Abstract Claudia Kirch:

Title: Data Segmentation: Moving-sum-procedures and bootstrap confidence intervals

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Using the example of changes in the mean we introduce change point estimators for multiple changes based on moving sum statistics which obtain optimal localisation rates for the change points. Despite the optimality property these estimators are not consistent in the usual sense but instead exhibit uncertainty that is non-vanishing even asymptotically in non-rescaled time. We propose bootstrap estimators to tame this uncertainty by means of confidence intervals and show that the bootstrap automatically adapts to the different asymptotic regimes associated with local and fixed changes respectively.

We shortly discuss extensions to multiple bandwidths moving sum procedures which work well in the presence of multiscale change points with both large jumps over short intervals and small changes over long stationary intervals.