

OPTIMAL CONTROL OF GENERALIZED BASS MODELS

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We consider generalizations of the new-product adoption model studied by Sethi et al. (2008). We take arbitrary adoption and saturation effects into account, and solve finite and infinite horizon discounted variations of the associated control problems. For a general class of models we derive explicit formulas of the value function and the optimal policies. Controlled Bass models with isoelastic demand are special examples of such models which are very important for applications. Results for these models and generalized Bass models will be presented.

This talk is based on joint work with K. Helmes and R. Schlosser.

References:

Sethi, S. P., Prasad, A. and He, X. (2008). Optimal Advertising and Pricing in a New-Product Adoption Model. *Journal of Optimization Theory and Applications* **139**(2): 351–360.

Helmes, K., Schlosser, R. and Weber, M. (2013). Optimal Advertising and Pricing in a Class of general New-Product Adoption Models. *European Journal of Operational Research*. To appear.