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PRESS-RELEASE

Centenary Lecture by Prof. Utpal Dutta on Seismic Microzonation and Major Earthquakes of Alaska Held at IIT (ISM) Dhanbad

The Department of Applied Geophysics, IIT (ISM) Dhanbad, hosted a **Centenary Lecture** by **Prof. Utpal Dutta**, Professor, Department of Civil Engineering, University of Alaska Anchorage, on “*Seismic Microzonation of Anchorage, Alaska, & 2018 M7.2 Anchorage Earthquake*” at the Academic Complex today.

The session began with a welcome address and a brief introduction of the speaker by **Prof. Mohit Agarwal**, Department of Applied Geophysics. **Prof. Saumen Maiti**, Head of the Department of Applied Geophysics, felicitated the chief guest at the conclusion of the talk. The event was also attended by **Prof. Prosanta Kumar Khan**, **Prof. Sanjit Kumar Pal**, and **Prof. Niptika Jana**.

Prof. Dutta, an alumnus of IIT (ISM) Dhanbad, opened his lecture with an overview of **seismic microzonation** and explained the four main geological units of Anchorage — *metamorphic terrain, glacial till, glacio-fluvial deposits, and the Bootlegger Cove Formation*. He shared details of a **Vibroseis survey conducted at 36 sites in the Anchorage Bowl** to study the sub-surface conditions.

In addition to microzonation, Prof. Dutta discussed the **causes of seismicity in Alaska** and presented an account of the **10 great earthquakes** in the region, highlighting their magnitudes, impacts, and geological settings. He also provided a detailed explanation of the **1964 Great Alaska Earthquake**, one of the most significant seismic events in North American history, and connected its lessons to present-day earthquake risk management.

Drawing from his extensive research in urban earthquake hazards, engineering seismology, and seismic microzonation, Prof. Dutta also analyzed the **2018 M7.2 Anchorage Earthquake**, explaining how site conditions and geological features influenced the damage patterns.

Prof. Dutta is currently serving as **foreign faculty** for the **GIAN course “Engineering Seismology”** being conducted from August 5 to 17, 2025, with **Prof. Mohit Agarwal** as national faculty. His talk offered students, researchers, and faculty a deeper understanding of earthquake hazards and the importance of integrating geological studies with urban planning to build resilient infrastructure.

Rajni Singh
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