

NIST on a Chip: A Revolution in Measurement Science

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Recent advances in measurement science enable realistic planning for a broad range of SI-traceable precision measurements that can be deployed almost anywhere: on the factory floor, in operating aircraft and motor vehicles, in the doctor's office. Most of these new measurement systems can be made the size of computer chips and bring the accuracy and precision of quantum-based measurements out of the metrology lab and into a broad range of applications. We will discuss some examples of early NIST on a chip measurement technologies and ideas for the future.