

Centre National de la Recherche Scientifique

Liste complète des publications

Laurent U PERRINET



Équipe NEural OPERations in TOpographies (NeOpTo)
Institut de Neurosciences de la Timone
UMR 7289, CNRS / Aix-Marseille Université
27, Bd. Jean Moulin, 13385 Marseille Cedex 5, France
https://laurentperrinet.github.io/
Laurent.Perrinet@univ-amu.fr

09 septembre 2023

1 Articles de revues en cours de révision

A58 **Ladret24sparse**

A57 Giacomo BENVENUTI, Sandrine CHEMLA, Arjan BOONMAN, Laurent U PERRINET, 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 Laurent U PERRINET. « A Robust Event-Driven Approach to Always-on Object Recognition ». In : *In revision* (15 juin 2023). URL : <https://laurentperrinet.github.io/publication/grimaldi-23/>

2 Articles de revues internationales à comité de lecture

2023

A55 Ilias RENTZEPERIS, Luca CALATRONI, Laurent U PERRINET et Dario PRANDI. « Beyond ℓ_1 sparse coding in V1 ». In : *PLOS Computational Biology* (12 sept. 2023). DOI : 10.1371/journal.pcbi.1011459. URL : <https://laurentperrinet.github.io/publication/rentzeperis-23>

A54 Amélie GRUEL, Dalia HAREB, Antoine GRIMALDI, Jean MARTINET, Laurent U PERRINET, Bernabé LINARES-BARRANCO et Teresa SERRANO-GOTARREDONA. « Stakes of Neuromorphic Foveation : a promising future for embedded event cameras ». In : *Biological Cybernetics* (2023)

A53 Antoine GRIMALDI et Laurent U PERRINET. « Learning heterogeneous delays in a layer of spiking neurons for fast motion detection ». In : *Biological Cybernetics* (11 sept. 2023). DOI : 10.1007/s00422-023-00975-8. URL : <https://laurentperrinet.github.io/publication/grimaldi-23-bc/>

A52 Hugo LADRET, Nelson CORTES, Lamyae IKAN, Frédéric CHAVANE, Christian CASANOVA et Laurent U PERRINET. « 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)

2022

A50 Antoine GRIMALDI, Amélie GRUEL, Camille BESNAINOU, Jean-Nicolas JÉRÉMIE, Jean MARTINET et Laurent U PERRINET. « 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 Laurent U PERRINET. « 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, Laurent U PERRINET 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, Laurent U PERRINET 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)

- 2021
- A46 Victor BOUTIN, Angelo FRANCIOSINI, Frédéric Y CHAVANE, Franck RUFFIER et Laurent U PERRINET. « Sparse Deep Predictive Coding captures contour integration capabilities of the early visual system ». In : *PLoS Computational Biology* (26 jan. 2021). DOI : 10.1371/journal.pcbi.1008629. URL : <https://doi.org/10.1371/journal.pcbi.1008629>
- 2020
- A45 Victor BOUTIN, Angelo FRANCIOSINI, Franck RUFFIER et Laurent U PERRINET. « Effect of top-down connections in Hierarchical Sparse Coding ». In : *Neural Computation* 32.11 (4 fév. 2020), p. 2279-2309. DOI : 10.1162/neco_a_01325. URL : <https://laurentperrinet.github.io/publication/boutin-franciosini-ruffier-perrinet-20-feedback/>
- A44 Emmanuel DAUCÉ, Pierre ALBIGÈS et Laurent U PERRINET. « 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 Laurent U PERRINET. « 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>
- 2019
- A42 Laurent U PERRINET. « An adaptive homeostatic algorithm for the unsupervised learning of visual features ». In : *Vision* 3.3 (2019), p. 47. DOI : 10.3390/vision3030047. URL : <https://spikeai.github.io/HULK/>
- A41 Cesar U RAVELLO, Laurent U PERRINET, 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/s41598-018-36861-8>
- A40 Sandrine CHEMLA, Alexandre REYNAUD, Matteo DI VOLO, 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 : <https://www.jneurosci.org/content/39/22/4282> (visité le 27/07/2018)
- 2018
- A39 Jean-Bernard DAMASSE, Laurent U PERRINET, Laurent MADELAIN et Anna MONTAGNINI. « Reinforcement effects in anticipatory smooth eye movements ». In : *Journal of Vision* 18.11 (1^{er} oct. 2018), p. 14-14. ISSN : 1534-7362. DOI : 10.1167/18.11.14. URL : <https://jov.arvojournals.org/article.aspx?articleid=2707670> (visité le 22/10/2018)
- A38 Jonathan VACHER, Andrew Isaac MESO, Laurent U PERRINET 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
- 2017
- A37 Mina A KHOEI, Guillaume S MASSON et Laurent U PERRINET. « The flash-lag effect as a motion-based predictive shift ». In : *PLoS Computational Biology* 13.1 (26 jan. 2017), e1005068. DOI : 10.1371/journal.pcbi.1005068. URL : <https://laurentperrinet.github.io/publication/khoei-masson-perrinet-17/>
- 2016
- A36 Jens KREMKOW, Laurent U PERRINET, Cyril MONIER, Jose-Manuel ALONSO, Ad M AERTSEN, Yves FRÉGNAC et Guillaume S MASSON. « Push-Pull Receptive Field Organization and Synaptic Depression : Mechanisms for Reliably Encoding Naturalistic Stimuli in V1 ». In : *Frontiers in Neural Circuits* 10 (2016). ISSN : 1662-5110. DOI : 10.3389/fncir.2016.00037. URL : <http://journal.frontiersin.org/article/10.3389/fncir.2016.00037/full>
- 2015
- A36 Wahiba TAOUALI, Giacomo BENVENUTI, Pascal WALLISCH, Frédéric Y CHAVANE et Laurent U PERRINET. « Testing the odds of inherent vs. observed overdispersion in

- neural spike counts ». In : *Journal of Neurophysiology* 115.1 (22 jan. 2016), p. 434-444. ISSN : 1522-1598. DOI : 10.1152/jn.00194.2015. URL : <http://www.ncbi.nlm.nih.gov/pubmed/26445864>
- A35 Jonathan VACHER, Andrew Isaac MESO, Laurent U PERRINET 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 Laurent U PERRINET 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> 2013
- A33 Laurent U PERRINET, Rick A ADAMS et Karl FRISTON. « Active inference, eye movements and oculomotor delays ». In : *Biological Cybernetics* 108.6 (16 déc. 2014), p. 777-801. ISSN : 1432-0770. DOI : 10.1007/s00422-014-0620-8. URL : <http://link.springer.com/article/10.1007%2Fs00422-014-0620-8> 2013
- A32 Mina A KHOEI, Guillaume S MASSON et Laurent U PERRINET. « Motion-based prediction explains the role of tracking in motion extrapolation ». In : *Journal of Physiology-Paris* 107.5 (1^{er} nov. 2013), p. 409-420. ISSN : 0928-4257. DOI : 10.1016/j.jphysparis.2013.08.001. URL : <https://laurentperrinet.github.io/publication/khoei-13-jpp/>
- A31 Bernhard A KAPLAN, Anders LANSNER, Guillaume S MASSON et Laurent U PERRINET. « 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>
- A30 Rodrigo NAVA, J Victor MARCOS, Boris ESCALANTE-RAMIREZ, Gabriel CRISTÓBAL, Laurent U PERRINET et Raúl S J ESTÉPAR. « Advances in Texture Analysis for Emphysema Classification ». In : *Lecture Notes in Computer Science* 8259 (2013). Sous la dir. de David HUTCHISON et al., p. 214-221. ISSN : 1611-3349. DOI : 10.1007/978-3-642-41827-3_27. URL : http://dx.doi.org/10.1007/978-3-642-41827-3_27 2012
- A29 Claudio SIMONCINI, Laurent U PERRINET, 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>
- A28 Laurent U PERRINET et Guillaume S MASSON. « Motion-based prediction is sufficient to solve the aperture problem ». In : *Neural Computation* 24.10 (2012), p. 2726-50
- A27 Paula S LEON, Ivo VANZETTA, Guillaume S MASSON et Laurent U PERRINET. « 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, Laurent U PERRINET 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, Laurent U PERRINET 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>
- A24 Guillaume S MASSON et Laurent U PERRINET. « The behavioral receptive field underlying motion integration for primate tracking eye movements ». In : *Neuroscience*

