

## **KADUNA STATE UNIVERSITY (KASU) HAS HOSTED ITS 19TH INAUGURAL LECTURE TITLED “ELECTRONIC AND COMMUNICATION SYSTEMS: DRIVING INNOVATION FOR A CONNECTED SOCIETY,” DELIVERED BY PROFESSOR ISAAC HYUK DANIEL OF THE DEPARTMENT OF PHYSICS**



*By: Queen Ezeike.*

Delivering the lecture, Prof. Daniel examined the growing influence of electronic and communication systems in a world increasingly driven by people, smart devices, communication networks, automation, and intelligent systems.

He identified five fundamental pillars of communication engineering—signals, systems, noise, resources, and Maxwell’s equations—explaining that these principles form the foundation for the design and development of faster, more reliable communication networks.

The professor further explored key technical foundations of modern communication technologies, highlighting Radio Frequency (RF) Communication, which utilizes electromagnetic waves to power wireless networks, mobile communication systems, radar technologies, and satellite links.

He also discussed Wired Communication Systems, describing the traditional communication chain of transmitter, guided medium, and receiver. According to him, technologies such as copper cables and optical fibre networks continue to play a crucial role in delivering high-speed, low-loss data transmission across various sectors.

Beyond its commercial potential, the microfinance bank is expected to generate far-reaching benefits for the institution and the wider society.

Tracing the evolution of communication engineering from fundamental physics to advanced electronic systems, Prof. Daniel emphasized that scientific inquiry remains essential to technological progress. “Our goal is to understand nature so that we can build systems that serve people,” he said, stressing the need for research-driven innovation in addressing societal challenges.

The lecture also spotlighted emerging frontiers in the field, including wearable systems and body interaction technologies, which are increasingly being deployed for healthcare monitoring and personalized medical applications. Additionally, he examined the relationship between environmental physics and radio frequency radiation, advocating a balanced approach that supports the expansion of communication infrastructure while ensuring public safety and environmental sustainability.

Prof. Daniel noted that as Nigeria continues to expand its wireless communication networks, researchers, policymakers, and industry stakeholders must work collaboratively to ensure responsible deployment of emerging technologies.

Deputy Vice-Chancellor Academics Mr. Yushau I. Ango, representing Vice Chancellor, welcomed participants and underscored the importance of electronic and communication technologies in Nigeria’s ongoing digital transformation agenda. According to him, innovations in telecommunications, embedded systems, and the Internet of Things (IoT) have become critical drivers of economic growth, improved service delivery, and the development of smart cities. He noted that investments in these areas would create opportunities for young engineers and strengthen the nation’s technological capacity.

In his citation of the lecturer, Prof. Hyson Aboh described Prof. Isaac Hyuk Daniel as a distinguished scholar committed to excellence in teaching, research, and mentorship. He stated that the professor’s contributions align with KASU’s vision of producing graduates equipped to address contemporary challenges in connectivity, communication infrastructure, and technological innovation. Its concluded with the presentation of a plaque and certificate to Prof. Daniel by the Chairman of the Inaugural Lecture Committee, Prof. Bala Dogo, in recognition of his scholarly contributions and outstanding service to academia.

Prof. Bala Dogo expressed appreciation to the lecturer, guests, members of staff, and students for their participation in the event. He commended Prof. Daniel for sharing insights that will contribute to technological advancement and national development.

In his closing remarks, the Chairman of the occasion lauded Kaduna State University for sustaining the tradition of inaugural lectures, describing the platform as an important avenue for scholars to disseminate knowledge, stimulate intellectual discourse.



*Layout and Design: Aliyu Bature*