Corrigendum to ‘Accelerating regularized tensor decomposition using the alternating direction method of multipliers with multiple Nesterov’s extrapolations’ [Signal Processing 222 (2024) 109532]

Deqing Wang[a,b,c,*], Guoqiang Hu[d]

[a] *State Key Laboratory of Robotics, Shenyang Institute of Automation, Chinese Academy of Sciences, Shenyang 110016, China*
[b] *Institutes for Robotics and Intelligent Manufacturing, Chinese Academy of Sciences, Shenyang 110169, China*
[c] *Key Laboratory of Marine Robotics, Liaoning Province, Shenyang 110169, China*
[d] *College of Artificial Intelligence, Dalian Maritime University, Dalian 116026, China*

The authors regret that the regularization item $\mathcal{R}\big(\boldsymbol{U}^{(n)}\big)$ in equation (4) is lost in the original article during text typing. The correct form of equation (4) is

$$\begin{aligned}\mathcal{L}_{\rho}\left(\boldsymbol{A}^{(n)}, \boldsymbol{U}^{(n)}, \boldsymbol{\Lambda}^{(n)}\right) =& \frac{1}{2}\left\|\boldsymbol{X}_{(n)} - \boldsymbol{A}^{(n)}\big(\boldsymbol{B}^{(n)}\big)^{T}\right\|_F^2 + \mathcal{R}\big(\boldsymbol{U}^{(n)}\big) \\ &+ \left\langle \boldsymbol{\Lambda}^{(n)}, \boldsymbol{A}^{(n)} - \boldsymbol{U}^{(n)} \right\rangle + \frac{\rho_n}{2}\left\|\boldsymbol{A}^{(n)} - \boldsymbol{U}^{(n)}\right\|_F^2.\end{aligned} \tag{4}$$

The authors regret that the denominator ρ_n under the parameter β_n is lost in equations (29) and (30) in the original article during text typing.

The correct form of equation (29) is

$$\begin{aligned}\boldsymbol{U}^{(n)} =& \begin{cases} \boldsymbol{A}^{(n)} + \frac{1}{\rho_n}\boldsymbol{\Lambda}^{(n)} + \frac{\beta_n}{\rho_n}\boldsymbol{E}, & \text{if } \boldsymbol{A}^{(n)} + \frac{1}{\rho_n}\boldsymbol{\Lambda}^{(n)} < -\frac{\beta_n}{\rho_n}\boldsymbol{E}; \\ 0, & \text{if } \big|\boldsymbol{A}^{(n)} + \frac{1}{\rho_n}\boldsymbol{\Lambda}^{(n)}\big| \le \frac{\beta_n}{\rho_n}\boldsymbol{E}; \\ \boldsymbol{A}^{(n)} + \frac{1}{\rho_n}\boldsymbol{\Lambda}^{(n)} - \frac{\beta_n}{\rho_n}\boldsymbol{E}, & \text{if } \boldsymbol{A}^{(n)} + \frac{1}{\rho_n}\boldsymbol{\Lambda}^{(n)} > \frac{\beta_n}{\rho_n}\boldsymbol{E}; \end{cases} \\ =& \operatorname{sign}\big(\boldsymbol{A}^{(n)} + \frac{1}{\rho_n}\boldsymbol{\Lambda}^{(n)}\big) \cdot \\ & \max\left\{0, \big|\boldsymbol{A}^{(n)} + \frac{1}{\rho_n}\boldsymbol{\Lambda}^{(n)}\big| - \frac{\beta_n}{\rho_n}\boldsymbol{E}\right\},\end{aligned} \tag{29}$$

where $\boldsymbol{E} \in \mathbb{R}^{I_n \times R}$ is a matrix of all ones.

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*Corresponding author at: State Key Laboratory of Robotics, Shenyang Institute of Automation, Chinese Academy of Sciences, Shenyang 110016, China.

Email addresses: deqing.wang@foxmail.com (Deqing Wang), guoqiang.hu@dlmu.edu.cn (Guoqiang Hu)

URL: https://deqing.net (Deqing Wang)

The correct form of equation (30) is

$$\begin{aligned}\boldsymbol{U}_k^{(n)} =&\operatorname{sign}\big(\boldsymbol{A}_k^{(n)} + \frac{1}{\rho_n}\widehat{\boldsymbol{\Lambda}}_{k-1}^{(n)}\big)\cdot \\ &\max\left\{0, \left|\boldsymbol{A}_k^{(n)} + \frac{1}{\rho_n}\widehat{\boldsymbol{\Lambda}}_{k-1}^{(n)}\right| - \frac{\beta_n}{\rho_n}\boldsymbol{E}\right\}.\end{aligned} \tag{30}$$

The authors would like to apologise for any inconvenience caused.