

THE SEQUENTIAL PROBABILITY RATIO TEST REVISITED: LINKING STATISTICS AND RUIN THEORY

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Wald's classical sequential probability ratio test for one simple hypothesis against an alternative is based on the boundary crossing of an associated random walk. In this talk we connect this test to a problem in ruin theory, leading to explicit expressions for the decision boundaries for sequential testing of Erlang distributions. Information on the mean sample size of the test can be retrieved as well. The approach relies on the use of scale matrices associated to corresponding Markov additive processes. This simplifies and extends earlier results of Teugels & Van Assche.