Today's session, "**Semiconductors and AI Accelerators**," *delivered by* **Jalil Shaikh**, Chief Marketing Officer and Business Development lead at Xcelerium, provided a deep dive into Pakistan's emerging role in the global semiconductor space. Xcelerium, despite not having its own manufacturing, is building its strategy around a $25B global market and focusing heavily on FPGA and AI accelerator development within Pakistan. The team behind this innovation includes Raheel Khan (CEO), who previously served as VP/GM at Intel and Qualcomm, Naser Adas (Founder & COO), who led Small Cells and Edge Compute at Intel and holds a PhD from Georgia Tech and an MBA from UCLA, while Shaikh himself has served as VP/GM at Atmel.

A major emphasis of the talk was on Xcelerium's XLR 100 processor, a chip that is being designed in Pakistan, and is optimized for autonomous and real-time applications. Unlike ASICs, which offer maximum efficiency but zero flexibility, since they are application specific and not general purpose, and FPGAs, which are expensive, and provide reconfigurability at the cost of performance, the XLR 100 attempts to combine the best of both. It is built on RISC-V's open ISA, and features C-programmable, dynamically reconfigurable architecture, domain-specific accelerators, and a software-defined design that reduces hardware churn, mitigates resource bottlenecks, and scales efficiently.

Jalil Shaikh stressed that he believes that manufacturing should not be done in Pakistan, given the massive logistical and financial challenges, but instead, Pakistan should focus on design, intellectual labor, and building strong engineering teams. A key lesson that he shared was the importance of patience and foundation-building. Joining a company is just the start, and that true impact comes from staying long enough to contribute meaningfully, grow teams, and create durable value, because that is where is legacy lies.

Overall, the session was amazing, and it highlighted the technical innovation happening locally. I look forward to the day when GIKI has its own semiconductor design, and students from different unis come here and we collaborate together to further the tech landscape of Pakistan.