

[Liggett, Thomas M.](#)

**Total positivity and renewal theory.** (English) [Zbl 0682.60078](#)

Probability, statistics, and mathematics, Pap. in Honor of Samuel Karlin, 141-162 (1989).

[For the entire collection see [Zbl 0679.00013](#).]

The paper unifies and considerably extends several known results on the relations between a probability density  $f$  and the corresponding renewal density  $u$  by means of total positivity. Moreover for a density  $f$  with decreasing failure rate there is given a straight forward proof of the fact that (in the discrete time formulation)  $u(n) - u(n + 1)$  is asymptotic to a constant multiple of the tail probabilities of  $f$ .

Reviewer: [M.Schäl](#)

**MSC:**

[60K05](#) Renewal theory

Cited in **6** Documents

**Keywords:**

[renewal density](#); [total positivity](#); [tail probabilities](#)