Soft Matter

CORRECTION

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Cite this: *Soft Matter*, 2022, **18**, 684

DOI: 10.1039/d1sm90221k

rsc.li/soft-matter-journal

Correction: Guided run-and-tumble active particles: wall accumulation and preferential deposition

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Correction for 'Guided run-and-tumble active particles: wall accumulation and preferential deposition' by Chamkor Singh, *Soft Matter*, 2021, **17**, 8858–8866, DOI: 10.1039/D1SM00775K.

The author regrets the following mistake in Section 2 of the original article, while presenting the computational procedure in the text. The procedure consistent with the computational program (which is public at https://gitlab.com/iamchamkor/bio3d) is described below.

The change in angle due to rotational noise and tumble events is first calculated in eqn (1) of the paper (page 8859, left column, line 40), as

$$\Delta\varphi = \sigma(1-s)\Delta\varphi_{\text{tumble}} + \sigma\sqrt{2k_{\text{B}}T/\gamma_{\text{r}}}\xi_{\text{r}}\Delta t. \tag{1}$$

Here, $s = 0$ only at the end of a tumble duration or equivalently at the beginning of a run duration, and 1 otherwise. $\sigma = 0$ means a deposited bacterium and 1 otherwise. The bacterium is then reorientated using eqn (2) of the paper (page 8859, right column, line 40),

$$\mathbf{e}^{*} = \sigma[\mathbf{e}\cos\Delta\varphi + (\mathbf{n}\times\mathbf{e})\sin\Delta\varphi] \tag{2}$$

with unit axis of rotation $\mathbf{n}$ chosen randomly but perpendicular to $\mathbf{e}$, *i.e.* with the constraint $\mathbf{n}\cdot\mathbf{e} = 0$. Now, if a guiding torque $\mathbf{T} = \Gamma\sin\varphi\mathbf{w}$ (section 4, page 8861, right column, line 49) is also applied, then an additional change in angle due to this torque is calculated as $\Delta\varphi_2 = \sigma[-\Gamma\sin\varphi/\gamma_{\text{r}}]\Delta t$. Here, φ is the angle between $-\mathbf{k}$ and $\mathbf{e}^{*}$ (positive counterclockwise about the unit rotation axis, Fig. 4) and the unit rotation axis is $\mathbf{w} = -\mathbf{e}^{*}\times\mathbf{k}/|-\mathbf{e}^{*}\times\mathbf{k}|$. In general, $\mathbf{w}$ is different from $\mathbf{n}$. The bacteria is then reorientated using: $\mathbf{e}' = \sigma[\mathbf{e}^{*}\cos\Delta\varphi_2 + (\mathbf{w}\times\mathbf{e}^{*})\sin\Delta\varphi_2]$. If there is no guiding torque then obviously $\mathbf{e}' = \mathbf{e}^{*}$. Once reoriented due to rotational noise, tumbling, and the guiding torque, the bacteria is translated: $\mathbf{r}' = \mathbf{r} + \left[\sigma\sqrt{2k_{\text{B}}T/\gamma_{\text{t}}}\boldsymbol{\xi}_{\text{t}} + \sigma s v_{\text{o}}\mathbf{e}' + \mathbf{F}_{\text{twitch}}/\gamma_{\text{t}}\right]\Delta t$, and the program moves to the next time step. Here, $\boldsymbol{\xi}_{\text{t}}$ is a vector whose components are white Gaussian randoms. The rotational as well as translational diffusion remains active throughout runs as well as tumbles. The expression for torque in Section 4, page 8861, right column, line 46, has a typo and should be read as $\mathbf{T} = \Gamma\mathbf{e}\times\mathbf{d}$.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

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