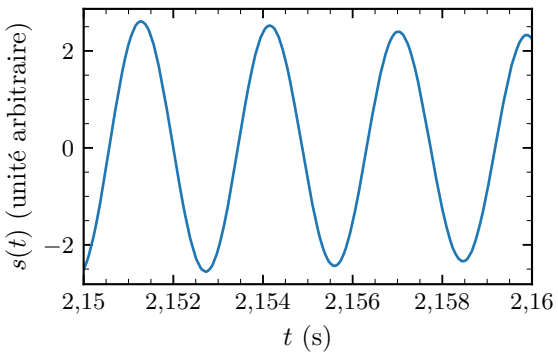
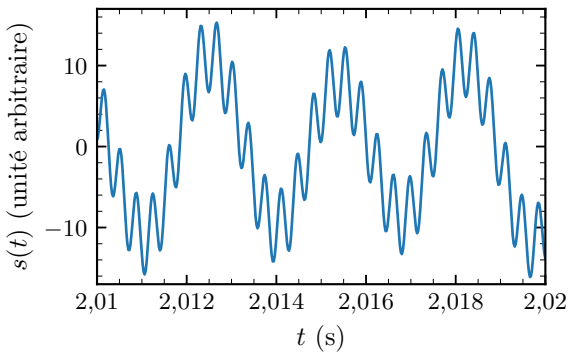
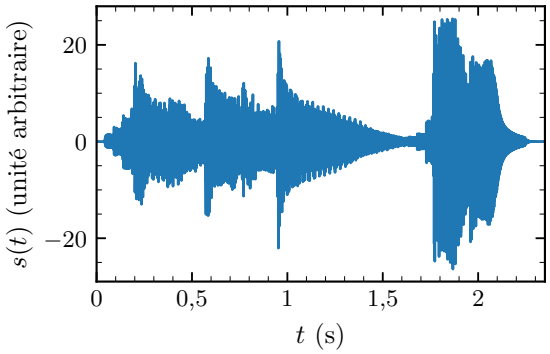


