

BODE_250302

Disegnare i diagrammi di Bode delle seguenti funzioni di trasferimento:

$$P_0(s) = \frac{50(s+1)}{(s+10)(s^2+1)}$$

$$P_1(s) = \frac{12}{s(s+2)(s+4)}$$

$$P_2(s) = \frac{1500(2s+1)}{(s+2)(s+5)}$$

$$P_3(s) = \frac{1}{s^2(s+3)}$$

$$P_4(s) = \frac{60\left(1 + \frac{s}{2}\right)}{(s+1)(s-1)^2}$$

$$P_5(s) = \frac{0.1(s^2+1)}{5s(s+2)(s+4)}$$

$$P_6(s) = \frac{s-2}{(s+2)(s^2+1000)}$$

$$P_7(s) = \frac{s-2}{(s+2)(s^2-1000)}$$

$$P_8(s) = \frac{800(s+1)}{(s+2)(s^2+4s+5)}$$

$$P_9(s) = \frac{s+1}{s(s-2)}$$

$$P_{10}(s) = \frac{64s(s-1)}{(s+0.5)(s^2-4)(s+4)}$$

$$P_{11}(s) = \frac{8s(s-2)}{(s^2-0.25)(s+4)^2}$$

$$P_{12}(s) = \frac{32(s+0.5)}{s(s+1)(s^2+4)}$$

$$P_{13}(s) = \frac{8(s+1)}{s(s+0.5)(s^2+4)}$$

$$P_{14}(s) = \frac{1000(s+1)}{s(s+0.5)(s^2-4)}$$

$$P_{15}(s) = 1000 \frac{(s+0.5)^3(s+1)}{s^2(s^2+4)(s+8)}$$

$$G_4(s) = \frac{(s^2-0.2s+1)}{5s(s+2)(s+4)}$$