



Corrigendum: Generating functionals for computational intelligence: the Fisher information as an objective function for self-limiting Hebbian learning rules

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A corrigendum on

Generating functionals for computational intelligence: the Fisher information as an objective function for self-limiting Hebbian learning rules

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In formula (10) of (Echeveste and Gros, 2014) the Fisher information with respect to the synaptic flux was formulated formally as an integral over the postsynaptic activity y , without stating explicitly that the postsynaptic activity $y = y(\mathbf{y})$ is actually a function of the N_w presynaptic activities $\mathbf{y} = (y_1, \dots, y_{N_w})$. The correct version of equation (10) is hence

$$F_w = \int \left(\sum_{j=1}^{N_w} w_j \frac{\partial}{\partial w_j} \ln(p(y(\mathbf{y}))) \right)^2 \times p(\mathbf{y}) d\mathbf{y}.$$

The functional dependence of the postsynaptic y on the presynaptic \mathbf{y} was implicitly used in equation (12) and in the derivation of the synaptic plasticity rules, but otherwise not explicitly stated.

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REFERENCE

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