DISTÂNCIA DE MINKOWSKI

$$D_p(\mathbb{X}(t), \mathbb{Y}(t)) = \left(\sum_{i=1}^{3} |\mathbb{X}_i(t) - \mathbb{Y}_i(t)|^p \right)^{1/p}$$

$$\mathbb{X}(t) = (\mathbb{A}(t), \mathbb{S}(t), \mathbb{G}(t))$$

$$\mathbb{A}(t) = \frac{\mathcal{A}(t) - \langle \mathcal{A}(t) \rangle}{\sigma(\mathcal{A}(t))} \qquad \mathcal{A}(t) = \frac{A(t)}{A(0)} \qquad A(t) = \langle z^0 \rangle(t)$$

$$\mathbb{S}(t) = \frac{\mathcal{S}(t) - \langle \mathcal{S}(t) \rangle}{\sigma(\mathcal{S}(t))} \qquad \mathcal{S}(t) = \sigma(t) \qquad \sigma(t) = \sqrt{\langle z^2 \rangle(t) - \mu^2(t)}$$

$$\mathbb{G}(t) = \frac{\mathcal{G}(t) - \langle \mathcal{G}(t) \rangle}{\sigma(\mathcal{G}(t))} \qquad \mathcal{G}(t) = \gamma(t) \qquad \gamma(t) = \frac{\langle z^3 \rangle(t) - 3\mu(t)\sigma^2(t) - \mu^3(t)}{\sigma^3(t)}$$

$$\langle z^n \rangle(t) = \int_{-\infty}^{+\infty} \Psi^\dagger(z,t)\, z^n\, \Psi(z,t)\, dz$$