

Selected Publications

([Google Scholar Profile](#), [Pubmed List](#))

- [1] **Farhang-Sardroodi, S.**, Deng, X., Portet, S., Arino, J. and Craig, M., 2023. Insights into B Cell and Antibody Kinetics Against SARS-CoV-2 Variants Using Mathematical Modelling. *bioRxiv*, pp.2023-11. <https://doi.org/10.1101/2023.11.10.566587>
- [2] Gholami, S., Korosec, C.S., **Farhang-Sardroodi, S.**, Dick, D.W., Craig, M., Ghaemi, M.S., Ooi, H.K. and Heffernan, J.M., 2023. A mathematical model of protein subunits COVID-19 vaccines. *Mathematical Biosciences*, 358, p.108970. <https://doi.org/10.1016/j.mbs.2023.108970>
- [3] Molla, J., **Farhang-Sardroodi, S.**, Moyles, I.R. and Heffernan, J.M., 2023. Pharmaceutical and Non-Pharmaceutical Interventions for Controlling the COVID-19 Pandemic. *medRxiv*, pp.2023-03. <https://doi.org/10.1098/rsos.230621>
- [4] Korosec, C.S., **Farhang-Sardroodi, S.**, Dick, D.W., Gholami, S., Ghaemi, M.S., Moyles, I.R., Craig, M., Ooi, H.K. and Heffernan, J.M., 2022. Long-term durability of immune responses to the BNT162b2 and mRNA-1273 vaccines based on dosage, age and sex. *Scientific reports*, 12(1), p.21232. <https://doi.org/10.1038/s41598-022-25134-0>
- [5] **Farhang-Sardroodi, S.**, La Croix, M.A. and Wilkie, K.P., 2022. Chemotherapy-induced cachexia and model-informed dosing to preserve lean mass in cancer treatment. *PLoS computational biology*, 18(3), p.e1009505. <https://doi.org/10.1371/journal.pcbi.1009505>
- [6] **Farhang-Sardroodi, S.**, Ghaemi, M.S., Craig, M., Ooi, H.K. and Heffernan, J.M., 2022. A machine learning approach to differentiate between COVID-19 and influenza infection using synthetic infection and immune response data. *medRxiv*, pp.2022-01. <https://doi.org/10.1101/2022.01.27.22269978>
- [7] **Farhang-Sardroodi, S.**, Korosec, C.S., Gholami, S., Craig, M., Moyles, I.R., Ghaemi, M.S., Ooi, H.K. and Heffernan, J.M., 2021. Analysis of host immunological response of adenovirus-based COVID-19 vaccines. *Vaccines*, 9(8), p.861. <https://doi.org/10.3390/vaccines9080861>
- [8] **Farhang-Sardroodi, S.**, Komarova, N.L., Michelen, M. and Pemantle, R., 2021. Success probability for selectively neutral invading species in the line model with a random fitness landscape. *Studies in Applied Mathematics*, 146(4), pp.1023-1049. <https://doi.org/10.1111/sapm.12373>

- [9] **Farhang-Sardroodi, S.** and Wilkie, K.P., 2020. Mathematical model of muscle wasting in cancer cachexia. *Journal of Clinical Medicine*, 9(7), p.2029. <https://doi.org/10.3390/jcm9072029>
- [10] **Farhang-Sardroodi, S.**, Darooneh, A.H., Kohandel, M. and Komarova, N.L., 2019. Environmental spatial and temporal variability and its role in non-favoured mutant dynamics. *Journal of The Royal Society Interface*, 16(157), p.20180781. <https://doi.org/10.1098/rsif.2018.0781>
- [11] **Farhang-Sardroodi, S.**, Darooneh, A.H., Nikbakht, M., Komarova, N.L. and Kohandel, M., 2017. The effect of spatial randomness on the average fixation time of mutants. *PLoS computational biology*, 13(11), p.e1005864. <https://doi.org/10.1371/journal.pcbi.1005864>
- [12] **Farhang-Sardroodi, S.**, Rezaei-Aghdam, A. and Sedghi-Ghadim, L., 2015. Nambu structures on four-dimensional real Lie groups and related superintegrable systems. *Theoretical and Mathematical Physics*, 183, pp.684-704. <https://doi.org/10.1007/s11232-015-0288-9>