



## ON THE IMPLEMENTATION OF A TRANSMITTED-REFERENCE UWB RECEIVER (ThuPmOR12)

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### \* Abstract :

In this paper we discuss the design issues of an Ultra Wide Band (UWB) receiver, targeting a single-chip CMOS implementation for low data-rate applications like  $\{\text{lem ad hoc}\}$  wireless sensor networks. A non-coherent transmitted-reference (TR) receiver is chosen because of its small complexity compared to other architectures. Issues, challenges and possible design solutions are discussed. In particular, an analysis of the trade-off between performance and complexity in an integrated circuit implementation is given.