



FUTA NEWS

FUTA DON PROFFERS SOLUTIONS TO SPATE OF BUILDING COLLAPSE

A Professor of Civil Engineering has cited use of inferior materials, sharp practices, use of unqualified manpower in very significant building projects and absence of codes of engineering properties of building materials as major causes of the spate of collapse of buildings in the country.

Speaking on the topic , “The Tower of Babel: the secret of the birth and but of structural integrity” at the 67th Inaugural Lecture of the Federal University of Technology, Akure, FUTA ,Joseph Afolayan, a Structural Engineer, explained that engineering properties of the commonly used construction materials especially for concreting in Nigeria grossly fall below the minimum standard. He added that “in spite of the shortfall, unqualified skills are employed to handle construction projects at various levels leading to poor quality control” .

Professor Afolayan who dwelt largely on the risk factors associated with building constructions disclosed that “apart from poor material quality and very poor workmanship, the effects of environmental conditions on structures are worrisome especially at the coastal regions in Nigeria”. Afolayan who traced the history of construction from the ingenuity of man to its chronological development noted that no structure is free from the possibility of failure or damage hence probabilistic concepts are invoked and loads designed to fit risks.

Professor Afolayan who emphasized that every structure is built with some factors of ignorance usually referred to as factors of safety likened the elastic behavior of materials to the confusion of the original language of the builders of the Biblical Tower of Babel in which the perfect knowledge of materials and the environment of operation ceases to exist thereby making it difficult to model the real world. The Don who pegged the life span of every structure at 50 years noted that the engineering profession in Nigeria needs new approaches in order to provide the best to society. According to him “we need to reconsider a transition from the deterministic way of

thinking to open-minded concepts involving the random nature and interaction of individual variables that have to be engineered”.

Among recommendations made, Professor Afolayan urged Nigerians to reduce the level of exposure of structures to risk by imbuing maintenance culture, seek advice from experts when changing the form and use of buildings and insist on material and soil test for multistory buildings. The lecturer also said because of the current waves of terrorism, attention should be paid to the design and construction of shock resistant buildings in the country. He also proposed the investigation of building collapse causes and the documentation of such for lessons to be taught and learnt, orientation in probabilistic code for professionals who design buildings in Nigeria and the alteration of the programmes of undergraduate and graduate students in Engineering to include probabilistic thinking to prepare them for real world problems. He also emphasized the need to formulate national codes build on tested engineering properties of available building materials in Nigeria.

Speaking earlier the Vice-Chancellor, Professor Adebisi Daramola, said Professor Afolayan, has been a consistent productive scholar, a renowned structural engineering expert and an educational manager per excellence. Daramola who was represented by his deputy vice chancellor, Academic, Professor Adedayo Fasakin, said of Professor Afolayan, “In the three decades of his teaching and research work, he has taught various civil and structural engineering courses at undergraduate and postgraduate levels”. He noted that Professor Afolayan has contributed significantly to knowledge in his chosen area of structural engineering through over a hundred publications in reputable journals both locally and internationally. He added that Professor Afolayan’s ability and capacity to lead and inspire others is what stands him out among his peers. He described Professor Afolayan who was recently appointed Acting Vice-Chancellor, Landmark University, Omu-Aran, Kwara State as both a successful academic and administrator.