

Nalin, Olivier

Contrôlabilité exacte sur une partie du bord des équations de Maxwell. (Exact controllability on the boundary of Maxwell's equations). (French) [Zbl 0688.49041](#)

C. R. Acad. Sci., Paris, Sér. I 309, No. 13, 811-815 (1989).

Summary: To extend to Maxwell's equations the results proved by *C. Bardos*, *G. Lebeau* and *J. Rauch* [see appendix II of *J. L. Lions*, Exact controllability, perturbations and stabilization of distributed systems. Vol. 1: Exact controllability. (French) (1988; [Zbl 0653.93002](#))] for the wave equation we first prove a result on the propagation of singularities for the system of Maxwell's equations. We then deduce a characterization (with necessary and sufficient conditions of that part of the boundary on which one has to act to obtain exact controllability. We are thus able to improve results of *J. E. Lagnese* [*SIAM J. Control Optimization* 27, No.2, 374-388 (1989)].

MSC:

[93B03](#) Attainable sets, reachability

[35L50](#) Initial-boundary value problems for first-order hyperbolic systems

[93B05](#) Controllability

[93C20](#) Control/observation systems governed by partial differential equations

[78A40](#) Waves and radiation in optics and electromagnetic theory

Cited in **6** Documents

Keywords:

Maxwell's equations; propagation of singularities; exact controllability