

Abstract Submitted
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A novel method for the precise determination of step times and sizes in counting large numbers of photobleaching events KONSTANTINOS TSEKOURAS, STEVE PRESSE, Indiana University - Purdue University Indianapolis — Counting of photobleaching steps is of importance in the investigation of many open problems in biophysics. Current methods of counting photobleaching steps cannot directly account for fluorophore photophysical behaviors such as fluorophore self-quenching, blinking and flickering. Our Bayesian approach to the counting problem allows for fluorophore blinking and reactivation as well as for multiple simultaneous photobleaching events and is neither computational resource- nor time- heavy. We detail the methods applicability and limitations and present examples of application in photobleach event counting.

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