$$p\_\varepsilon(r) = \frac{2b - a}{r\_\varepsilon^3} Fr - \frac{3}{2r\_\varepsilon^5} \left(2b \left(r^T Fr\right) I_n + a\varepsilon^2 F\right) r$$

where

- $F \in \mathbb{R}^{n \times n}$
- $r \in \mathbb{R}^n$
- $r\_\varepsilon \in \mathbb{R}$
- $a \in \mathbb{R}$
- $b \in \mathbb{R}$
- $\varepsilon \in \mathbb{R}$