Liste complète des publications

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1 Articles de revues en cours de révision

- A57 Giacomo Benvenuti, Sandrine Chemla, Arjan Boonman, <u>Laurent U Perrinet</u>, Guillaume S Masson et Frederic Chavane. « Anticipatory Responses along Motion Trajectories in Awake Monkey Area V1 ». en. In: bioRxiv (2020), p. 2020.03.26.010017. DOI: 10/ggqj77. URL: https://www.biorxiv.org/content/10.1101/2020.03.26.010017 (visité le 31/03/2020)
- A56 Antoine Grimaldi, Victor Boutin, Sio-Hoi Ieng, Ryad Benosman et <u>Laurent U Perrinet</u>.

 « A Robust Event-Driven Approach to Always-on Object Recognition ». In: *Te-chRxiv preprint* (15 juin 2023). DOI: 10.36227/techrxiv.18003077. URL: https://www.techrxiv.org/articles/preprint/A_robust_event-driven_approach_to_always-on_object_recognition/18003077

2 Articles de revues internationales à comité de lecture

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- A55 Antoine GRIMALDI et <u>Laurent U PERRINET</u>. « Learning heterogeneous delays in a layer of spiking neurons for fast motion detection ». In: *Biological Cybernetics* (2023). URL: https://laurentperrinet.github.io/publication/grimaldi-23-bc/
- A54 Amélie Gruel, Dalia Hareb, Antoine Grimaldi, Jean Martinet, <u>Laurent U Perrinet</u>, Bernabé Linares-Barranco et Teresa Serrano-Gotarredona. « Stakes of Neuromorphic Foveation: a promising future for embedded event cameras ». In: *Biological Cybernetics* (2023)
- A53 Ilias RENTZEPERIS, Luca CALATRONI, <u>Laurent U PERRINET</u> et Dario PRANDI. « Beyond ℓ_1 sparse coding in V1 ». In: PLOS Computational Biology (2023). URL: https://laurentperrinet.github.io/publication/rentzeperis-23
- A52 Hugo Ladret, Nelson Cortes, Lamyae Ikan, Frédéric Chavane, Christian Casanova et <u>Laurent U Perrinet</u>. « Cortical recurrence supports resilience to sensory variance in the primary visual cortex ». In: *Nature Communications Biology* (6 juin 2023). preprint: https://www.biorxiv.org/content/10.1101/2021.03.30.437692. DOI: 10.1038/s42003-023-05042-3. URL: https://laurentperrinet.github.io/publication/ladret-23/
- A51 Jean-Nicolas Jérémie et Laurent U Perrinet. « Ultra-Fast Image Categorization in biology and in neural models ». In : Vision (21 mars 2023). Doi : 10.3390/vision7020029. (Visité le 21/03/2023)

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- A50 Antoine GRIMALDI, Amélie GRUEL, Camille BESNAINOU, Jean-Nicolas JÉRÉMIE, Jean MARTINET et <u>Laurent U PERRINET</u>. « Precise spiking motifs in neurobiological and neuromorphic data ». In: Brain Sciences (23 déc. 2022). DOI: 10.3390/brainsci13010068. URL: https://laurentperrinet.github.io/publication/grimaldi-22-polychronies/
- A49 Victor BOUTIN, Angelo FRANCIOSINI, Frédéric Y CHAVANE et <u>Laurent U PERRINET</u>. « Pooling in a predictive model of V1 explains functional and structural diversity across species ». In: *PLoS Computational Biology* (18 juill. 2022). DOI: 10. 1371/journal.pcbi.1010270. URL: https://laurentperrinet.github.io/publication/franciosini-21
- A48 Frédéric V Barthélemy, Jérôme Fleuriet, <u>Laurent U Perrinet</u> et Guillaume S Masson. « A Behavioral Receptive Field for Ocular Following in Monkeys: Spatial Summation and Its Spatial Frequency Tuning ». In: *eNeuro* (2022), ENEURO.0374-21.2022. ISSN: 2373-2822. DOI: 10.1523/ENEURO.0374-21.2022
- A47 Frédéric Chavane, <u>Laurent U Perrinet</u> et James Rankin. « Revisiting Horizontal Connectivity Rules in V1: From like-to-like towards like-to-All ». In: *Brain Structure and Function* (5 fév. 2022). ISSN: 1863-2661. DOI: 10.1007/s00429-022-02455-4. URL: https://doi.org/10.1007/s00429-022-02455-4 (visité le 06/02/2022)

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- A44 Emmanuel Daucé, Pierre Albigès et <u>Laurent U Perrinet</u>. « A dual foveal-peripheral visual processing model implements efficient saccade selection ». In: *Journal of Vision* 20.8 (5 juin 2020), p. 22-22. DOI: 10.1167/jov.20.8.22. URL: https://laurentperrinet.github.io/publication/dauce-20/
- A43 Chloé PASTUREL, Anna MONTAGNINI et <u>Laurent U PERRINET</u>. « Humans adapt their anticipatory eye movements to the volatility of visual motion properties ». In: *PLoS Computational Biology* (26 jan. 2020). DOI: 10.1371/journal.pcbi.1007438. URL: https://hal.archives-ouvertes.fr/hal-02394142

