Full name of the applicant	**Bertrand Fontaine**
SEMAPHORE Application ID	**24893458**
Type of instrument	**Research Associate**

PUBLICATIONS OF THE APPLICANT - FULL LIST

MAIN LANGUAGE CHOSEN = ENGLISH

1. Articles published in peer-review journals

B. Fontaine, C. Köppl, JL. Peña: Reverse correlation analysis of auditory-nerve fiber responses to broadband noise in a bird, the barn owl, 2015, **Journal of the Association for Research in Otolaryngology,** in press

2) **B. Fontaine**, KM. MacLeod, ST. Lubejko, LJ. Steinberg, C. Köppl, JL. Peña: Emergence of band-pass filtering through adaptive spiking in the owl's cochlear nucleus, **Journal of Neurophysiology**, 2014, 112:430-445

3) **B. Fontaine**, JL. Pena, R. Brette: Spike-threshold adaptation predicted by membrane potential dynamics in vivo, **PloS Computational Biology,** 2014, 10(4): e1003560

4) **B Fontaine**, V Benichoux, PX Joris, R Brette: Predicting spike timing in highly synchronous auditory neurons at different sound levels, **Journal of Neurophysiology**, 2013 110: 1672–1688

5) C. Rossant, **B. Fontaine**, DFM. Goodman: Playdoh: a lightweight Python library for distributed computing and optimisation, **Journal of Computational Science**, 2013, 4:352-259

6) C. Rossant, **B. Fontaine**, A.K. Magnusson, R. Brette: A calibration-free electrode compensation method, **Journal of Neurophysiology**, 2012, 108:2629-2639

7) **B. Fontaine**, R. Brette: Neural development of binaural tuning through Hebbian learning predicts frequency dependent best delays, **Journal of Neuroscience**, 2011, 31:11692-96

8) **B. Fontaine**, DFM. Goodman, R. Brette: Online auditory filter processing using vectorization along channels, **Frontiers in Neuroinformatics**, 2011, 5(9): doi: 10.3389/fninf.2011.0000

9) B.J. Fischer, L.J. Steinberg, **B. Fontaine,** R. Brette, J.L. Pena: Effect of instantaneous frequency glides on interaural time difference processing by auditory coincidence detectors, **Proceedings of the National Academy of Sciences**, 2011 108:18138-4

10) **B. Fontaine**, H. Peremans: Compressive sensing: A strategy for fluttering target discrimination employed by bats emitting broadband calls, **Journal of the Acoustical Society of America**, 2011, 129(2):1100-10

11) C. Rossant, DFM. Goodman, **B. Fontaine**, J. Platkiewicz, A. Magnusson, R. Brette: Fitting neuron models to spike trains, **Frontiers in Neuroscience**, 2011, 5(9): doi: 10.3389/fnins.2011.00009

12) **B. Fontaine**, H. Peremans: Bat echolocation processing using first-spike latency coding, **Neural Networks**, 2009, 22(10):1372- 82

13) **B. Fontaine**, H. Peremans: Determining biosonar images using sparse representations, **Journal of the Acoustical Society of America**, 2009, 125 (5):3052 -3060

14) **B. Fontaine**, H. Peremans: Tuning Bat LSO Neurons to Interaural Intensity Differences through Spike-Timing Dependent Plasticity, **Biological Cybernetics**, 2007, 97:261-267

2. Articles published in conference proceedings

15) **B. Fontaine**, H. Peremans and J. Steckel: 3D sparse imaging in biosonar scene analysis. In SPARS'09-Signal Processing with Adaptive Sparse Structured Representations, 2009, [Online]. Available: http://hal.inria.fr/inria-00369380/

16) **B. Fontaine**, H. Peremans: Modelling the Bat LSO Tonotopical Map Refinement during Development. In From Animals to Animats, 2008, 10:240-249

17) **B. Fontaine**, H. Peremans, B. Schrauwen: Bat echolocation modelling using spike kernels with Support Vector Regression. In Proceedings of the 15th European Symposium on Artificial Neural Networks,2007, 367-372

18) **B. Fontaine**, H. Peremans : Tuning Neurons to Interaural Intensity Differences Using Spike Timing-Dependent Plasticity. International Journal of Applied Mathematics and Computer Science, 2007, 4(2), 520-523

19) **B. Fontaine**, H. Peremans : Sonar target recognition based on spike coded spectrogram. In The Annals of Dunarea de Jos University of Galati, 2006, 5-10

3. Oral presentations during conferences with scientific selection committee

20) **B. Fontaine**, H. Peremans . A spike burst coding scheme for environment representation by FM bats. Conference of the Acoustical Society of America, 2006, Providence, USA

21) **B. Fontaine**, H. Peremans: Biosonar sequences analysis using first spike latency encoding. 1th conference on Natural and Biomimetic Mechanosensing, 2009. Dresden, Germany

22) **B. Fontaine**, R. Brette . A developmental explanation of the dependence of binaural best delays on characteristic Frequency. Conference of the computational neuroscience society, 2011, Stockholm, Sweden