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Noncontrollability to rest of the two-dimensional distributed system governed by the integrodifferential equation. (English) Zbl 1346.93076

Summary: In this paper, we examine the controllability problem of a distributed system governed by the two-dimensional Gurtin-Pipkin equation. We consider a system with compactly supported distributed control and show that if the memory kernel is a twice continuously differentiable function, such that its Laplace transformation has at least one root, then the system cannot be driven to equilibrium in finite time.

MSC:
93B05 Controllability
45K05 Integro-partial differential equations

Keywords:
lack of controllability to rest; equation with memory; distributed control; moment problems

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References:

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