

Karlin, Anna R.; Kenyon, Claire; Randall, Dana

Dynamic TCP acknowledgment and other stories about $e/(e-1)$. (English) Zbl 1045.68155
Algorithmica 36, No. 3, 209-224 (2003).

Summary: We present the first optimal randomized online algorithms for the TCP acknowledgment problem and the Bahncard problem. These problems are well known to be generalizations of the classical online ski-rental problem, however, they appeared to be harder. In this paper we demonstrate that a number of online algorithms which have optimal competitive ratios of $e/(e-1)$, including these, are fundamentally no more complex than ski rental. Our results also suggest a clear paradigm for solving ski-rental-like problems.

MSC:

68W05 Nonnumerical algorithms

Cited in **16** Documents

Keywords:

TCP acknowledgment; Online algorithms; Ski-rental; Basis inputs

Full Text: [DOI](#)