- and biobehavioral reviews (21 mars 2012). ISSN : 1873-7528. DOI : 10.1016/j.neubiorev.2011.03.009. URL : <http://view.ncbi.nlm.nih.gov/pubmed/21421006>
- A23 Nicole VOGES et Laurent U PERRINET. « 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> 2011
- A22 Jérôme FLEURIET, Sandrine HUGUES, Laurent U PERRINET et Laurent GOFFART. « Saccadic foveation of a moving visual target in the rhesus monkey ». In : *Journal of Neurophysiology* 105.2 (1^{er} fév. 2011), p. 883-895. ISSN : 1522-1598. DOI : 10.1152/jn.00622.2010. URL : <http://dx.doi.org/10.1152/jn.00622.2010>
- A21 Amarender BOGADHI, Anna MONTAGNINI, Pascal MAMASSIAN, Laurent U PERRINET 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> 2010
- A20 Laurent U PERRINET. « Role of homeostasis in learning sparse representations ». In : *Neural Computation* 22.7 (17 juill. 2010), p. 1812-36. ISSN : 1530-888X. DOI : 10.1162/neco.2010.05-08-795. URL : <https://doi.org/10.1162/neco.2010.05-08-795>
- A19 Emmanuel DAUCÉ et Laurent U PERRINET. « 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>
- A18 Nicole VOGES et Laurent U PERRINET. « Phase space analysis of networks based on biologically realistic parameters ». In : *Journal of Physiology-Paris* 104.1-2 (10 nov. 2010), p. 51-60. ISSN : 1769-7115. DOI : 10.1016/j.jphysparis.2009.11.004. URL : <http://dx.doi.org/10.1016/j.jphysparis.2009.11.004>
- A17 Jens KREMKOW, Laurent U PERRINET, Guillaume S MASSON et Ad M AERTSEN. « Functional consequences of correlated excitatory and inhibitory conductances in cortical networks ». In : *Journal of Computational Neuroscience* 28.3 (1^{er} juin 2010), p. 579-94. DOI : 10.1007/s10827-010-0240-9. URL : <http://www.ncbi.nlm.nih.gov/pubmed/20490645>
- A16 Khaled Masmoudi, Marc Antonini, Pierre Kornprobst, Laurent U Perrinet A novel bio-inspired static image compression scheme for noisy data transmission over low-bandwidth channels. *Acoustics Speech and Signal Processing (ICASSP)*, 2010. 2008
- A15 Andrew P DAVISON, Daniel BRUDERLE, Jochen EPPLER, Jens KREMKOW, Eilif MULLER, Dejan PECEVSKI, Laurent U PERRINET 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
- A13 Frédéric V BARTHÉLEMY, Laurent U PERRINET, Eric CASTET et Guillaume S MASSON. « Dynamics of distributed 1D and 2D motion representations for short-latency ocular following ». In : *Vision research* 48.4 (1^{er} fév. 2008), p. 501-522. ISSN : 0042-6989. DOI : 10.1016/j.visres.2007.10.020. URL : <http://dx.doi.org/10.1016/j.visres.2007.10.020> 2007
- A12 Sylvain FISCHER, Filip ŠROUBEK, Laurent U PERRINET, Rafael REDONDO et Gabriel CRISTÓBAL. « Self-Invertible 2D Log-Gabor Wavelets ». In : *International Journal of Computer Vision* 75.2 (13 jan. 2007), p. 231-246. ISSN : 1573-1405. DOI : 10.1007/s11263-006-0026-8. URL : <http://dx.doi.org/10.1007/s11263-006-0026-8>

- A11 Sylvain FISCHER, Rafael REDONDO, Laurent U PERRINET et Gabriel CRISTÓBAL. « Sparse Approximation of Images Inspired from the Functional Architecture of the Primary Visual Areas ». In : *EURASIP Journal on Advances in Signal Processing* 2007.1 (2007), p. 090727-122. ISSN : 1687-6180. DOI : 10.1155/2007/90727. URL : <http://dx.doi.org/10.1155/2007/90727>
- A10 Anna MONTAGNINI, Pascal MAMASSIAN, Laurent U PERRINET, 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>
- A9 Laurent U PERRINET et Guillaume S MASSON. « Modeling spatial integration in the ocular following response using a probabilistic framework ». In : *Journal of Physiology-Paris* 101.1-3 (2007), p. 46-55. DOI : 10.1016/j.jphysparis.2007.10.011. URL : <http://dx.doi.org/10.1016/j.jphysparis.2007.10.011>
- A8 Laurent U PERRINET. « Finding Independent Components using spikes : a natural result of Hebbian learning in a sparse spike coding scheme ». In : *Natural Computing* 3.2 (1^{er} jan. 2004), p. 159-75. DOI : 10.1023/B:NACO.0000027753.27593.a7. URL : <http://dx.doi.org/10.1023/B:NACO.0000027753.27593.a7>
- A7 Laurent U PERRINET. « Feature detection using spikes : the greedy approach ». In : *Journal of Physiology-Paris* 98.4-6 (1^{er} juill. 2004), p. 530-9. DOI : 10.1016/j.jphysparis.2005.09.012. URL : <http://dx.doi.org/10.1016/j.jphysparis.2005.09.012>
- A6 Laurent U PERRINET, Manuel SAMUELIDES et Simon J THORPE. « Coding static natural images using spiking event times : do neurons cooperate? ». In : *IEEE Transactions on Neural Networks* 15.5 (1^{er} sept. 2004). Special issue on 'Temporal Coding for Neural Information Processing', p. 1164-75. DOI : 10.1109/TNN.2004.833303. URL : <http://dx.doi.org/10.1109/TNN.2004.833303>
- A5 Laurent U PERRINET, Manuel SAMUELIDES et Simon J THORPE. « Emergence of filters from natural scenes in a sparse spike coding scheme ». In : *Neurocomputing* 58-60.C (2003). Special issue : Computational Neuroscience : Trends in Research 2004 - Edited by E. De Schutter, p. 821-6. DOI : 10.1016/j.neucom.2004.01.133. URL : <http://dx.doi.org/10.1016/j.neucom.2004.01.133>
- A4 Laurent U PERRINET, Manuel SAMUELIDES et Simon J THORPE. « Sparse spike coding in an asynchronous feed-forward multi-layer neural network using matching pursuit ». In : *Neurocomputing* 57 (1^{er} mars 2004). Special issue : New Aspects in Neurocomputing : 10th European Symposium on Artificial Neural Networks 2002 - Edited by T. Villmann, p. 125-134. ISSN : 0925-2312. DOI : 10.1016/j.neucom.2004.01.010. URL : <http://dx.doi.org/10.1016/j.neucom.2004.01.010>
- A3 Laurent U PERRINET, Arnaud DELORME, Simon J THORPE et Manuel SAMUELIDES. « Network of integrate-and-fire neurons using Rank Order Coding A : how to implement spike timing dependant plasticity ». In : *Neurocomputing* 38-40.1-4 (2001), p. 817-22. DOI : 10.1016/S0925-2312(01)00460-X
- A2 Arnaud DELORME, Laurent U PERRINET, Simon J THORPE et Manuel SAMUELIDES. « Network of integrate-and-fire neurons using Rank Order Coding B : spike timing dependant plasticity and emergence of orientation selectivity ». In : *Neurocomputing* 38-40.1-4 (2001), p. 539-45. DOI : 10.1.1.18.4990. URL : <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.18.4990>
- A1 Laurent U PERRINET et Manuel SAMUELIDES. « Coherence detection in a spiking neuron via Hebbian learning ». In : *Neurocomputing* 44-46.C (1^{er} juin 2002), p. 817-22. DOI : 10.1016/S0925-2312(02)00374-0. URL : [http://dx.doi.org/10.1016/S0925-2312\(02\)00374-0](http://dx.doi.org/10.1016/S0925-2312(02)00374-0)

2004

2003

2002

3 Chapitres d'ouvrage à comité de lecture

- C6 Laurent U PERRINET. « 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, Laurent U PERRINET et Guillaume S MASSON. « Visual motion processing and human tracking behavior ». In : *Biologically Inspired Computer Vision*. Sous la dir. de Gabriel CRISTÓBAL, Laurent U PERRINET 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 Laurent U PERRINET. « Sparse Models for Computer Vision ». In : *Biologically Inspired Computer Vision*. Sous la dir. de Gabriel CRISTÓBAL, Laurent U PERRINET et Matthias S KEIL. Wiley-VCH Verlag GmbH et Co. KGaA, 1^{er} nov. 2015. Chap. 13. ISBN : 9783527680863. DOI : 10.1002/9783527680863.ch14. URL : <http://onlinelibrary.wiley.com/doi/10.1002/9783527680863.ch14/summary>
- C3 Gabriel CRISTÓBAL, Laurent U PERRINET et Matthias S KEIL. « Introduction ». In : *Biologically Inspired Computer Vision*. Sous la dir. de Gabriel CRISTÓBAL, Laurent U PERRINET et Matthias S KEIL. Wiley-VCH Verlag GmbH et Co. KGaA, 1^{er} nov. 2015. Chap. 1. DOI : 10.1002/9783527680863.ch1. URL : <http://bicv.github.io/chap1/>
- C2 Bruno CESSAC, Emmanuel DAUCÉ, Laurent U PERRINET 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, 1^{er} mars 2007, p. 1-5. DOI : 10.1140/epjst/e2007-00057-3. URL : <http://www.springerlink.com/index/10.1140/epjst/e2007-00057-3>
- C1 Laurent U PERRINET. « Dynamical Neural Networks : modeling low-level vision at short latencies ». 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. Berlin / Heidelberg : Springer Verlag, 1^{er} mars 2007, p. 163-225. DOI : 10.1140/epjst/e2007-00061-7

4 Thèses et ouvrages

- B4 Gabriel CRISTÓBAL, Laurent U PERRINET et Matthias S KEIL, éd. *Biologically Inspired Computer Vision*. Weinheim, Germany : Wiley-VCH Verlag GmbH et Co. KGaA, 7 oct. 2015. ISBN : 9783527680863. DOI : 10.1002/9783527680863. URL : <http://onlinelibrary.wiley.com/book/10.1002/9783527680863>
- B3 Laurent U PERRINET et Emmanuel DAUCÉ, éd. *Proceedings of the second french conference on Computational Neuroscience, Marseille*. 1^{er} oct. 2008. URL : <https://hal.archives-ouvertes.fr/NEUROCOMP08>
- B2 Bruno CESSAC, Emmanuel DAUCÉ, Laurent U PERRINET et Manuel SAMUELIDES. *Topics in Dynamical Neural Networks : From Large Scale Neural Networks to Motor Control and Vision*. T. 142. The European Physical Journal (Special Topics) 1. Berlin / Heidelberg : Springer Verlag, 1^{er} mars 2007
- B1 Laurent U PERRINET. « Comment déchiffrer le code impulsif de la vision ? Étude du flux parallèle, asynchrone et éparé dans le traitement visuel ultra-rapide ». Thèse de doct. Université Paul Sabatier, Toulouse, France, 2003. URL : <https://laurentperrinet.github.io/publication/perrinet-03-these>

