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**An optimal control approach for e-rumor.** (English) Zbl 1473.49024  
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Summary: Social networks have a significant role in spreading rumors. Such phenomena of e-rumor are big challenges for communities, organizations and states, since the spread of rumors can rapidly jeopardise their public opinion and their economic and financial markets. In these last decades, many mathematical theories have been developed on this topic both in algebraic and numerical terms. In the present work, an optimal control approach is applied on a rumor's dynamical model in order to minimize the spread. At the end of the paper some numerical results are given.

**MSC:**

**49K15** Optimality conditions for problems involving ordinary differential equations  
**49S05** Variational principles of physics  
**94A15** Information theory (general)  
**91D30** Social networks; opinion dynamics

**Keywords:**

social networks; e-rumor; optimal control; Cauchy-Lipschitz's theorem; Pontryagin's maximum principle

**Full Text:** [Link](#)

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