

Finyagina, V. I.**Modeling a mobile control in distributed-parameter two-dimensional systems.** (English. Russian original) [Zbl 0753.93035](#)[Sov. J. Comput. Syst. Sci. 28, No. 3, 57-66 \(1990\)](#); translation from *Izv. Akad. Nauk SSSR, Tekh. Kibern.* 1989, No. 6, 68-77 (1989).

Summary: *A. G. Butkovskij, V. A. Kubyshkin, A. G. Smirnov, E. S. Tverdokhlebov and E. P. Chubarov* [*Telemekh.* 1984, No. 9, 52-61 (1984; [Zbl 0558.93048](#))] and *A. G. Butkovskij, V. A. Kubyshkin, E. S. Tverdokhlebov and E. P. Chubarov* [*ibid.* 1983, No. 4, 5-12 (1983; [Zbl 0521.93038](#))] propose a substitution method for designing, and a method for realizing distributed controls with the aid of mobile action sources for one-dimensional distributed systems. The goal of this paper is to use and generalize these methods for modeling mobile controls in two-dimensional regions. The results of the paper have a broad field of application but, for specificity, we apply them to a broad class of thermal processes of smelting a metal in an electron-beam intermediate- vessel furnace.

MSC:[93C10](#) Nonlinear systems in control theory**Keywords:**[modeling mobile controls](#)