

Bibliography

Before listing Ching-Zong's publications, we give a brief introduction of their background and divide them broadly into five groups, in which the papers are referred to by their numbers in the subsequent list.

A. Least squares estimates in stochastic regression models

Ching-Zong's work in this area began with papers [1], [2] and [3], in which the strong consistency of least squares estimates is established in fixed-design linear regression models. In particular, when the errors are square integrable martingale differences, a necessary and sufficient condition for the strong consistency of least squares estimates is given. However, when the regressors are stochastic, this condition is too weak to ensure consistency. Paper [6] is devoted to resolving this difficulty, and establishes strong consistency and asymptotic normality of least squares estimates in stochastic regression models under mild assumptions on the stochastic regressors and errors. These results can be applied to interval estimation of the regression parameters and to recursive on-line identification and control schemes for linear dynamic systems, as shown in [6]. Papers [7], [12] and [15] extend the results of [6] and establish the asymptotic properties of least squares estimates in more general settings.

B. Adaptive control and stochastic approximation

Papers [17] and [18] resolve the dilemma between the control objective and the need of information for parameter estimation by occasional use of white-noise probing inputs and by a reparametrization of the model. Asymptotically efficient self-tuning regulators are constructed in [18] by making use of certain basic properties of adaptive predictors involving recursive least squares for the reparametrized model. Paper [16] studies excitation properties of the designs generated by adaptive control schemes. Instead of using least squares, [13] uses stochastic approximation for recursive estimation of the unknown parameters in adaptive control. Paper [20] introduces a multivariate version of adaptive stochastic approximation and demonstrates that it is asymptotically efficient from both the estimation and control points of view, while [28] uses martingale transforms with non-atomic limits to analyze stochastic approximation. Paper [23] introduces irreversibility constraints into the classical multi-armed bandit problem in adaptive control.

C. Nonstationary time series

For a general autoregressive (AR) process, [9] proves for the first time that the least squares estimate is strongly consistent regardless of whether the roots of the characteristic polynomial lie inside, on, or outside the unit disk. Paper [22] shows that in general unstable AR models, the limiting distribution of the least squares estimate can be characterized as a function of stochastic integrals. The techniques