Atividade

Implementar as funções no ProOF e comparar resultados para representação real e binária.

4. *Bohachevsky 1 Problem (BF1)* (Bohachevsky et al., 1986)

$$\min_{x} f(x) = x_1^2 + 2x_2^2 - 0.3\cos(3\pi x_1) - 0.4\cos(4\pi x_2) + 0.7$$

subject to $-50 \leqslant x_1, x_2 \leqslant 50$. The number of local minima is unknown but the global minimizer is located at $x^* = (0,0)$ with $f(x^*) = 0$.

9. *Cosine Mixture Problem (CM)* (Breiman and Cutler, 1993)

$$\max_{x} f(x) = 0.1 \sum_{i=1}^{n} \cos(5\pi x_i) - \sum_{i=1}^{n} x_i^2$$

subject to $-1 \leqslant x_i \leqslant 1$, $i \in \{1, 2, \ldots, n\}$. The global maxima are located at the origin with the function values 0.20 and 0.40 for $n = 2$ and $n = 4$, respectively.