

Mapped Tent-pitching methods for Maxwell Equations

We present a new numerical method for solving time dependent Maxwell Equations. It is based on the tent-pitching algorithm, which is a domain decomposition method in space-time. Provided that an approximate solution is available at the tent-bottom, the equation can be locally evolved up to the top of the tent. With mapped tent-pitching, we present a new, completely explicit version of tent-pitching. This leads to an highly parallel algorithm, which utilizes modern computer architectures extremely well.