

# BUDGETED MAXIMIZATION PROBLEMS

- ✦ NP-hard in general
- ✦ **Submodular** set function maximization:
  - ✦  $(1-1/e)$ -approximations ( $\sim 63\%$ )  
(Nemhauser 1978, Khuller et al. 1999, Calinescu et al. 2009)