

## R-WoNC(3)

三日目 . Loihi のチュートリアル .

### メモ

- Intel's 'Loihi' Neuromorphic Chip in the Lab - <https://www.youtube.com/watch?v=cDKnt9ldXv0>
- Robust computation with rhythmic spike patterns <https://arxiv.org/abs/1901.07718>
- INRC - inrc\_interest\_at\_intel.com に連絡すればいいらしい
  - cf. <https://newsroom.intel.com/news/intel-announces-neuromorphic-computing-research-collaborators/#gs.0n1ob9>
- Loihi 上のプログラミングモデル, Neural Process と Sequential Neural Interfacing Process が channel でつながってる, というモデルなのか .
- Nengo Loihi Keyword Recognition Demo - <https://www.youtube.com/watch?v=nIsK7dSXBo0>
- cf. NxNet 使ってる別のデモ [https://github.com/combra-lab/combra\\_loihi/blob/master/demos/demo3.py](https://github.com/combra-lab/combra_loihi/blob/master/demos/demo3.py)
- Nengo-Loihi のサンプル [https://www.nengo.ai/nengo-loihi/examples/oscillator\\_nonlinear.html](https://www.nengo.ai/nengo-loihi/examples/oscillator_nonlinear.html)
- Nengo で MNIST な例 . [https://www.nengo.ai/nengo-loihi/examples/mnist\\_convnet.html](https://www.nengo.ai/nengo-loihi/examples/mnist_convnet.html)
  - cf. ANN->SNN なツールもあるのか <https://snntoolbox.readthedocs.io/en/latest/guide/intro.html>

### あとでよむ

- Spike: A GPU Optimised Spiking Neural Network Simulator - <https://www.biorxiv.org/content/biorxiv/early/2018/11/05/461160.full.pdf>
- Deep Learning in Spiking Neural Networks - <https://arxiv.org/pdf/1804.08150.pdf>
- Fast-Classifying, High-Accuracy Spiking Deep Networks Through Weight and Threshold Balancing - [https://www.ini.uzh.ch/admin/extras/doc\\_get.php?id=54478](https://www.ini.uzh.ch/admin/extras/doc_get.php?id=54478)
- Performance of SVM, CNN, and ANN with BoW, HOG, and Image Pixels in Face Recognition - <https://ieeexplore.ieee.org/document/8412925>
- Robust computation with rhythmic spike patterns - <https://arxiv.org/abs/1901.07718>