



BLIND MULTIUSER DETECTION BY ACCELERATED SUBSPACE TRACKING (ThuPmOR8)

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★ **Abstract :** We propose a new blind multiuser detection scheme based on an accelerated subspace tracking in rapidly time-varying channel scenarios. The proposed subspace tracker is derived by combining the projection approximation subspace tracking (PAST) with the internal model principle, approximately expressing the changing parameters with an expansion of polynomial time functions. The proposed subspace tracker can still maintain the linear computational complexity to the number of users, similar to the PAST. Furthermore, the effectiveness of the proposed multiuser detector is validated in synchronous DS-CDMA systems with Rayleigh fading through some numerical simulations.