5 Actes de conférences internationales à comité de lecture

1. Laurent U PERRINET. « Accurate Detection of Spiking Motifs by Learning Heterogeneous Delays of a Spiking Neural Network ». In : *32nd International Conference on Artificial Neural Networks (ICANN 2023)- Special Session on Recent Advances in Spiking Neural Networks*. Heraklion (Crete, Greece), 27 sept. 2023. URL : <https://laurentperrinet.github.io/publication/perrinet-23-icann/>
2. Jean-Nicolas JÉRÉMIE, Emmanuel DAUCÉ et Laurent U PERRINET. « Retinotopy improves the categorisation and localisation of visual objects in CNNs ». In : *32nd International Conference on Artificial Neural Networks (ICANN 2023)*. Heraklion (Crete, Greece), 26 sept. 2023. DOI : 10.1007/978-3-031-44207-0_52. URL : <https://laurentperrinet.github.io/publication/jeremie-23-icann>
3. Urbano Miguel NUNES, Laurent U PERRINET et Sio-Hoi IENG. « Time-to-Contact Map by Joint Estimation of Up-to-Scale Inverse Depth and Global Motion using a Single Event Camera ». In : *International Conference on Computer Vision 2023 (ICCV2023)*. 6 oct. 2023. URL : <https://laurentperrinet.github.io/publication/nunes-23-iccv/>
4. Jean-Nicolas JÉRÉMIE, Emmanuel DAUCÉ et Laurent U PERRINET. « Retinotopy improves the categorisation and localisation of visual objects in CNNs ». In : *Computational Cognitive Neuroscience Society Meeting 2023*. Oxford (UK), 2023. URL : <https://laurentperrinet.github.io/publication/jeremie-23-ccn>
5. Hugo LADRET et Laurent U PERRINET. « Convolutional Sparse Coding is improved by heterogeneous uncertainty modeling ». In : *ICLR 2023 SNN Workshop*. 5 mai 2023. URL : <https://laurentperrinet.github.io/publication/ladret-23-iclr/>
6. Antoine GRIMALDI et Laurent U PERRINET. « Learning heterogeneous delays of spiking neurons for motion detection ». In : *GDR Vision, Toulouse, 2023*. Toulouse, France, 27 jan. 2023. URL : <https://gdr-vision-2023.sciencesconf.org/browse?forward-action=index&forward-controller=browse&docid=442297&lang=en>
7. Hugo LADRET, Nelson CORTES, Lamyae IKAN, Frédéric CHAVANE, Christian CASANOVA et Laurent U PERRINET. « Resilience to sensory uncertainty in the primary visual cortex ». In : *Computational and Systems Neuroscience (Cosyne) 2023*. 9 mars 2023. URL : <https://www.world-wide.org/cosyne-23/resilience-sensory-uncertainty-primary-88600879/>
8. Antoine GRIMALDI, Camille BESNAINOU, Hugo LADRET et Laurent U PERRINET. « Learning heterogeneous delays of spiking neurons for motion detection ». In : *Proceedings of ICIP 2022*. Bordeaux, France, 16 oct. 2022. DOI : 10.1109/ICIP46576.2022.9897394. URL : <https://ieeexplore.ieee.org/document/9897394/>
9. Antoine GRIMALDI et Laurent U PERRINET. « Learning heterogeneous delays of spiking neurons for motion detection ». In : *Proceedings of the FENS Forum 2022*. S05-547. Poster Session 05 - Section : Modeling the Brain. Paris (France), 12 juill. 2022. URL : <https://laurentperrinet.github.io/publication/grimaldi-22-fens/>
10. Hugo LADRET et Laurent U PERRINET. « Recurrent cortical connectivity in the primary visual cortex supports robust encoding of natural sensory inputs ». In : *Proceedings of the FENS Forum 2022*. S02-528. Poster Session 04 - Section : Visual System, From Retina to Cortex (ID 567). Paris (France), 11 juill. 2022. URL : <https://laurentperrinet.github.io/publication/ladret-22-fens/>
11. Jean-Nicolas JÉRÉMIE, Emmanuel DAUCÉ et Laurent U PERRINET. « Ultra-rapid visual search in natural images using active deep learning ». In : *Proceedings of the FENS Forum 2022*. S02-528. Poster Session 02 - Section : Machine Learning for Neuroscience and Psychiatry (ID 529). Paris (France), 10 juill. 2022. URL : <https://laurentperrinet.github.io/publication/jeremie-22-fens/>
12. Ghassan DABANE, Laurent U PERRINET et Emmanuel DAUCÉ. « What You See Is What You Transform : Foveated Spatial Transformers as a Bio-Inspired Attention Mechanism ». In : *IJCNN 2022 : International Joint Conference on Neural Networks*.

2022. DOI : 10.36227/techrxiv.16550391. URL : https://www.techrxiv.org/articles/preprint/What_You_See_Is_What_You_Transform_Foveated_Spatial_Transformers_as_a_bio-inspired_attention_mechanism/16550391/1 (visit   le 11/05/2022)
13. Hugo LADRET et Laurent U PERRINET. « A resilient neural code in V1 to process natural images ». In : *Proceedings of AREADNE*. Santorini (Greece), 29 juin 2022. URL : <https://areadne.org/>
 14. Ilias RENTZEPERIS, Luca CALATRONI, Laurent U PERRINET et Dario PRANDI. « Which sparsity problem does the brain solve? » In : *Proceedings of AREADNE*. Santorini (Greece), 29 juin 2022. URL : <https://laurentperrinet.github.io/publication/rentzeperis-22-areadne/>
 15. Jean-Nicolas J  R  MIE, Emmanuel DAUC   et Laurent U PERRINET. « Ultra-rapid visual search in natural images using active deep learning ». In : *Proceedings of AREADNE*. Santorini (Greece), 29 juin 2022. URL : <https://areadne.org/>
 16. Antoine GRIMALDI, Camille BESNAINOU, Hugo LADRET et Laurent U PERRINET. « Decoding spiking motifs using neurons with heterogeneous delays ». In : *Proceedings of AREADNE*. Santorini (Greece), 29 juin 2022. URL : <https://areadne.org/>
 17. Hugo LADRET, Nelson CORTES, Lamyae IKAN, Fr  d  ric Y CHAVANE, Christian CASANOVA et Laurent U PERRINET. « Modulation of orientation selectivity by orientation precision ». In : *Proceedings of the Society for Neuroscience conference*. P465.08. 2021. URL : <https://www.abstractsonline.com/pp8/#!/10485/presentation/22078>
 18. Hugo LADRET et Laurent U PERRINET. « Decoding orientation distributions from noisy observations in V1 ». In : *Champalimaud Research Symposium (CRS21)*. Poster Session II -Fri 15 Oct 13 :30—15 :30h, Lisbon time. 15 oct. 2021. URL : <https://symposium.fchampalimaud.science/Poster-sessions>
 19. Jean-Nicolas J  R  MIE et Laurent U PERRINET. « Ultra-fast categorization of images containing animals in vivo and in computo ». In : *Champalimaud Research Symposium (CRS21)*. Poster Session II -Fri 15 Oct 13 :30—15 :30h, Lisbon time. 15 oct. 2021. URL : <https://symposium.fchampalimaud.science/Poster-sessions>
 20. Antoine GRIMALDI, Victor BOUTIN, Sio-Hoi IENG, Ryad BENOSMAN et Laurent U PERRINET. « From event-based computations to a bio-plausible Spiking Neural Network ». In : *Champalimaud Research Symposium (CRS21)*. Poster Session I Thu 14 Oct 14—16h, Lisbon time. 14 oct. 2021. URL : <https://symposium.fchampalimaud.science/Poster-sessions>
 21. Antoine GRIMALDI, Victor BOUTIN, Sio-Hoi IENG, Laurent U PERRINET et Ryad BENOSMAN. « A robust bio-inspired approach to event-driven object recognition ». In : *Computational and Systems Neuroscience (Cosyne) 2021*. 26 f  v. 2021. URL : <https://laurentperrinet.github.io/publication/grimaldi-21-cosyne/>
 22. Antoine GRIMALDI, Victor BOUTIN, Sio-Hoi IENG, Laurent U PERRINET et Ryad BENOSMAN. « A homeostatic gain control mechanism to improve event-driven object recognition ». In : *Content-Based Multimedia Indexing (CBMI) 2021*. 24 juin 2021. DOI : 10.1109/CBMI50038.2021.9461901. URL : <https://laurentperrinet.github.io/publication/grimaldi-21-cbmi/>
 23. Alberto VERGANI et Laurent U PERRINET. « Simulating anticipatory activity in a 1D Spiking Neural Network Model ». In : *Bernstein Conference 2021*. 22 sept. 2021. DOI : 10.12751/nncn.bc2021.p094
 24. Hugo LADRET et Laurent U PERRINET. « Learning dynamics in a neural network model of the primary visual cortex ». In : t. 4. 0. 2020. URL : <http://aes.amegroups.com/article/view/5214>
 25. Angelo FRANCIOSINI, Victor BOUTIN et Laurent U PERRINET. « Modelling Complex-cells and topological structure in the visual cortex of mammals using Sparse Predictive Coding ». In : *SIGMA'2020 (Signal, Image, Geometry, Modelling, Approximation)*. 30 mars 2020. URL : <https://conferences.cirm-math.fr/2152.html>

