

# PARAMETER ESTIMATION FOR THE SIMPLE SELF-CORRECTING POINT PROCESS

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**Abstract.** We consider the simple self-correcting point process whose intensity takes only the two levels,  $a$  and  $b$ , where the level  $a$  ( $0 < a < 1$ ) is the state of the intensity for low stress, and the level  $b$  ( $1 < b < \infty$ ) is for high stress. Then, the maximum likelihood estimators of  $a$  and  $b$  and their asymptotic distributions are explicitly shown. These results may be instructive and suggestive for studying more general cases of self-correcting point processes.

*Key words and phrases:* Self-correcting point process, stress release process, maximum likelihood estimator, invariant distribution, transition probability, ergodicity, local asymptotic normality (LAN).