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PRESS-RELEASE

IIT (ISM) Dhanbad Students Selected Among Top 37 Teams Nationwide for Prestigious 1TOPS Semiconductor Program

In a significant achievement for IIT (ISM) Dhanbad, a student team from the Department of Electronics Engineering has been selected among the **Top 37 teams across India** for the prestigious **1TOPS (One Tape-Out Per Student) Program**, an initiative of the **VLSI Society of India (VSI)** aimed at nurturing industry-ready semiconductor talent in the country.

Under this programme, VSI will provide financial support of up to **₹5 lakh** towards Multi-Project Wafer (MPW) chip tape-out, enabling students to develop a complete silicon prototype. As part of the initiative, **Team VLSISM** from IIT (ISM) will design and tape out an **end-to-end, low-power and low-area RISC-V–based System-on-Chip (SoC)** using **65 nm technology**.

The proposed SoC is tailored for **robotics and drone applications** and will feature a **Linux-capable RISC-V core** integrated with a **custom AI accelerator**. This will support real-time computer vision tasks such as CNN inference, enabling efficient edge intelligence solutions. By adopting open-source RISC-V architecture and indigenous VLSI design workflows, the project aligns strongly with the **India Semiconductor Mission** and the national vision of **Aatmanirbhar Bharat**, contributing to self-reliance in semiconductor design and hardware acceleration.

The student team will work under the mentorship of **Prof. Rajeev Kumar Ranjan**, Faculty Mentor, and receive industry guidance from **Mr. Sumit Kumar**, Senior Manager – Design Verification Engineering at Analog Devices, who brings over 15 years of experience in SoC and verification engineering.

IIT (ISM) Dhanbad also acknowledged the leadership of **Dr. Satya Gupta, CEO, VLSI Society of India**, and the VSI team for spearheading the 1TOPS initiative to strengthen India's semiconductor ecosystem.

Team VLSISM Members: Maharishi Sonwani, Soumyajit Samanta, Nitin Singhal, Amarkant, Aditya Ranjan, Dhananjay Jha, Krushn Surlakar, and Pradyumn Agrawal.

This accomplishment highlights IIT (ISM) Dhanbad's growing footprint in advanced VLSI research, RISC-V innovation, and next-generation semiconductor technology development.

Rajni Singh
Dean (Corporate Communications)