26. Angelo FRANCIOSINI, Victor BOUTIN et Laurent U PERRINET. « Modelling Complex-cells and topological structure in the visual cortex of mammals using Sparse Predictive Coding ». In : *Computational and Systems Neuroscience (Cosyne) 2020*. 27 sept. 2020. URL : <https://laurentperrinet.github.io/publication/franciosini-20-cosyne/>
27. Emmanuel DAUCÉ et Laurent U PERRINET. « Visual search as active inference ». In : *IWAI 2020*. 17 déc. 2020. DOI : 10.1007/978-3-030-64919-7_17. URL : <https://laurentperrinet.github.io/publication/dauce-20-iwai>
28. Victor BOUTIN, Angelo FRANCIOSINI, Frédéric Y CHAVANE, Franck RUFFIER et Laurent U PERRINET. « Sparse Deep Predictive Coding captures contour integration capabilities of the early visual system ». In : *SIGMA'2020 (Signal, Image, Geometry, Modelling, Approximation)*. 3 mars 2019. URL : <https://conferences.cirm-math.fr/2152.html>
29. Hugo LADRET, Nelson CORTES, Frédéric Y CHAVANE, Laurent U PERRINET et Christian CASANOVA. « Orientation selectivity to synthetic natural patterns in a cortical-like model of the cat primary visual cortex ». In : *Proceedings of the Society for Neuroscience conference*. 403.16 / P20. 2019. URL : <https://www.abstractsonline.com/pp8/#!/7883/presentation/65859>
30. Wahiba TAOUALI, Giacomo BENVENUTI, Frédéric Y CHAVANE et Laurent U PERRINET. « A dynamic model for decoding direction and orientation in macaque primary visual cortex ». In : *Proceedings of NCCD, Capbreton*. 23 sept. 2019. URL : <https://laurentperrinet.github.io/publication/perrinet-19-nccd>
31. Victor BOUTIN, Angelo FRANCIOSINI, Frédéric Y CHAVANE, Franck RUFFIER et Laurent U PERRINET. « Sparse Deep Predictive Coding to model visual object recognition ». In : *Proceedings of the Society for Neuroscience conference*. presentation number : 490.02. 2019. URL : <https://laurentperrinet.github.io/publication/boutin-franciosini-ruffier-perrinet-19-sfn/>
32. Angelo FRANCIOSINI, Victor BOUTIN et Laurent U PERRINET. « Modelling Complex Cells of Early Visual Cortex using Predictive Coding ». In : *Annual Computational Neuroscience Meeting : CNS*2019, Barcelona*. P243. 2019. URL : <https://www.cnsorg.org/cns-2019-poster-presentation-guide>
33. Angelo FRANCIOSINI, Victor BOUTIN et Laurent U PERRINET. « A hierarchical, multi-layer convolutional sparse coding algorithm based on predictive coding ». In : *Neuro-France 2019, International Conference from the Société des Neurosciences, Marseille, France*. 2019. URL : <https://www.professionalabstracts.com/nf2019/iplanner/#/presentation/790>
34. Victor BOUTIN, Angelo FRANCIOSINI, Franck RUFFIER et Laurent U PERRINET. « Top-down connection in Hierarchical Sparse Coding ». In : *GdR Robotics - 2019-06-05*. 2019
35. Victor BOUTIN, Angelo FRANCIOSINI, Franck RUFFIER et Laurent U PERRINET. « Un-supervised Hierarchical Sparse Coding algorithm inspired by Biological Vision ». In : *Doc2AMU Doctoral Day - 2018-11-23*. 2018
36. Victor BOUTIN, Angelo FRANCIOSINI, Franck RUFFIER et Laurent U PERRINET. « From biological vision to unsupervised hierarchical sparse coding ». In : *iTwist, 2018*. 2018. URL : <https://laurentperrinet.github.io/publication/boutin-franciosini-ruffier-perrinet-18-itwist/>
37. Julien DUPEYROUX, Victor BOUTIN, Julien R SERRES, Laurent U PERRINET et Stéphane VIOLLET. « M2APix : a bio-inspired auto-adaptive visual sensor for robust ground height estimation ». In : *ISCAS2018, IEEE International Symposium on Circuits and Systems*. 2018. URL : <https://ieeexplore.ieee.org/abstract/document/8351433>
38. Angelo FRANCIOSINI et Laurent U PERRINET. « On the Origins of Hierarchy in Visual Processing ». In : *Curves and Surfaces 2018, Arcachon*. 2018. URL : <https://laurentperrinet.github.io/publication/franciosini-perrinet-18-cs/>

39. Hugo LADRET et Laurent U PERRINET. « Selectivity to oriented patterns of different precisions ». In : *GDR Vision, Paris, 2018*. 2018. URL : https://github.com/hugoladret/InternshipM1/raw/master/2018-06_POSTER_final.pdf
40. Kiana MANSOUR POUR, Nikos GEKAS, Pascal MAMASSIAN, Laurent U PERRINET, Anna MONTAGNINI et Guillaume S MASSON. « Speed uncertainty and motion perception with naturalistic random textures ». In : *Journal of Vision, Vol.18, 345, proceedings of VSS*. 26.472. 2018. DOI : 10.1167/18.10.345. URL : <https://laurentperrinet.github.io/publication/mansour-18-vss>
41. Chloé PASTUREL, Anna MONTAGNINI et Laurent U PERRINET. « Estimating and anticipating a dynamic probabilistic bias in visual motion direction ». In : 2018. URL : <https://laurentperrinet.github.io/publication/pasturel-18>
42. Chloé PASTUREL, Anna MONTAGNINI et Laurent U PERRINET. « ANEMO : Quantitative tools for the ANalysis of Eye MOvements ». In : *Grenoble Workshop on Models and Analysis of Eye Movements, Grenoble, France*. 2018. URL : <https://laurentperrinet.github.io/publication/pasturel-18-anemo>
43. Laurent U PERRINET, Chloé PASTUREL et Anna MONTAGNINI. « Estimating and anticipating a dynamic probabilistic bias in visual motion direction ». In : *Grenoble Workshop on Models and Analysis of Eye Movements, Grenoble, France*. 2018. URL : <https://laurentperrinet.github.io/publication/pasturel-18-grenoble>
44. Laurent U PERRINET. « A low-cost, accessible eye tracking framework ». In : *GDR Vision, Paris, 2018*. 2018. URL : <https://github.com/laurentperrinet/Perrinet18gdr>
45. Victor BOUTIN, Angelo FRANCIOSINI, Franck RUFFIER et Laurent U PERRINET. « Controlling an aerial robot with human gestures using bio-inspired algorithm ». In : *Doc2AMU Doctoral Day - 2017-10-13*. 2017
46. Victor BOUTIN, Franck RUFFIER et Laurent U PERRINET. « Efficient learning of sparse image representations using homeostatic regulation ». In : *NeuroFrance 2017, International Conference from the Société des Neurosciences, Bordeaux, France*. 2017
47. Victor BOUTIN, Franck RUFFIER et Laurent U PERRINET. « Efficient learning of sparse image representations using homeostatic regulation ». In : *SPARS2017, Lisbon*. 2017
48. Kiana MANSOUR POUR, Laurent U PERRINET, Guillaume S MASSON et Anna MONTAGNINI. « How the dynamics of human smooth pursuit is influenced by speed uncertainty ». In : *Proceedings of ECVF*. 2017. URL : <https://laurentperrinet.github.io/publication/mansour-17-ecvp/>
49. Kiana MANSOUR POUR, Laurent U PERRINET, Guillaume S MASSON et Anna MONTAGNINI. « Voluntary tracking the moving clouds : Effects of speed variability on human smooth pursuit ». In : *GDR Vision, Lille, 2017*. 2017. URL : <https://laurentperrinet.github.io/publication/mansour-17-gdr>
50. Chloé PASTUREL, Jean-Bernard DAMASSE, Anna MONTAGNINI et Laurent U PERRINET. « Estimating and anticipating a dynamic probabilistic bias in visual motion direction ». In : *GDR Vision, Lille, 2017*. 2017. URL : <https://laurentperrinet.github.io/publication/pasturel-17-gdr>
51. Laurent U PERRINET et Etienne REY. « Expériences autour de la perception de la forme en art et science ». In : *GDR Vision, Lille, 2017*. 2017
52. Jean-Bernard DAMASSE, Anna MONTAGNINI et Laurent U PERRINET. « Dynamic modulation of volatility by reward contingencies : effects on anticipatory smooth eye movement ». In : *Proceedings of Vision Sciences Society Annual Meeting*. T. 17. 12. Meeting abstract presented at VSS 2017. The Association for Research in Vision et Ophthalmology, 2017, p. 273. DOI : 10.1167/17.10.273. URL : <http://jov.arvojournals.org/article.aspx?doi=10.1167/17.10.273>
53. Laurent U PERRINET. « Biologically-inspired characterization of sparseness in natural images ». In : *2016 6th European Workshop on Visual Information Processing (EUVIP)*.

