自动化学院·自慧讲堂（2025年第3期）

报告题目： Remote State Estimation Under Transmission Power Constraints

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报告时间： 2025年4月16日 16:00-17:00

报告地点： 临江楼A103报告厅

主 持 人： 葛泉波 教授

报告摘要：

In this presentation, we talk about the remote state estimation problem with noisy wireless communication channels, where the total transmission power constraint becomes a concern. Utilizing the ultimately bounded filtering method, we devise a state estimator that accounts for the combined effect of probabilistic bit flips and transmission power allocation on estimation performance. Moreover, the task of co-designing the transmission power allocation scheme and estimator gains is modeled as an optimization problem, which is then addressed through a two-step optimization strategy. Numerical simulation examples are provided to demonstrate the effectiveness of the proposed co-design approach.

报告人简介：

Zidong Wang is currently a Chair Professor at Brunel University London, a Fellow of the European Academy of Sciences, a Fellow of the European Academy of Sciences and Arts, an IEEE Fellow, and the Editor-in-Chief of the International Journal of Systems Science and Neurocomputing. He has been engaged in research on control theory, machine learning, bioinformatics, and other fields for many years, and has published over 700 international papers in SCI journals. He is currently or has previously served as the Editor-in-Chief, Associate Editor, or Editorial Board Member of twelve international journals. He has also served as the President of the Chinese Automation and Computing Society in the UK, a National Leading Talent at Donghua University, and a National Expert at Tsinghua University.