

# **From Generic to Specific: Tailoring Wearable Technologies for Personalized Healthcare**

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## **Extended Abstract**

Wearable technologies have become ubiquitous in the consumer world—some see them as fashion statements, others as tools for fitness and lifestyle tracking. While these devices continue to evolve, packed with increasingly sophisticated sensors and features, their application in healthcare demands a very different design philosophy.

In this keynote, Prof. Kunal Mankodiya will explore the journey from generic, one-size-fits-all wearables to use-inspired, personalized health technologies. Drawing from years of research in his Wearable Biosensing Lab, he will present case studies of customized e-textile wearables developed for specific health conditions—ranging from neurological disorders to neonatal care.

These systems are not designed in isolation. Patients, caregivers, nurses, and clinicians are engaged throughout the design process to ensure usability and relevance. Interdisciplinary collaboration is central to avoiding the pitfalls of retrofitting technology after development. Once prototypes are refined, feasibility studies evaluate their real-world performance—sometimes leading to iterative redesign and testing.

Prof. Mankodiya will conclude by sharing his experience working with med-tech startups, offering insights into the translation of lab-based innovations into real-world solutions that advance personalized and accessible healthcare.