

灵峰论坛

On the Application of Characteristic Model Based All Coefficient Adaptive Control on Active Magnetic Bearing Systems

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Prof. Zongli Lin

University of Virginia

Zongli Lin is the Ferman W. Perry Professor in the School of Engineering and Applied Science at University of Virginia. His current research interests include nonlinear control, robust control, and control applications. He currently serves on the editorial boards of several journals and book series, including Automatica, Systems & Control Letters, Science China Information Sciences, and Springer/ Birkhauser book series Control Engineering. He is a Fellow of the IEEE, a Fellow of the IFAC, and a Fellow of AAAS, the American Association for the Advancement of Science.

Abstract

In this talk, we will present some of our recent results on the implementation of the characteristic ACAC on an experimental test rig for high speed energy storage flywheels suspended on magnetic bearings. Extensive numerical simulation and experimental results indicate that this model free control law outperforms the μ -synthesis control law that was originally designed when the experimental platform was built in terms of their ability to suppress the vibration on the high speed test rig and possesses considerable robustness with respect to plant uncertainties, external disturbances and time delay.