# FEDERAL UNIVERSITY OF TECHNOLO
# MINNA, NIGERIA

## SCHOOL OF ENGINEERING AN
## ENGINEERING TECHNOLOGY


# 7th ANNUAL ENGINEERING CONFERENCE

# BOOK OF ABSTRACTS

# &

# PROGRAMME OF EVENTS

## Theme:

## HEALTH, SAFETY AND ENVIRONMENT (HSE) IN ENGINEERING PRACTICE

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## INVESTIGATION OF FARM ACCIDENTS IN NIGERIA: PART II- KANO, KATSINA, KEBBI, SOKOTO, AND ZAMFARA

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### ABSTRACT

This paper is a report of a survey of farm accidents in Kano, Katsina, Kebbi, Sokoto and Zamfara states. The study investigates the degree of damage, cost and impact of farm related accidents in some mechanized farms in Nigeria. Investigative Survey Research Approach (ISRA) was adopted in the study. To this end a two-part questionnaire was designed, Parts A and B with 15 and 25 questions respectively. Part A of the questionnaire comprised of demographic variables and Part B addresses issues that are directly linked with causes, types, cost, and degree of damage caused by farm accidents.

The result shows that 90% of the respondents were males, 75% of the farms visited were government-owned while only about 25% were private-owned. Similarly, an average of 47.3% of the accidents were due to environmental factors, 14.0% due to human factors, 7.7% due to machine/vehicle factors, 28.3% due to topographic conditions of the roads, while 2.7% was attributed to exposure to chemicals, explosives and other agro-chemicals. The information as regards quantifying the cost of accidents in monetary terms and time losses were rather subjective, as no proper records were available virtually all the establishments surveyed. This aspect is therefore ignored.

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## SAFETY IN THE AVIATION INDUSTRY- ENGINEERING PERSPECTIVE

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This paper attempted to present the multiple efforts at achieving safety of air transportation from the design to the production, and then to the operation of aircraft and aeronautical products. All this is in order to provide the yet known engineering solutions. In the process, we have seen that aviation is a highly regulated industry.

However, it is evident that engineering solutions alone cannot provide all the solutions required to reduce risks in air transportation, as there are other contributing factors that must be considered as well. The importance of Safety Management System (SMS) approach to aviation organizations cannot be overemphasized. Those organizations are expected to manage safety performance in the manner they manage their finances, by creating deliberate procedures and allocating responsibilities to all staff.

For the desired high level of safety in the Nigerian airspace, we have identified that

a. The proposed civil aviation bill be passed into law to provide the regulatory authority the necessary powers to enforce compliance with safety standards unhindered; and to restructure the organizational set up of the parastatals, giving upper hand to the technical departments in decision making and departmental financial votes
b. There should be continuity in policy formulation and implementation, such that chief executives of parastatals are guaranteed security of tenure in office to the appointed term - to ensure accountability, transparency and enhanced performance
c. To enable upgrade and/or modernization and continuous maintenance of facilities and equipment, and provision of adequate training of technical personnel to deliver the expected services, the federal government should consider budgetary allocation to augment their internally generated revenue