1057-49-205   **Arunachalam Chockalingam*** (`arunachalam@purdue.edu`), 315 N. Grant Street, School of
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Kumar Muthuraman. *American Options and Sub-optimal Exercise Policies.* Preliminary report.

The American option pricing problem gives rise to a free-boundary problem, the solution of which yields the price function
and associated optimal exercise policy. Chockalingam and Muthuraman (2009) develop an exercise policy improvement
scheme to price these options in a variety of settings. In this work, we derive error bounds for option prices obtained using
exercise policies that lie below the optimal exercise policy, and relate these to the exercise policy improvement scheme of
Chockalingam and Muthuraman (2009). These error bounds are applicable for a variety of market models. We provide
numerical illustrations to verify these error bounds. Furthermore, we list a result for option prices obtained using exercise
policies that lie above the true policy. (Received January 22, 2010)