

Selecting the tip  $t=t(S)$  of the probable spike  $S$  in the form of a local extremum on the initial record  $y$

Constructing linear regressions for the fragments of the record  $\Delta = 1, \dots, 10$

Fuzzy comparisons of the values of the linear regressions

The free parameters:  
the parameter of fuzzy comparison  $\nu > 0$

Searching for quasi-spikes

Classifying the left-hand ( $S'$ ) and the right-hand ( $S''$ ) slopes of the probable spike  $S$  in terms "steep—gentle"

The free parameters:  
the level of extremality  $0 < \rho_1 \leq 1$

The slopes are steep trends

Classifying the left-hand ( $S'$ ) and the right-hand ( $S''$ ) slopes of the probable spike  $S$  in terms "ascending—descending"; determining the shape and the boundaries of the probable spike  $S$

Selecting the spikes

Classifying the left-hand  $W'(S)$  and the right-hand  $W''(S)$  wings of the quasi-spike ( $S', t, S''$ ) in terms "quiet—not quiet"

The free parameters:  
the level of quietness  $0 < \rho_2 \leq 1$

The wings are quiet fragments

Selecting the spikes from the set of quasi-spikes

The block diagram of the  $SPs$  algorithm