Quality and Reliability with Applications to Information and Communication Technology (ICT) Industry

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Abstract

Information and communication technology (ICT) products (such as smart phone, ipad, and etc.) are widely used in our daily life. The quality and reliability of the key components in ICT devices are of great interests to both customers and the manufactures. In this talk, I will briefly introduce four related topics as follows: (a) Run-to-run (R2R) process control of IC manufacturing process; (b) Fault detection and classification (FDC) of IC manufacturing process; (c) Field failure rate prediction of ICT products; and (d) End-of-performance (EOP) prediction of Lithium-ion batteries. Suitable statistical approaches are also proposed to address these decision problems.