List of Publications Related to the PhD Thesis

PhD Candidate: Alicia Garrido Peña

Advisor: Pablo Varona Martinez

Journal Publications

Garrido-Peña, A., Elices, I., & Varona, P. Characterization of interval variability in the sequential activity of a central pattern generator model [JCR Q2. Related to Chapter 4]. *Neurocomputing*, *461*. 2021. *461*. 667–678. ISSN: 0925-2312. https://doi.org/10.1016/j.neucom.2020.08.093.

Garrido-Peña, A., Sanchez-Martin, P., Reyes-Sanchez, M., Levi, R., Rodriguez, F. B., Castilla, J., Tornero, J., & Varona, P. Modulation of neuronal dynamics by sustained and activity-dependent continuous-wave near-infrared laser stimulation [JCR Q1. Related to Chapter 5.]. *Neurophotonics*, *11*(2). 2024. *11*. (2). 024308. ISSN: 2329-423X, 2329-4248. https://doi.org/10.1117/1.NPh.11.2.024308.

International Conference Contributions

Amaducci, R., Elices, I., Reyes-Sanchez, M., Garrido-Peña, A., Levi, R., Rodriguez, F. B., & Varona, P. (2020). Hybrid robot driven by a closed-loop interaction with a living central pattern generator with online feedback. 29th Annual Computational Neuroscience Meeting: CNS*2020. P207. [Related to Chapter 4], In *BMC Neuroscience*. Related to Chapter 4. https://doi.org/10.1186/s12868-020-00593-1

Amaducci, R., Elices, I., Reyes-Sanchez, M., Garrido-Peña, A., Levi, R., Rodriguez, F. B., & Varona, P. (2021). Controlling robotic locomotion by a closed-loop interaction with living central pattern generators. [Related to Chapter 4], In *COSYNE*. Related to Chapter 4. https://www.cosyne.org/s/Cosyne2021_program_book.pdf

Berbel, B., Garrido-Peña, A., Elices, I., Latorre, R., & Varona, P. (2021a). Effect of Electrical Synapses in the Cycle-by-Cycle Period and Burst Duration of Central Pattern Generators (I. Rojas, G. Joya, & A. Català, Eds.) [Related to Chapter 4.]. In I. Rojas, G. Joya, & A. Català (Eds.), *Advances in Computational Intelligence*, Springer International Publishing. Related to Chapter 4. https://doi.org/10.1007/978-3-030-85099-9_7

Berbel, B., Garrido-Peña, A., Elices, I., Latorre, R., & Varona, P. (2021b). Gap junctions shape the intervals that build robust sequences in a central pattern generator model. 30th Annual Computational Neuroscience Meeting: CNS*2021–Meeting Abstracts. P194. [Related to Chapter 4.], In *Journal of Computational Neuroscience*. Related to Chapter 4. https://doi.org/10.1007/s10827-021-00801-9

Garrido-Peña, A., Elices, I., Levi, R., Rodriguez, F. B., & Varona, P. (2020). Experimental and computational characterization of interval variability in the sequential activity of the Lymnaea feeding CPG. 29th Annual Computational Neuroscience Meeting: CNS*2020. O11. ORAL PRESENTATION [Related to Chapter 4.], In *BMC Neuroscience*. Related to Chapter 4. https://doi.org/10.1186/s12868-020-00593-1

Garrido-Peña, A., Elices, I., Levi, R., Rodriguez, F. B., & Varona, P. (2021). Universality of interval variability constraints in the sequential activity of motor circuits. [Related to Chapter 4.], In *COSYNE*. Related to Chapter 4. https://www.cosyne.org/s/Cosyne2021_program_book.pdf

Garrido-Peña, A., Levi, R., Castilla, J., Tornero, J., & Varona, P. (2021). Effect of infrared laser stimulation in single neurons: Experimental and modeling study. 30th Annual Computational Neuroscience Meeting: CNS*2021–Meeting Abstracts. P193. [Related to Chapter 5], In *Journal of Computational Neuroscience*. Related to Chapter 5. https://doi.org/10.1007/s10827-021-00801-9

Garrido-Peña, A., Sanchez-Martin, P., Levi, R., Castilla, J., Tornero, J., & Varona, P. (2022). Activity-dependent stimulation to assess the effect of infrared-laser stimulation in single neurons. Poster Presentation [Related to Chapter 5], In *FENS*, FENS forum 2022. Related to Chapter 5. https://kenesvm.azureedge.net/public/general/FENS2022.pdf

Garrido-Peña, A., Sanchez-Martin, P., Reyes-Sanchez, M., Levi, R., Rodriguez, F. B., Castilla, J., Tornero, J., & Varona, P. (2024a). Effective noninvasive neuronal waveform modulation with sustained and activity-dependent continuous-wave near-infrared laser stimulation. Poster presentation. [Related to Chapter 5.], In *FENS*, FENS forum 2024. Related to Chapter 5.

Garrido-Peña, A., Sánchez-Martín, P., Elices, I., Reyes-Sanchez, M., Berbel, B., Latorre, R., Rodriguez, F. B., & Varona, P. (2024). Exploring the ability of biophysical models to reproduce the functional variability of neurons. 32nd Annual Computational Neuroscience Meeting: CNS*2023. [Related to Chapter 4], In *InPress for Journal of Computational Neuroscience*. Related to Chapter 4.

Garrido-Peña, A., Sánchez-Martín, P., Reyes-Sanchez, M., Castilla, J., Tornero, J., Levi, R., Rodriguez, F. B., & Varona, P. (2023). Activity-dependent infrared laser stimulation to assess its biophysical

effects on single neurons. 31st Annual Computational Neuroscience Meeting: CNS*2022. F3. ORAL PRESENTATION. [Related to Chapter 5], In *Journal of Computational Neuroscience*. Related to Chapter 5. https://doi.org/10.1007/s10827-022-00841-9

Sanchez-Martin, P., Elices, I., Garrido-Peña, A., Levi, R., Rodriguez, F. B., & Varona, P. (2021). Dynamic synchronization between electrically coupled cells of central pattern generators. 30th Annual Computational Neuroscience Meeting: CNS*2021–Meeting Abstracts. P195. [Related to chapter 4], In *Journal of Computational Neuroscience*. Related to chapter 4. https://doi.org/10.1007/s10827-021-00801-9

Sánchez-Martín, P., Garrido-Peña, A., Berbel, B., Rodriguez, F. B., Levi, R., & Varona, P. (2023). Influence of electrical coupling in shaping time intervals and dynamical invariants of central pattern generator sequences. 31st Annual Computational Neuroscience Meeting: CNS*2022. P109. [Related to Chapter 4.], In *Journal of Computational Neuroscience*. Related to Chapter 4. https://doi.org/10.1007/s10827-022-00841-9

Soëtard, P., Amaducci, R., Sánchez-Martín, P., Reyes-Sanchez, M., Garrido-Peña, A., Levi, R., Rodriguez, F. B., & Varona, P. (2023). Dynamical principles of functional neural sequences validated in hybrid robots built with living central pattern generators. 31st Annual Computational Neuroscience Meeting: CNS*2022. P110 [Related to Chapter 4], In *Journal of Computational Neuroscience*. Related to Chapter 4. https://doi.org/10.1007/s10827-022-00841-9