- IEEE, 1^{er} oct. 2016, p. 1-6. ISBN : 978-1-5090-2781-1. DOI : 10.1109/EUVIP.2016.7764592. URL : <http://ieeexplore.ieee.org/document/7764592/>
54. Kiana MANSOUR POUR, Laurent U PERRINET, Guillaume S MASSON et Anna MONTAGNINI. « Voluntary tracking the moving clouds : Effects of speed variability on human smooth pursuit ». In : *Proceedings of the Society for Neuroscience conference*. 2016, 2P045. URL : <https://laurentperrinet.github.io/publication/mansour-16-ecvp>
 55. Kiana MANSOUR POUR, Laurent U PERRINET, Guillaume S MASSON et Anna MONTAGNINI. « Voluntary tracking the moving clouds : Effects of speed variability on human smooth pursuit ». In : *GDR Vision, Toulouse, Nov 3rd, 2016*. 2016. URL : <https://laurentperrinet.github.io/publication/mansour-16-gdr>
 56. Jean-Bernard DAMASSE, Anna MONTAGNINI et Laurent U PERRINET. « Modeling the effect of dynamic contingencies on anticipatory eye movements ». In : *Proceedings of ECVP*. 2016, 2P044. URL : <https://laurentperrinet.github.io/publication/damasse-16-ecvp>
 57. Kiana MANSOUR POUR, Laurent U PERRINET, Guillaume S MASSON et Anna MONTAGNINI. « Voluntary tracking the moving clouds : Effects of speed variability on human smooth pursuit ». In : *Proceedings of ECVP*. 2016, 2P045. URL : <https://laurentperrinet.github.io/publication/mansour-16-ecvp>
 58. Jean-Bernard DAMASSE, Laurent U PERRINET, Jeremie JOZEFOWIEZ, Laurent MADELAINE et Anna MONTAGNINI. « Operant reinforcement versus reward expectancy : effects on anticipatory eye movements ». In : *Proceedings of VSS*. T. 16. 12. The Association for Research in Vision et Ophthalmology, 1^{er} sept. 2016, p. 1356. DOI : 10.1167/16.12.1356. URL : <http://jov.arvojournals.org/article.aspx?doi=10.1167/16.12.1356>
 59. Anna MONTAGNINI, Jean-Bernard DAMASSE, Laurent U PERRINET et Guillaume S MASSON. « Effects of motion predictability on anticipatory and visually-guided eye movements : a common prior for sensory processing and motor control? » In : *Proceedings of ECVP*. 2016, 22T106. URL : <https://laurentperrinet.github.io/publication/montagnini-16-ecvp>
 60. Laurent U PERRINET, Rick A ADAMS et Karl FRISTON. « Compensation of oculomotor delays in the visual system's network ». In : *Complex Networks : from theory to interdisciplinary applications*. 2016, paper 61. URL : <https://laurentperrinet.github.io/publication/perrinet-16-networks>
 61. Wahiba TAOUALI, Giacomo BENVENUTI, Frédéric Y CHAVANE et Laurent U PERRINET. « A dynamic model for decoding direction and orientation in macaque primary visual cortex ». In : *Proceedings of AREADNE*. 2016. DOI : 10.1167/15.12.484
 62. Cesar U RAVELLO, F. OLIVARES, R. HERZOG, Laurent U PERRINET, Maria-José ESCOBAR et Adrián G PALACIOS. « Spatiotemporal tuning of retinal ganglion cells dependent on the context of signal presentation ». In : *European Retina Meeting 2015*. 2015
 63. Jonathan VACHER, Andrew Isaac MESO, Laurent U PERRINET et Gabriel PEYRÉ. « A Mathematical Account of Dynamic Texture Synthesis for Probing Visual Perception ». In : *ICMS 2015 conference*. 2015
 64. Laurent U PERRINET et James A BEDNAR. « Sparse Coding Of Natural Images Using A Prior On Edge Co-Occurrences ». In : *European Signal Processing Conference 2015 (EUSIPCO 2015)*. Nice, France, 1^{er} août 2015. DOI : 10.1109/EUSIPCO.2015.7362781. URL : <http://dx.doi.org/10.1109/EUSIPCO.2015.7362781>
 65. Anna MONTAGNINI, Jean-Bernard DAMASSE, Laurent U PERRINET et Laurent MADELAINE. « Anticipating a moving target : role of vision and reinforcement ». In : *Proceedings of the Society for Neuroscience conference*. 2015. URL : <https://laurentperrinet.github.io/publication/montagnini-15-sfn>

66. Wahiba TAOUALI, Giacomo BENVENUTI, Frédéric Y CHAVANE et Laurent U PERRINET. « A dynamic model for decoding direction and orientation in macaque primary visual cortex ». In : *Proceedings of VSS*. 2016. DOI : 10.1167/15.12.484. URL : <http://jov.arvojournals.org/article.aspx?articleid=2433592>
67. Jean-Bernard DAMASSE, Laurent MADELAIN, Laurent U PERRINET et Anna MONTAGNINI. « Anticipatory smooth eye movements and reinforcement ». In : *Proceedings of VSS*. The Association for Research in Vision et Ophthalmology, 1^{er} sept. 2015. DOI : 10.1167/15.12.1019. URL : <http://jov.arvojournals.org/article.aspx?articleid=2434129>
68. Frédéric DANION, Caroline LANDELLE, Anna MONTAGNINI, Laurent U PERRINET et Laurent MADELAIN. « Eye tracking a self-moved target with complex hand-target dynamics ». In : *Proceedings of the Society for Neuroscience conference*. Sfn. 2015. URL : <https://laurentperrinet.github.io/publication/danion-15-sfn>
69. Wahiba TAOUALI, Giacomo BENVENUTI, Pascal WALLISCH, Frédéric Y CHAVANE et Laurent U PERRINET. « On overdispersion in neuronal evoked activity ». In : *ICMNS 2015 conference*. 2015
70. Jonathan VACHER, Andrew Isaac MESO, Laurent U PERRINET et Gabriel PEYRÉ. « Dynamic Textures For Probing Motion Perception ». In : *IHP workshop*. 2014
71. P Philipp RUDIGER, Jean-Luc STEVENS, Bharath Chandra TALLURI, Laurent U PERRINET et James A BEDNAR. « Relationship between natural image statistics and lateral connectivity in the primary visual cortex ». In : *Proceedings of COSYNE*. 2014. URL : <http://goo.gl/RJpJR4>
72. Laurent U PERRINET et James A BEDNAR. « Edge co-occurrences are sufficient to categorize natural versus animal images ». In : t. 14. 10. Association for Research in Vision et Ophthalmology, 22 août 2014, p. 1310. DOI : 10.1167/14.10.1310. URL : <http://dx.doi.org/10.1167/14.10.1310>
73. Claudio SIMONCINI, Anna MONTAGNINI, Laurent U PERRINET et Guillaume S MASSON. « The characteristics of microsaccadic eye movements varied with the change of strategy in a match-to-sample task ». In : t. 14. 10. Association for Research in Vision et Ophthalmology, 22 août 2014, p. 110. DOI : 10.1167/14.10.110. URL : <http://dx.doi.org/10.1167/14.10.110>
74. Bernhard A KAPLAN, Mina A KHOEI, Anders LANSNER et Laurent U PERRINET. « Signature of an anticipatory response in area V1 as modeled by a probabilistic model and a spiking neural network ». In : *IEEE International Joint Conference on Neural Networks (IJCNN) 2014 Beijing, China*. Bernhard A Kaplan and Mina A Khoei contributed equally to this work. 6 juill. 2014. DOI : 10.1109/IJCNN.2014.6889847. URL : <https://laurentperrinet.github.io/publication/kaplan-khoei-14>
75. Mina A KHOEI, Laurent U PERRINET et Guillaume S MASSON. « Motion-based prediction model for flash lag effect ». In : t. 14. 10. Association for Research in Vision et Ophthalmology, 22 août 2014, p. 471. DOI : 10.1167/14.10.471. URL : <http://dx.doi.org/10.1167/14.10.471>
76. Wahiba TAOUALI et Laurent U PERRINET. « A Simple Model of Orientation Encoding Accounting For Multivariate Neural Noise ». In : *6th Workshop of the Computational Neuroscience Network in Marseille*. 2014
77. Wahiba TAOUALI et Laurent U PERRINET. « A Simple Model of Orientation Encoding Accounting For Multivariate Neural Noise ». In : *Proceedings of AREADNE*. 2014
78. Andrew Isaac MESO, Claudio SIMONCINI, Laurent U PERRINET et Guillaume S MASSON. « Beyond simply faster and slower : exploring paradoxes in speed perception ». In : t. 14. 10. Association for Research in Vision et Ophthalmology, 22 août 2014, p. 491. DOI : 10.1167/14.10.491. URL : <http://dx.doi.org/10.1167/14.10.491>
79. Mina A KHOEI, Giacomo BENVENUTI, Frédéric Y CHAVANE et Laurent U PERRINET. « Motion-based prediction and development of the response to an 'on the way' stimulus ». In : *Annual Computational Neuroscience Meeting : CNS*2013, Paris*. 2013.

