

## **Performance of OCDMA systems with new spectral direct detection (SDD) technique using enhanced double weight (EDW) code**

This paper investigates the performance of enhanced double weight (EDW) code for spectral-amplitude-coding OCDMA (SAC-OCDMA) system using a newly proposed spectral direct detection (SDD) technique. EDW is the enhanced version of double weight (DW) code that possesses ideal cross-correlation properties and weight which can be any odd number greater than one. The theoretical and simulation results show that the proposed new spectral direct detection technique improves the performance compared to the conventional complementary subtraction technique.