Errata to:
Supplementary Material for
"Spectral Clustering based
on the graph p-Laplacian"

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Unfortunately there has been an error in a previous version of the supplementary material. However, the error occurred in an additional statement which was not used in any proof, thus the correctness of the other results is not affected. The third statement in Prop. 2.6. for the unnormalized case and the normalized case reads correctly:

Proposition 2.6 *For any function $f : V \to \mathbb{R}$ let $\tilde{f}$ denote the **unnormalized** p-mean of f. Then it holds that*

$$(\cdots)$$

$$\left(\frac{\partial^2}{\partial f_k \partial f_l} F_p^{(2)} \right)(f) \quad = \quad \left(\frac{\partial^2}{\partial f_k \partial f_l} F_p \right)(f - \tilde{f}\mathbf{1}) + F_p^{(2)}(f) \cdot \Omega(f)_{k,l} \ ,$$

where

$$\Omega(f)_{k,l} = \frac{p(p-1)\left| f_l - \tilde{f} \right|^{p-2} \left| f_k - \tilde{f} \right|^{p-2}}{\sum_i \left| f_i - \tilde{f} \right|^p \sum_i \left| f_i - \tilde{f} \right|^{p-2}} \ .$$

*For any function $f : V \to \mathbb{R}$ let $\tilde{f}$ denote the **normalized** p-mean of f. Then it holds that*

$$(\cdots)$$

$$\left(\frac{\partial^2}{\partial f_k \partial f_l} G_p^{(2)} \right)(f) \quad = \quad \left(\frac{\partial^2}{\partial f_k \partial f_l} F_p \right)(f - \tilde{f}\mathbf{1}) + F_p^{(2)}(f) \cdot \Omega(f)_{k,l}$$

where

$$\Omega(f)_{k,l} = \frac{p(p-1)d_l d_k \left| f_l - \tilde{f} \right|^{p-2} \left| f_k - \tilde{f} \right|^{p-2}}{\sum_i d_i \left| f_i - \tilde{f} \right|^p \sum_i d_i \left| f_i - \tilde{f} \right|^{p-2}} \ .$$