中国矿业大学

CHINA UNIVERSITY OF MINING AND TECHNOLOGY

学术报告

[illegible]

[illegible] What You See Is Not What You Get: A Networked Estimation Perspective

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[illegible] Brunel University [illegible] IEEE Fellow [illegible] International Journal of Systems Science [illegible] Neurocomputing [illegible] SCI [illegible]

[illegible] In this presentation, we talk about the state estimation problems for networked systems under unconventional measurements. Such unconventional measurements include, but are not limited to, 1) randomly occurring phenomena (e.g. delays, dropouts, saturations, quantization, fading, disorders, resolutions, biases, degradations, censorings, outliers), 2) effects induced by communication protocols (e.g. event-triggering protocol, round-robin protocol, try-once-discard protocol and random access protocol), and 3) effects induced by coding-decoding mechanisms (e.g. encryption-decryption scheme). Some background knowledge is first introduced from the perspectives of concepts, applications and challenges. Then, some detailed discussions are given on the optimal estimation issues with network constraints, system constraints and protocol constraints, and a few developed methodologies for handling unconventional measurements are discussed. Finally, we conclude our main contributions and some future directions.