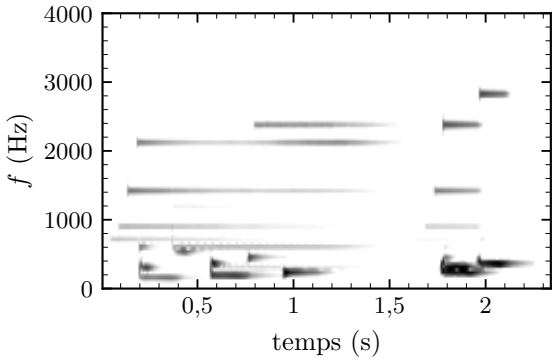
(a) *Un signal.*



(b) *Même signal, à un autre moment.*

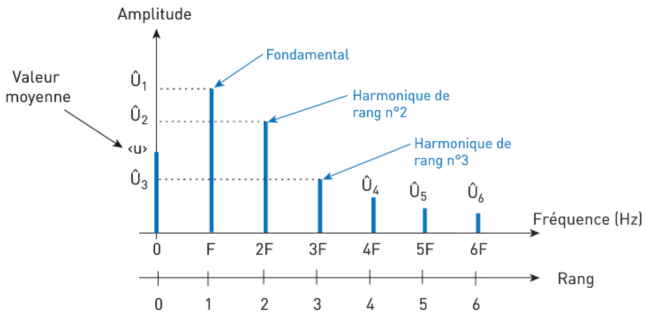


(c) *Signal complet.*

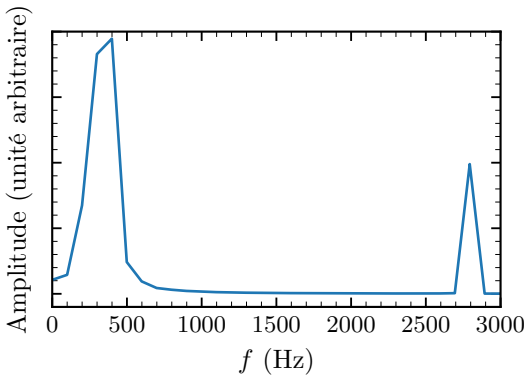


(d) *Représentation temps-fréquence.*

Figure 1

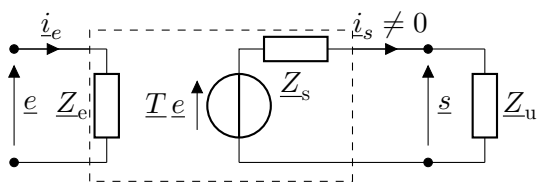


(a) *Spectre en amplitude d'un signal périodique.*

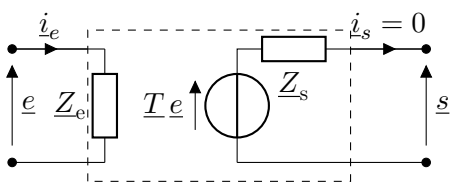


(b) *Spectre du signal de la figure 1b.*

Figure 2 – *Spectres en amplitude.*

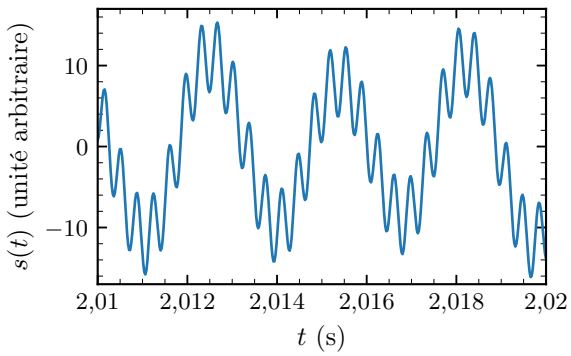


(a) *Quadripôle avec une charge $\underline{Z}_u$.*

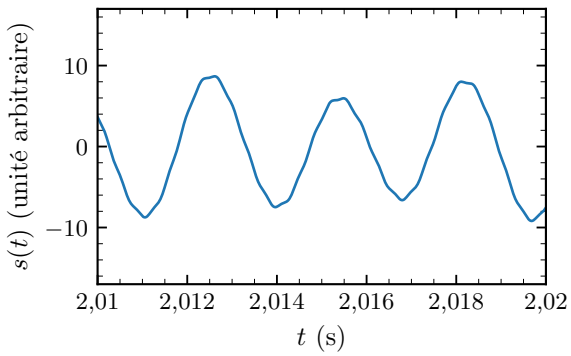


(b) *Quadripôle à vide.*

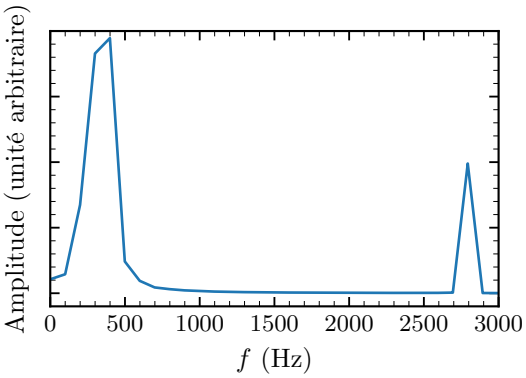
Figure 8 – *Illustration des notions d'impédances d'entrée et de sortie.*



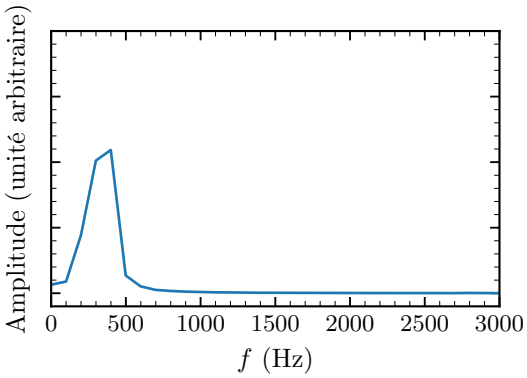
(a) *Signal de la figure 1b.*



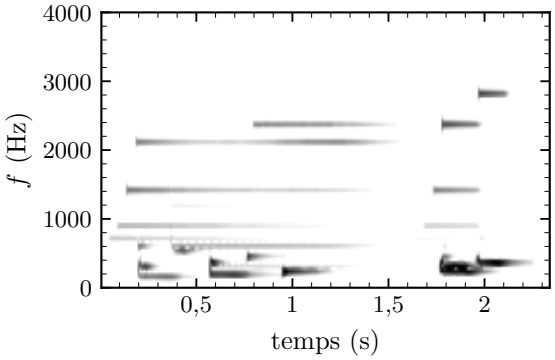
(b) *Signal après filtre passe-bas.*



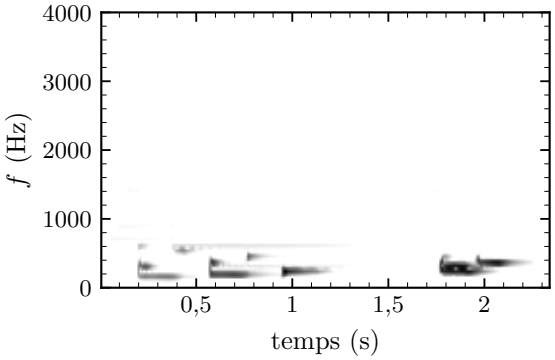
(c) *Spectre du signal de la figure 1b.*



