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Well-posedness study and finite element simulation of time-domain cylindrical and elliptical cloaks.

The main purpose of the paper under review is to establish the well-posedness for the governing equations which are used for cylindrical cloaking simulation. The authors also propose a new mixed finite element scheme for simulating the cylindrical cloak. Numerical results showing the cloaking phenomena obtained by the new scheme are provided in a separate section. Numerical simulations and analysis of the elliptical cloak are performed in the final part of this paper.

Keywords: Maxwell’s equations; invisibility cloak; finite element method; metamaterials
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