



A NOVEL CARRIER ALLOCATION METHOD FOR MULTIUSER OFDM SYSTEM WITH AMPLIFIER NONLINEARITIES (ThuPmOR3)

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✳ **Abstract :** Amplifier nonlinearities affect drastically the performance of OFDM systems. A new carrier allocation method that reduces the intermodulation distortion between different carriers for multiuser OFDM system is presented. Using this allocation technique and transmit beamforming a bit error rate improvement is obtained in a low or medium load system. Comparison of this proposal with Block and Interleaved OFDM allocation methods is performed. Applying the novel allocation technique, the values of Input Back Off (IBO) that can be applied in order to obtain an adequate bit error rate are smaller than with conventional allocation techniques.