

COMPARATIVE ANALYSIS OF MODEL- A AND MODEL- B FOR 3D OCDMA SYSTEM USING LINEAR AND CUBIC ALGEBRAIC OPERATOR

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Abstract

The authors have developed novel mathematical models for 3 D OCDMA system by generating codes using algebraic congruent operator and optical orthogonal codes. The codes thus generated have been implemented by designing OCDMA system using all practical parameters as well as impairments thus supporting maximum fifteen active users for satisfactory BER 6.6298e-008. The results are shown in terms of eye diagram, signal strength.

Keywords : Optical Code Division Multiple Access (OCDMA), Optical Orthogonal Codes (OOC), Linear Congruent Operator (LCO), Cubic Congruent Operator (CCO), Galois field (5), 3 Dimensional, Model A, Model B.