(d) *Spectre après filtre passe-bas.*

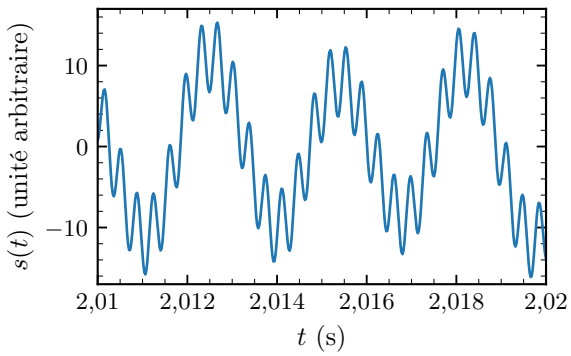


(e) *Représentation temps-fréquence du signal complet.*

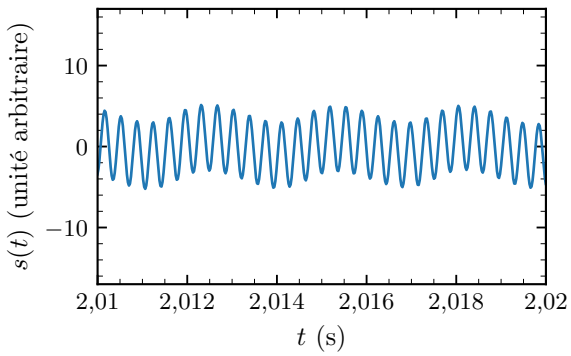


(f) *Rp. $t - f$ après filtre passe-bas.*

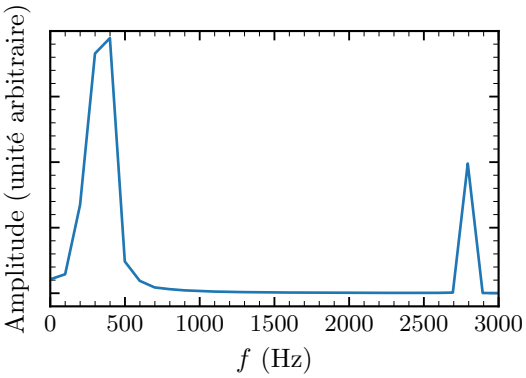
Figure 4 – *Effet d'un filtre passe-bas d'ordre 1 de fréquence de coupure $f_c = 1200\,\text{Hz}$.*



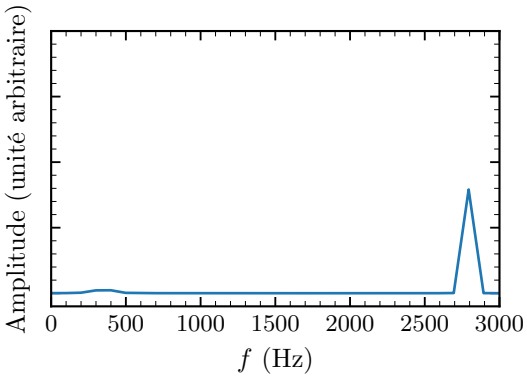
(a) *Signal de la figure 1b.*



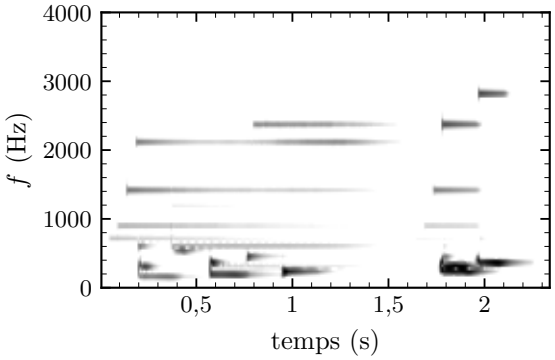
(b) *Signal après filtre passe-haut.*



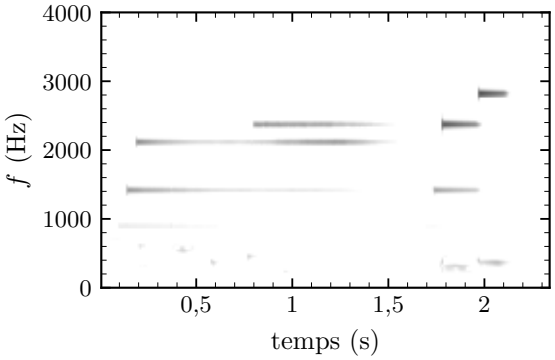
(c) *Spectre du signal de la figure 1b.*



(d) *Spectre après filtre passe-haut.*



(e) *Représentation temps-fréquence du signal complet.*



(f) *Rp. $t - f$ après filtre passe-haut.*

Figure 6 – *Effet d'un filtre passe-haut d'ordre 1 de fréquence de coupure $f_c = 2000\,\text{Hz}$.*