372.