# Abstracts

## Extremely low-precision integer cellular array algorithm for computational electromagnetics

*G.E. Bridges and N.R.S. Simons. "Extremely low-precision integer cellular array algorithm for computational electromagnetics." 1999 Microwave and Guided Wave Letters 9.1 (Jan. 1999 [MGWL]): 1-3.*

We present an algorithm for computational electromagnetics using extremely low-precision integer variables (only a single or a few bits) operating on a cellular array topology. We show, through the enforcement of field and energy conservation rules, that lossless linear wave behavior can be simulated enabling solution of the two-dimensional Maxwell's equations. Since the algorithm operates using only a few bits per cell and does not require floating-point operations, it is ideally suited for implementation on a fine grain computing engine.

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