

Comments and Corrections

Corrections to “Design, Fabrication, and Hysteresis Modeling of Soft Microtubule Artificial Muscle (SMAM) for Medical Applications”

Mai Thanh Thai , Phuoc Thien Phan , Trung Thien Hoang , Harrison Low , Nigel H. Lovell , *Fellow, IEEE*, and Thanh Nho Do , *Member, IEEE*

The new asymmetric model that captures the hysteresis nonlinearity of the soft microtubule artificial muscle (SMAM) given by the equation (3) in [1] was incorrectly printed. This equation lacks the component of internal state $z(t)$ in its structure. The correct equation should be:

$$\Phi_S(x, t) = \begin{cases} 0 : x(t) < 0 \\ \frac{\alpha_{x1}x^4(t) + \alpha_{x2}x(t) + (\alpha_{x1}x^4(t) + \alpha_{x2}x(t) - 1)e^{-2x(t)}}{1 + e^{-2x(t)}} + \alpha_z z(t) : x(t) \geq 0 \end{cases} \quad (3)$$

ACKNOWLEDGMENT

Mai Thanh Thai and Trung Thien Hoang would like to acknowledge the support from the Science and Technology Scholarship Program

for Overseas Study for Master's and Doctoral Degrees, VinUniversity, Vingroup, Vietnam.

REFERENCE

- [1] M. T. Thai, P. T. Phan, T. T. Hoang, H. Low, N. H. Lovell, and T. N. Do, “Design, fabrication, and hysteresis modeling of soft microtubule artificial muscle (SMAM) for medical applications,” *IEEE Robot. Automat. Lett.*, vol. 6, no. 3, pp. 5089–5096, Jul. 2021.

Manuscript received August 25, 2021; accepted August 25, 2021. Date of current version September 9, 2021. This letter was recommended for publication by Associate Editor C.-H. Yeow upon evaluation of the reviewers' comments. This work was supported by the UNSW Scientia Fellowship (PS46197), the UNSW Start-Up funding (PS58173), the Seed Funding from the Sydney Partnership for Health, Education, Research and Enterprise (SPHERE) (RG210207), and the Vanguard Grant from National Heart Foundation of Australia (RG204224). (Corresponding author: Thanh Nho Do.)

The authors are with the Graduate School of Biomedical Engineering (GS-BmE), Faculty of Engineering, UNSW Sydney, Kensington Campus, NSW 2052, Australia (e-mail: maithanh.thai@unsw.edu.au; phuoc_thien.phan@unsw.edu.au; trungthien.hoang@unsw.edu.au; h.low@unsw.edu.au; n.lovell@unsw.edu.au; tn.do@unsw.edu.au).

Digital Object Identifier 10.1109/LRA.2021.3108243