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- A41 Cesar U RAVELLO, <u>Laurent U PERRINET</u>, Maria-José ESCOBAR et Adrián G PALACIOS. « Speed-Selectivity in Retinal Ganglion Cells is Sharpened by Broad Spatial Frequency, Naturalistic Stimuli ». In: Scientific Reports 9.1 (24 jan. 2019). DOI: 10.1038/s41598-018-36861-8. URL: https://doi.org/10.1038%2Fs41598-018-36861-8
- A40 Sandrine CHEMLA, Alexandre REYNAUD, Matteo DIVOLO, Yann ZERLAUT, Laurent U PERRINET, Alain DESTEXHE et Frédéric Y CHAVANE. « Suppressive waves disambiguate the representation of long-range apparent motion in awake monkey V1 ». In: Journal of Neuroscience 2792 (18 mars 2019), p. 18. DOI: 10.1523/JNEUROSCI.2792-18.2019. URL: http://www.jneurosci.org/content/early/2019/03/18/JNEUROSCI.2792-18.2019 (visité le 27/07/2018)

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- A38 Jonathan Vacher, Andrew Isaac Meso, <u>Laurent U Perrinet</u> et Gabriel Peyré. « Bayesian Modeling of Motion Perception using Dynamical Stochastic Textures ». In: *Neural Computation* (21 nov. 2018). DOI: 10.1162/neco_a_01142. URL: https://www.mitpressjournals.org/doi/abs/10.1162/neco_a_01142

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- A35 Jonathan Vacher, Andrew Isaac Meso, <u>Laurent U Perrinet</u> et Gabriel Peyré. « Biologically Inspired Dynamic Textures for Probing Motion Perception ». In: Advances in Neural Information Processing Systems 28 (2015), p. 1918-1926. URL: http://papers.nips.cc/paper/5769-biologically-inspired-dynamic-textures-for-probing-motion-perception.pdf
- A34 <u>Laurent U Perrinet</u> et James A Bednar. « Edge co-occurrences can account for rapid categorization of natural versus animal images ». In: *Scientific Reports* 5 (2015), p. 11400. DOI: 10.1038/srep11400. URL: http://www.nature.com/articles/srep11400

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A31 Bernhard A KAPLAN, Anders LANSNER, Guillaume S MASSON et <u>Laurent U PERRINET</u>. « Anisotropic connectivity implements motion-based prediction in a spiking neural network ». In: *Frontiers in Computational Neuroscience* 7.112 (17 sept. 2013). DOI: 10.3389/fncom.2013.00112. URL: https://laurentperrinet.github.io/publication/kaplan-13

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A29 Claudio SIMONCINI, <u>Laurent U PERRINET</u>, Anna MONTAGNINI, Pascal MAMASSIAN et Guillaume S MASSON. « More is not always better: dissociation between perception and action explained by adaptive gain control ». In: *Nature Neuroscience* (2012). DOI: 10.1038/nn.3229. URL: http://www.nature.com/neuro/journal/vaop/ncurrent/full/nn.3229.html

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- A27 Paula S Leon, Ivo Vanzetta, Guillaume S Masson et <u>Laurent U Perrinet</u>. « Motion Clouds: Model-based stimulus synthesis of natural-like random textures for the study of motion perception ». In: *Journal of Neurophysiology* 107.11 (14 mars 2012), p. 3217-3226. ISSN: 1522-1598. DOI: 10.1152/jn.00737.2011. URL: http://dx.doi.org/10.1152/jn.00737.2011
- A26 Karl Friston, Rick A Adams, <u>Laurent U Perrinet</u> et Michael Breakspear. « Perceptions as Hypotheses : Saccades as Experiments ». In : *Frontiers in Psychology* 3 (2012). ISSN: 1664-1078. DOI: 10.3389/fpsyg.2012.00151. URL: http://dx.doi.org/10.3389/fpsyg.2012.00151
- A25 Rick A Adams, <u>Laurent U Perrinet</u> et Karl Friston. « Smooth Pursuit and Visual Occlusion: Active Inference and Oculomotor Control in Schizophrenia ». In: *PLoS ONE* 7.10 (26 oct. 2012), e47502+. doi: 10.1371/journal.pone.0047502. URL: http://dx.doi.org/10.1371/journal.pone.0047502
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- A23 Nicole Voges et <u>Laurent U Perrinet</u>. « Complex dynamics in recurrent cortical networks based on spatially realistic connectivities ». In: *Frontiers in Computational Neuroscience* 6 (2012). ISSN: 1662-5188. DOI: 10.3389/fncom.2012.00041. URL: https://laurentperrinet.github.io/publication/voges-12