- DOI : 10.1186/1471-2202-14-S1-P314. URL : <https://laurentperrinet.github.io/publication/khoei-13-cns>
80. Laurent U PERRINET, Rick A ADAMS et Karl FRISTON. « Active inference, eye movements and oculomotor delays ». In : *Annual Computational Neuroscience Meeting : CNS 2013, Paris*. 2013. URL : <https://laurentperrinet.github.io/publication/perrinet-13-cns>
 81. Mina A KHOEI, Giacomo BENVENUTI, Frédéric Y CHAVANE et Laurent U PERRINET. « Motion-based prediction and development of the response to an 'on the way' stimulus ». In : *Annual Computational Neuroscience Meeting : CNS*2013, Paris*. 2013. DOI : 10.1186/1471-2202-14-S1-P314. URL : <https://laurentperrinet.github.io/publication/khoei-13-cns>
 82. Andrew Isaac MESO, Claudio SIMONCINI, Laurent U PERRINET et Guillaume S MASSON. « How and why do image frequency properties influence perceived speed ? » In : *VSS Conference Abstract*. T. (13)9. 2013, p. 354. DOI : 10.1167/13.9.354. URL : <https://laurentperrinet.github.io/publication/meso-13-vss>
 83. Laurent U PERRINET, Rick A ADAMS et Karl FRISTON. « Active inference, eye movements and oculomotor delays ». In : *The 7th Japanese-French Frontiers of Science Symposium*. 2013. URL : <https://laurentperrinet.github.io/publication/perrinet-13-jffos>
 84. Claudio SIMONCINI, Laurent U PERRINET, Anna MONTAGNINI et Guillaume S MASSON. « Measuring speed of moving textures : Different pooling of motion information for human ocular following and perception ». In : *VSS Conference Abstract*. 2013
 85. Laurent U PERRINET, Rick A ADAMS et Karl FRISTON. « Active inference, smooth pursuit and oculomotor delays ». In : *Proceedings of AREADNE, Santorini, Greece, 21-24 June 2012, published by The AREADNE Foundation, Inc., Cambridge, Massachusetts, USA, <http://areadne.org>*. 2012
 86. Guillaume S MASSON et Laurent U PERRINET. « Motion-based prediction is sufficient to solve the aperture problem ». In : *Proceedings of AREADNE*. 2012. URL : <https://laurentperrinet.github.io/publication/masson-12-areadne>
 87. Mina A KHOEI, Laurent U PERRINET et Guillaume S MASSON. « Role of motion-based prediction in motion extrapolation ». In : *Proceedings of the Society for Neuroscience conference*. SfN. 2012. URL : <https://laurentperrinet.github.io/publication/khoei-12-sfn>
 88. Claudio SIMONCINI, Laurent U PERRINET, Anna MONTAGNINI, Pascal MAMASSIAN et Guillaume S MASSON. « Measuring speed of moving textures : Different pooling of motion information for human ocular following and perception. » In : *Front. Neurosci. Conference Abstract : Neural Coding, Decision-Making and Integration in Time*. 2012. DOI : 10.3389/conf.fnins.2012.86.00016. URL : http://www.frontiersin.org/myfrontiers/abstractdetails.aspx?abs_doi=10.3389/conf.fnins.2012.86.00016
 89. Claudio SIMONCINI, Anna MONTAGNINI, Laurent U PERRINET et Guillaume S MASSON. « Effect of image statistics on fixational eye movements ». In : *VSS Conference Abstract*. 2012. DOI : 10.1167/12.9.1014. URL : <http://www.journalofvision.org/content/12/9/1014.abstract?sid=9c51ff88-5b9a-4d1b-aaf1-a1219bd02b0a>
 90. Claudio SIMONCINI, Anna MONTAGNINI, Laurent U PERRINET, Pascal MAMASSIAN et Guillaume S MASSON. « Pattern discrimination for moving random textures : Richer stimuli are more difficult to recognize ». In : t. 11. 11. Association for Research in Vision et Ophthalmology, 23 sept. 2011, p. 749. DOI : 10.1167/11.11.749. URL : <http://dx.doi.org/10.1167/11.11.749>
 91. Claudio SIMONCINI, Anna MONTAGNINI, Laurent U PERRINET, Pascal MAMASSIAN et Guillaume S MASSON. « Pattern discrimination for moving random textures : Richer

- stimuli are more difficult to recognize ». In : *VSS Conference Abstract*. 1^{er} août 2012. DOI : 10.1167/11.11.749. URL : <http://www.journalofvision.org/content/12/9/1014.abstract?sid=9c51ff88-5b9a-4d1b-aaf1-a1219bd02b0a>
92. Laurent U PERRINET, David FITZPATRICK et James A BEDNAR. « Edge statistics in natural images versus laboratory animal environments : implications for understanding lateral connectivity in V1 ». In : *Proceedings of the Society for Neuroscience conference*. Sous la dir. de Www WASHINGTON. Program No. 530.04. 2011. URL : <https://laurentperrinet.github.io/publication/perrinet-11-sfn>
 93. Claudio SIMONCINI, Laurent U PERRINET, Anna MONTAGNINI, Pascal MAMASSIAN et Guillaume S MASSON. « Different pooling of motion information for perceptual speed discrimination and behavioral speed estimation ». In : *Vision Science Society*. 43.503. 2010
 94. Laurent U PERRINET. « Probabilistic models of the low-level visual system : the role of prediction in detecting motion ». In : *LADISLAV TAUC and GDR MSPC NEUROSCIENCES CONFERENCE, From Mathematical Image Analysis to Neurogeometry of the Brain*. 2010. URL : <https://laurentperrinet.github.io/publication/perrinet-10-tauc/>
 95. Laurent U PERRINET et Guillaume S MASSON. « Dynamical emergence of a neural solution for motion integration ». In : *Proceedings of AREADNE*. 2010
 96. Amarender BOGADHI, Anna MONTAGNINI, Pascal MAMASSIAN, Laurent U PERRINET et Guillaume S MASSON. « A recurrent Bayesian model of dynamic motion integration for smooth pursuit ». In : *Vision Science Society*. 26.445. 2010. DOI : 10.1167/10.7.545. URL : <http://dx.doi.org/10.1167/10.7.545>
 97. Claudio SIMONCINI, Laurent U PERRINET, Anna MONTAGNINI, Pascal MAMASSIAN et Guillaume S MASSON. « Different pooling of motion information for perceptual speed discrimination and behavioral speed estimation ». In : *Vision Science Society*. 43.503. 2010
 98. Nicole VOGES et Laurent U PERRINET. « Phase space analysis of networks based on biologically realistic parameters ». In : *Proceedings of NeuroComp*. T. 104. 1-2. 2010, p. 51-60
 99. Laurent U PERRINET, Alexandre REYNAUD, Frédéric Y CHAVANE et Guillaume S MASSON. « Inferring monkey ocular following responses from V1 population dynamics using a probabilistic model of motion integration ». In : *Vision Science Society*. 23.411. 2009
 100. Laurent U PERRINET, Nicole VOGES, Jens KREMKOW et Guillaume S MASSON. « Decoding center-surround interactions in population of neurons for the ocular following response ». In : *Proceedings of COSYNE*. 2009
 101. Nicole VOGES et Laurent U PERRINET. « Dynamical state spaces of cortical networks representing various horizontal connectivities ». In : *Proceedings of COSYNE*. 2009
 102. Nicole VOGES et Laurent U PERRINET. « Dynamics of cortical networks including long-range patchy connections ». In : *Eighth Göttingen Meeting of the German Neuroscience Society*. 2009, T26-3C
 103. Jens KREMKOW, Laurent U PERRINET, Guillaume S MASSON et Ad M AERTSEN. « Functional consequences of correlated excitation and inhibition on single neuron integration and signal propagation through synfire chains ». In : *Eighth Göttingen Meeting of the German Neuroscience Society*. 2009, T26-6B
 104. Pierre YGER, Daniel BRUDERLE, Jochen EPPLER, Jens KREMKOW, Dejan PECEVSKI, Laurent U PERRINET, Michael SCHMUKER, Eilif MULLER et Andrew P DAVISON. « NeuralEnsemble : Towards a meta-environment for network modeling and data analysis ». In : *Eighth Göttingen Meeting of the German Neuroscience Society*. 2009, T26-4C
 105. Jens KREMKOW, Laurent U PERRINET, Pierre BAUDOT, Manu LEVY, Olivier MARRE, Cyril MONIER, Yves FRÉGNAC, Guillaume S MASSON et Ad M AERTSEN. « Control

- of the temporal interplay between excitation and inhibition by the statistics of visual input : a V1 network modelling study ». In : *Proceedings of the Society for Neuroscience conference*. 2008
106. Nicole VOGES et Laurent U PERRINET. « Analyzing cortical network dynamics with respect to different connectivity assumptions ». In : *Proceedings of NeuroComp08, Marseille*. Sous la dir. de Laurent U PERRINET et Emmanuel DAUCÉ. 1^{er} oct. 2008
 107. Nicole VOGES, Jens KREMKOW et Laurent U PERRINET. « Dynamics of cortical networks based on patchy connectivity patterns ». In : *FENS Abstract*. T. 4. 075.14. 2008
 108. Jens KREMKOW, Laurent U PERRINET, Ad M AERTSEN et Guillaume S MASSON. « Functional properties of feed-forward inhibition ». In : *Proceedings of NeuroComp08, Marseille*. Sous la dir. de Laurent U PERRINET et Emmanuel DAUCÉ. 1^{er} oct. 2008
 109. Laurent U PERRINET et Guillaume S MASSON. « Modeling spatial integration in the ocular following response to center-surround stimulation using a probabilistic framework ». In : *Proceedings of COSYNE*. 2008
 110. Laurent U PERRINET et Guillaume S MASSON. « Decoding the population dynamics underlying ocular following response using a probabilistic framework ». In : *Proceedings of AREADNE, 2008*. 2008
 111. Laurent U PERRINET. « What adaptive code for efficient spiking representations? A model for the formation of receptive fields of simple cells ». In : *Proceedings of COSYNE*. 2008
 112. 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
 113. Andrew P DAVISON, Pierre YGER, Jens KREMKOW, Laurent U PERRINET et Eilif MULLER. « PyNN : towards a universal neural simulator API in Python ». In : *Sixteenth Annual Computational Neuroscience Meeting : CNS*2007, Toronto, Canada. 7-12 July 2007*. Sous la dir. de B. M. C. NEUROSCIENCE. T. 8(Suppl 2) :P2. 2007. DOI : 10.1186/1471-2202-8-S2-P2. URL : <http://dx.doi.org/10.1186/1471-2202-8-S2-P2>
 114. Jens KREMKOW, Laurent U PERRINET, Arvind KUMAR, Ad M AERTSEN et Guillaume S MASSON. « Synchrony in thalamic inputs enhances propagation of activity through cortical layers ». In : *Annual Computational Neuroscience Meeting : BMC Neuroscience*. Sous la dir. de BMC NEUROSCIENCE. T. 8. Suppl 2. 6 juill. 2007, P180+. DOI : 10.1186/1471-2202-8-S2-P180. URL : <http://dx.doi.org/10.1186/1471-2202-8-S2-P180>
 115. Anna MONTAGNINI, Pascal MAMASSIAN, Laurent U PERRINET, Eric CASTET et Guillaume S MASSON. « Dynamic inference for motion tracking ». In : *Perception 36 ECVF Abstract Supplement*. 2007
 116. Anna MONTAGNINI, Pascal MAMASSIAN, Laurent U PERRINET et Guillaume S MASSON. « Visual tracking of ambiguous moving objects : A recursive Bayesian model ». In : *Journal of Vision*. T. 7. 9. 2007, p. 406
 117. Laurent U PERRINET. « On efficient sparse spike coding schemes for learning natural scenes in the primary visual cortex ». In : *Sixteenth Annual Computational Neuroscience Meeting : CNS*2007, Toronto, Canada. 7-12 July 2007*. Sous la dir. de Bmc N. 2007. T. 8(Suppl 2) :P206. This work is supported by the 6th RFP of the EU (grant no. 15879-FACETS). 2007. DOI : 10.1186/1471-2202-8-S2-P206. URL : <http://dx.doi.org/10.1186/1471-2202-8-S2-P206>
 118. Laurent U PERRINET. « Neural Codes for Adaptive Sparse Representations of Natural Images ». In : *Mathematical image processing meeting (Marseille, France) September 5, 2007*. 2007

