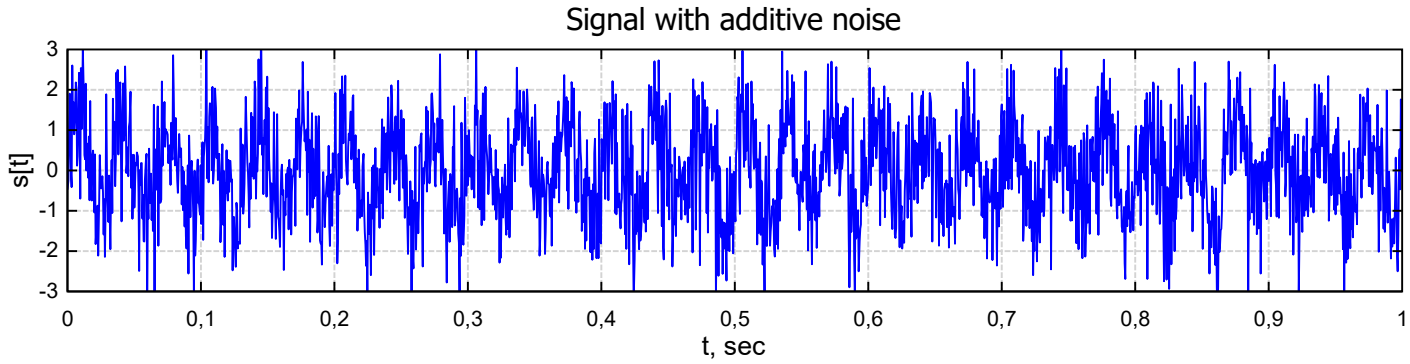
An example of using the function filter_iir()

$ord := 6$ $N := 2000$ $t_{min} := 0$ $t_{max} := 1$ $\Delta t := \frac{t_{max} - t_{min}}{N - 1}$ $f := 30$ $\text{appVersion}(4) = \text{"0.99.7921.69"}$

$t := \Delta t \cdot ([0\,..\,(N-1)])$

$s := \overrightarrow{\sin(2 \cdot \pi \cdot f \cdot t)} + \text{dspl\_randn}(N, 0, 1)$



$ba := \text{dspl\_iir}(1, 70, ord, 0.06, 0, \text{"ELLIP | LPF"})$ $b := ba_1$ $a := ba_2$

$b^T = [0.0004 \;\; -0.0019 \;\; 0.0042 \;\; -0.0054 \;\; 0.0042 \;\; -0.0019 \;\; 0.0004]$

$a^T = [1 \;\; -5.7702 \;\; 13.9303 \;\; -18.0087 \;\; 13.1476 \;\; -5.1394 \;\; 0.8403]$

$s_f := \text{dspl\_filter\_iir}(b, a, ord, s)$