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- A21 Amarender BOGADHI, Anna MONTAGNINI, Pascal MAMASSIAN, <u>Laurent U PERRINET</u> et Guillaume S MASSON. « Pursuing motion illusions : a realistic oculomotor framework for Bayesian inference ». In: *Vision research* 51.8 (22 avr. 2011), p. 867-880. ISSN: 1878-5646. DOI: 10.1016/j.visres.2010.10.021. URL: http://dx.doi.org/10.1016/j.visres.2010.10.021

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- A19 Emmanuel DAUCÉ et <u>Laurent U PERRINET</u>. « Computational Neuroscience, from Multiple Levels to Multi-level ». In: *Journal of Physiology-Paris* 104.1–2 (2010), p. 1-4. DOI: 10.1016/j.jphysparis.2009.11.001. URL: http://dx.doi.org/10.1016/j.jphysparis.2009.11.001
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- A15 Andrew P DAVISON, Daniel BRUDERLE, Jochen EPPLER, Jens KREMKOW, Eilif MULLER, Dejan PECEVSKI, <u>Laurent U PERRINET</u> et Pierre YGER. « PyNN: A Common Interface for Neuronal Network Simulators ». In: *Frontiers in Neuroinformatics* 2 (2008), p. 11. ISSN: 16625196. DOI: 10.3389/neuro.11.011.2008. URL: http://dx.doi.org/10.3389/neuro.11.011.2008
- A14 Laurent U Perrinet. « Adaptive Sparse Spike Coding: applications of Neuroscience to the compression of natural images ». In: Optical and Digital Image Processing Conference 7000 Proceedings of SPIE Volume 7000, 7 11 April 2008. Sous la dir. de Gabriel C. Peter Schelkens. T. 7000. 1. SPIE, 2008
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- A10 Anna Montagnini, Pascal Mamassian, <u>Laurent U Perrinet</u>, Eric Castet et Guillaume S Masson. « Bayesian modeling of dynamic motion integration ». In: *Journal of Physiology-Paris* 101.1-3 (1^{er} jan. 2007), p. 64-77. ISSN: 0928-4257. DOI: 10.1016/j.jphysparis.2007.10.013. URL: http://dx.doi.org/10.1016/j.jphysparis.2007.10.013
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3 Chapitres d'ouvrage à comité de lecture

- C6 <u>Laurent U Perrinet</u>. « From the retina to action: Dynamics of predictive processing in the visual system ». In: *The Philosophy and Science of Predictive Processing*. Sous la dir. de Dina Mendonça, Manuel Curado et Steven S Gouveia. Bloomsbury, 2020, p. 85-104. Doi: 10.5040/9781350099784.ch-005. url: https://laurentperrinet.github.io/publication/perrinet-20/
- C5 Anna Montagnini, <u>Laurent U Perrinet</u> et Guillaume S Masson. « Visual motion processing and human tracking behavior ». In: *Biologically Inspired Computer Vision*. Sous la dir. de Gabriel Cristóbal, <u>Laurent U Perrinet</u> et Matthias S Keil. Wiley-VCH Verlag GmbH et Co. KGaA, 1^{er} nov. 2015. Chap. 12. DOI: 10.1002/9783527680863.ch12. URL: https://laurentperrinet.github.io/publication/montagnini-15-bicv/
- C4 <u>Laurent U Perrinet</u>. « Sparse Models for Computer Vision ». In: *Biologically Inspired Computer Vision*. Sous la dir. de Gabriel Cristóbal, <u>Laurent U Perrinet</u> et Matthias S Keil. Wiley-VCH Verlag GmbH et Co. KGaA, 1er nov. 2015. Chap. 13. ISBN: 9783527680863. DOI: 10.1002/9783527680863.ch14. URL: http://onlinelibrary.wiley.com/doi/10.1002/9783527680863.ch14/summary
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- C2 Bruno CESSAC, Emmanuel DAUCÉ, <u>Laurent U PERRINET</u> et Manuel SAMUELIDES. «Introduction to Topics in Dynamical Neural Networks: From Large Scale Neural Networks to Motor Control and Vision». In: *Topics in Dynamical Neural Networks: From Large Scale Neural Networks to Motor Control and Vision*. T. 142. The European Physical Journal Special Topics 1. Springer Verlag, 1er mars 2007, p. 1-5. DOI: 10.1140/epjst/e2007-00057-3. URL: http://www.springerlink.com/index/10.1140/epjst/e2007-00057-3
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4 Thèses et ouvrages

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- B3 <u>Laurent U Perrinet</u> et Emmanuel Daucé, éd. *Proceedings of the second french conference on Computational Neuroscience, Marseille.* 1er oct. 2008. URL: https://hal.archives-ouvertes.fr/NEUROCOMP08
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- B1 <u>Laurent U Perrinet</u>. « Comment déchiffrer le code impulsionnel de la vision? Étude du flux parallèle, asynchrone et épars dans le traitement visuel ultra-rapide ». Thèse de doct. Université Paul Sabatier, Toulouse, France, 2003. URL: https://laurentperrinet.github.io/publication/perrinet-03-these

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