119. Laurent U PERRINET et Jens KREMKOW. « Dynamical contrast gain control mechanisms in a layer 2/3 model of the primary visual cortex ». In : *Physiogenic and pathogenic oscillations : the beauty and the beast, 5th INMED/TINS CONFERENCE SEPTEMBER 9 - 12, 2006, La Ciotat, France*. 2006
120. Laurent U PERRINET. « An efficiency razor for model selection and adaptation in the primary visual cortex ». In : *Fifteenth Annual Computational Neuroscience Meeting : CNS*2006*. 2006. URL : https://ocns.memberclicks.net/assets/docs/CNS_Program_books/2006booklet.pdf
121. Laurent U PERRINET, Frédéric V BARTHÉLEMY et Guillaume S MASSON. « Input-output transformation in the visuo-oculomotor loop : modeling the ocular following response to center-surround stimulation in a probabilistic framework ». In : *1ère conférence francophone NEUROsciences COMPutationnelles - NeuroComp*. 2006
122. Laurent U PERRINET et Jens KREMKOW. « Dynamical contrast gain control mechanisms in a layer 2/3 model of the primary visual cortex ». In : *The Functional Architecture of the Brain : from Dendrites to Networks. Symposium in honour of Dr Suzanne Tyc-Dumont. 4- 5 May 2006. GLM, Marseille, France*. 2006
123. Laurent U PERRINET, Jens KREMKOW, Frédéric V BARTHÉLEMY, Guillaume S MASSON et Frédéric Y CHAVANE. « Input-output transformation in the visuo-oculomotor loop : modeling the ocular following response to center-surround stimulation in a probabilistic framework ». In : *FENS*. 2006
124. Anna MONTAGNINI, Pascal MAMASSIAN, Laurent U PERRINET, Eric CASTET et Guillaume S MASSON. « Bayesian modeling of dynamic motion integration ». In : *1ère conférence francophone NEUROsciences COMPutationnelles (NeuroComp)*. 2006
125. Adrien WOHRER, Guillaume S MASSON, Laurent U PERRINET, Pierre KORNPORST et Thierry VIEVILLE. « Contrast sensitivity adaptation in a virtual spiking retina and its adequation with mammalian retinas ». In : *Perception*. Sous la dir. de Ricardo A. CARMONA et Gustavo LINAN-CEMBRANO. T. 35. ECVF, 29th European Conference on Visual Perception. 2006, p. 67
126. Laurent U PERRINET. « Efficient Source Detection Using Integrate-and-Fire Neurons ». In : *International Conference on Artificial Neural Networks*. Sous la dir. de David HUTCHISON et al. T. 3696. Lecture Notes in Computer Science. Berlin, Heidelberg : Springer Berlin Heidelberg, 1^{er} jan. 2005. Chap. 27, p. 167-172. ISBN : 978-3-540-28752-0. DOI : 10.1007/11550822_27. URL : http://dx.doi.org/10.1007/11550822_27
127. Laurent U PERRINET, Frédéric V BARTHÉLEMY, Eric CASTET et Guillaume S MASSON. « Dynamics of motion representation in short-latency ocular following : A two-pathways Bayesian model ». In : *Perception*. Sous la dir. de Ricardo A. CARMONA et Gustavo LINAN-CEMBRANO. T. 34. ECVF. 2005, p. 38
128. Sylvain FISCHER, Rafael REDONDO, Laurent U PERRINET et Gabriel CRISTÓBAL. « Sparse Gabor wavelets by local operations ». In : *Microtechnologies for the New Millennium 2005*. Sous la dir. de Ricardo A. CARMONA et Gustavo LINAN-CEMBRANO. T. 5839. Bioengineered and Bioinspired Systems II. Sevilla, Spain : SPIE, 29 juin 2005, p. 75-86. DOI : 10.1117/12.608403. URL : <http://dx.doi.org/10.1117/12.608403>
129. Sylvain FISCHER, Rafael REDONDO, Laurent U PERRINET et Gabriel CRISTÓBAL. « Efficient representation of natural images using local cooperation ». In : *Perception*. Sous la dir. de Ricardo A. CARMONA et Gustavo LINAN-CEMBRANO. T. 34. ECVF. 2005, p. 241
130. Rafael REDONDO, Sylvain FISCHER, Laurent U PERRINET et Gabriel CRISTÓBAL. « Modeling of simple cells through a sparse overcomplete gabor wavelet representation based on local inhibition and facilitation ». In : *Perception*. Sous la dir. de Ricardo A. CARMONA et Gustavo LINAN-CEMBRANO. T. 34. ECVF. 1^{er} août 2005, p. 238
131. Sylvain FISCHER, Rafael REDONDO, Laurent U PERRINET et Gabriel CRISTÓBAL. « Sparse Gabor wavelets by local operations ». In : *Microtechnologies for the New Millennium 2005*. Sous la dir. de Ricardo A. CARMONA et Gustavo LINAN-CEMBRANO.

- T. 5839. Bioengineered and Bioinspired Systems II. Sevilla, Spain : SPIE, 29 juin 2005, p. 75-86. DOI : 10.1117/12.608403. URL : <http://dx.doi.org/10.1117/12.608403>
132. Laurent U PERRINET. « Efficient Source Detection Using Integrate-and-Fire Neurons ». In : *International Conference on Artificial Neural Networks*. Sous la dir. de David HUTCHISON et al. T. 3696. Lecture Notes in Computer Science. Berlin, Heidelberg : Springer Berlin Heidelberg, 1^{er} jan. 2005. Chap. 27, p. 167-172. ISBN : 978-3-540-28752-0. DOI : 10.1007/11550822_27. URL : http://dx.doi.org/10.1007/11550822_27
 133. Laurent U PERRINET, Frédéric V BARTHÉLEMY, Eric CASTET et Guillaume S MASSON. « Dynamics of motion representation in short-latency ocular following : A two-pathways Bayesian model ». In : *Perception*. Sous la dir. de Ricardo A. CARMONA et Gustavo LINAN-CEMBRANO. T. 34. ECVF. 2005, p. 38
 134. Laurent U PERRINET et Manuel SAMUELIDES. « Visual Strategies for Sparse Spike Coding ». In : *Actes de Neurosciences et Sciences de l'Ingenieur, L'Agelonde*, 2002
 135. Laurent U PERRINET et Manuel SAMUELIDES. « Sparse Image Coding Using an Asynchronous Spiking Neural Network ». In : *Proceedings of ESANN*. 2002, p. 313-8
 136. Laurent U PERRINET et Manuel SAMUELIDES. « A generative model for Spike Time Dependent Hebbian Plasticity ». In : *Proceedings of DYNN*. 2000

