A differential pair with input transistors and provided with a variable degeneration resistor. The degeneration resistor comprises a series arrangement of two branches of coupled resistors which are shunted in mutually corresponding points by respective control transistors whose gates are interconnected. The differential pair further comprises a control loop comprising two current mirrors a bias resistor and a current source for providing a control signal to the gates of the control transistors. The control loop does not influence the DC bias of the differential pair.