6 Séminaires ou Conférences avec présentations orales ou affichées

1. Laurent U PERRINET. « Event-based vision ». In : *Séminaire colloque BioComp 2023*. Banyuls-sur-Mer (France), 1^{er} déc. 2023
2. Laurent U PERRINET. « Accurate Detection of Spiking Motifs by Learning Heterogeneous Delays of a Spiking Neural Network ». In : *ICANN Special Session on Recent Advances in Spiking Neural Networks*. Heraklion (Greece), 27 sept. 2023. URL : <https://laurentperrinet.github.io/publication/perrinet-23-icann/>
3. Laurent U PERRINET. « Event-based vision ». In : *Séminaire à l'Institut Fresnel*. Marseille (France), 8 sept. 2023. URL : <https://laurentperrinet.github.io/talk/2023-09-08-fresnel>
4. Laurent U PERRINET. « Game theory and brain strategies ». In : *Atelier jeu et cerveau - M2 MASCO*. Marseille (France), 23 jan. 2023. URL : <https://laurentperrinet.github.io/talk/2023-01-23-game-theory-and-the-brain>
5. Antoine GRIMALDI et Laurent U PERRINET. « Learning heterogeneous delays of Spiking Neurons for motion detection ». In : *NeuroVision Workshop in conjunction with CVPR 2022*. New Orleans (virtual), 19 juin 2022. URL : <https://sites.google.com/uci.edu/neurovision2022/schedule>
6. Jean-Nicolas JÉRÉMIE, Emmanuel DAUCÉ et Laurent U PERRINET. « Retinotopic mapping improves the reliability of image classification ». In : *NeuroVision Workshop in conjunction with CVPR 2022*. New Orleans (virtual), 19 juin 2022. URL : <https://sites.google.com/uci.edu/neurovision2022/schedule>
7. Emmanuel DAUCÉ et Laurent U PERRINET. « Contributions of neuroscience to the detection and localization of objects in visual inputs ». In : *MIR Symposium 2022 bio-inspired and Marine Robotics*. SeaTech building, University of Toulon, 14 juin 2022
8. Antoine GRIMALDI et Laurent U PERRINET. « Polychrony detection using heterogeneous delays ». In : *second CENTURI Scientific Day*. Marseille (France), 19 mai 2022. URL : <https://centuri-livingsystems.org/events/centuri-scientific-day-3/>
9. Hugo LADRET et Laurent U PERRINET. « Statistics of the sparse representations of natural images ». In : *2022 SIAM Conference on Imaging Science (IS22)*. 22 mars 2022

10. Laurent U PERRINET. « Des illusions aux hallucinations visuelles : une porte sur la perception ». In : *Neurocercle : Découvrir les neurosciences à Grenoble*. Grenoble (France), 12 jan. 2022. URL : <https://laurentperrinet.github.io/talk/2022-01-12-neuro-cercle>
11. Hugo LADRET, Nelson CORTES, Lamyae IKAN, Frédéric CHAVANE, Christian CASANOVA et Laurent U PERRINET. « Dynamical processing of orientation precision in the primary visual cortex ». In : *DynamicsDays - XL*. 27 août 2021
12. Laurent U PERRINET et Angelo FRANCIOSINI. « Pooling in a predictive model of V1 explains functional and structural diversity across species ». In : *Society for Mathematical Biology * 2021*. Everywhere (World), 15 juin 2021. URL : <https://laurentperrinet.github.io/talk/2021-06-15-smb>
13. Hugo LADRET, Nelson CORTES, Lamyae IKAN, Frédéric CHAVANE, Christian CASANOVA et Laurent U PERRINET. « Dynamical processing of orientation precision in the primary visual cortex ». In : *NeuroFrance 2021*. 20 mai 2021
14. Laurent U PERRINET. « Understanding natural vision using deep predictive coding ». In : *Séminaire à l'Institut de Recherche sur les Phénomènes Hors Équilibre*. Marseille (France), 25 sept. 2020. URL : <https://laurentperrinet.github.io/talk/2020-09-25-irphe>
15. Emmanuel DAUCÉ et Laurent PERRINET. « Visual search as active inference ». In : *IWAI 2020*. Ghent (Belgium), gone virtual, 14 sept. 2020. DOI : 10.1007/978-3-030-64919-7_17. URL : https://whova.com/embedded/subsession/ecmlp_202009/1215095/1215123/
16. Laurent U PERRINET. « From the retina to action : Understanding visual processing ». In : *Master Neurosciences et Sciences Cognitives*. Marseille (France), 3 avr. 2020
17. Laurent U PERRINET. « Des illusions aux hallucinations visuelles : une porte sur la perception ». In : *Cinéma et sciences : rencontre avec les élèves du lycée des métiers*. Lycée Professionnel Domaine Eguille, Vedène (France), 20 jan. 2020. URL : <https://laurentperrinet.github.io/talk/2020-01-20-atelier-sciences-cinema>
18. Emmanuel DAUCÉ, Pierre ALBIGÈS et Laurent U PERRINET. « Learning where to look : a foveated visuomotor control model ». In : *Annual Computational Neuroscience Meeting : CNS*2019 Barcelona, Spain*. 2019. URL : <https://bmcneurosci.biomedcentral.com/articles/10.1186/s12868-019-0538-0#Sec73>
19. Laurent U PERRINET. « Should I stay or should I go ? Humans adapt to the volatility of visual motion properties, and know about it ». In : *Colloque international de la Société Française des Neurosciences 2019*. Marseille (France), 23 mai 2019. URL : <https://laurentperrinet.github.io/talk/2019-05-23-neurofrance>
20. Laurent U PERRINET. « Des illusions aux hallucinations visuelles : une porte sur la perception ». In : *JNLF 2019, Revue Neurologique, Volume 175, Supplement 1, Page S165*. Lille, France, 2019. DOI : 10.1016/j.neurol.2019.01.031. URL : <https://laurentperrinet.github.io/talk/2019-04-18-jnlf>
21. Laurent U PERRINET. « Should I stay or should I go ? Adaption of human observers to the volatility of visual inputs ». In : *CausaL Kick-off*. INT, Marseille (France), 5 avr. 2019. URL : <https://laurentperrinet.github.io/talk/2019-04-05-bbcp-causal-kickoff>
22. Victor BOUTIN, Angelo FRANCIOSINI et Laurent U PERRINET. « From the retina to action : Predictive processing in the visual system ». In : *HDR Robin Baurès, Toulouse (France)*. Toulouse (France), 25 mars 2019. URL : https://laurentperrinet.github.io/2019-03-25_HDR_RobinBaurès
23. Laurent U PERRINET. « Should I stay or should I go ? Adaption of human observers to the volatility of visual inputs ». In : *LACONEU 2019 : 5th Latin-American Summer School in Computational Neuroscience*. Valparaiso (Chile), 2019. URL : <https://laurentperrinet.github.io/talk/2019-01-18-laconeu/>

24. Laurent U PERRINET, Chloé PASTUREL et Anna MONTAGNINI. « Principles and psychophysics of Active Inference in anticipating a dynamic, switching probabilistic bias ». In : *Probabilities and Optimal Inference to Understand the Brain*. INT, Marseille (France), 2018. URL : <https://laurentperrinet.github.io/talk/2018-04-05-bcp-talk/>
25. **2017-01-18_LACONEU**
26. Laurent U PERRINET. « Back to the present : dealing with delays in biological and neuromorphic systems ». In : *Workshop on Computational Neuroscience entitled "Neuromorphic Event-based Compound Eyes and Vision"*. Telluride, CO, 2017. URL : <https://laurentperrinet.github.io/talk/2017-06-28-telluride>
27. **2016-07-07_EDP-proba**
28. **2016-10-13_LAW**
29. **2016-11-03_SIGMA**
30. **2016-10-26_FillatreBarlaudPerrinet16EUVIP**
31. **2016-10-26_Perrinet16EUVIP**
32. **2016-11-03_gdr**
33. **2015-11-05_Chile**
34. **2015-10-07_GDR-BioComp**
35. **2014-01-10_INTFest**
36. **2014-03-20_Manchester**
37. **2014-04-25_kaplan-beijing**
38. **2013-03-21_Marseille**
39. **2013-07-05_Cerco**
40. **2013-11-26_BrainScalesDemos**
41. **2012-01-12_VisionAtUcl**
42. **2012-01-24_Edinburgh**
43. **2012-01-27_FIL**
44. **2012-03-22_Juelich**
45. **2012-03-23_Juelich**
46. **2012-05-10_itwist**
47. **2011-07-02_NeuroMedTalk**
48. **2011-09-28_ermite**
49. **2011-10-05_BrainScalesESS**
50. **2011-11-15_sfn**
51. **2010-01-08_facets**
52. **2010-12-17_TaucTalk**
53. **2009-04-01_INT**
54. **2009-07-18_Kremkow09cnstalk**
55. **2009-11-30_vss**
56. **2008-02-01_toledo**
57. **2008-04-01_incm**
58. **2008-06-01_Ulm**
59. **2007-09-01_mipm**
60. **2007-12-01_rankprize**
61. **2006-01-01_neurocomp**

7 Cours et actions de diffusion de la culture scientifique

1. Perrinet23formes-et-perception
2. 2023-05-10 _phd-program _neurosciences-computationnelles
3. 2023-04-05 _UE-neurosciences-computationnelles
4. 2023-04-03 _master-M4NC
5. 2022-03-23 _UE-neurosciences-computationnelles
6. Perrinet21hasard
7. Perrinet19temps
8. Perrinet19illusions
9. 2019-01-10 _PollyMaggoo
10. 2019-01-14 _LACONEU
11. 2019-01-16 _LACONEU
12. 2019-01-17 _LACONEU
13. 2019-04-03 _a _course _on _vision _and _modelization
14. 2018-01-25 _meetup-neuronautes
15. 2018-02-01 _BCP _INVIBE _fest
16. 2018-03-26 _cours-NeuroComp _FEP
17. 2018-10-10 _PollyMaggoo
18. 2018-10-11 _BioMorphisme
19. 2017-01-19 _LACONEU
20. 2017-01-20 _LACONEU
21. 2017-06-30 _Telluride
22. 2017-11-15 _ColloqueMaster
23. 2017-11-17 _FestivalInterferences
24. 2017-11-24 _NeurosciencesRobotique
25. 2016-04-25 _PollyMaggoo
26. 2016-04-28 _Mejanes
27. 2016-11-20 _PollyMaggoo
28. 2010-04-14 _OndesParalleles
29. Perrinet10DocSciences
30. 2009-11-24 _IntelligenceMecanique