

# Stochastic inference with spiking neural networks

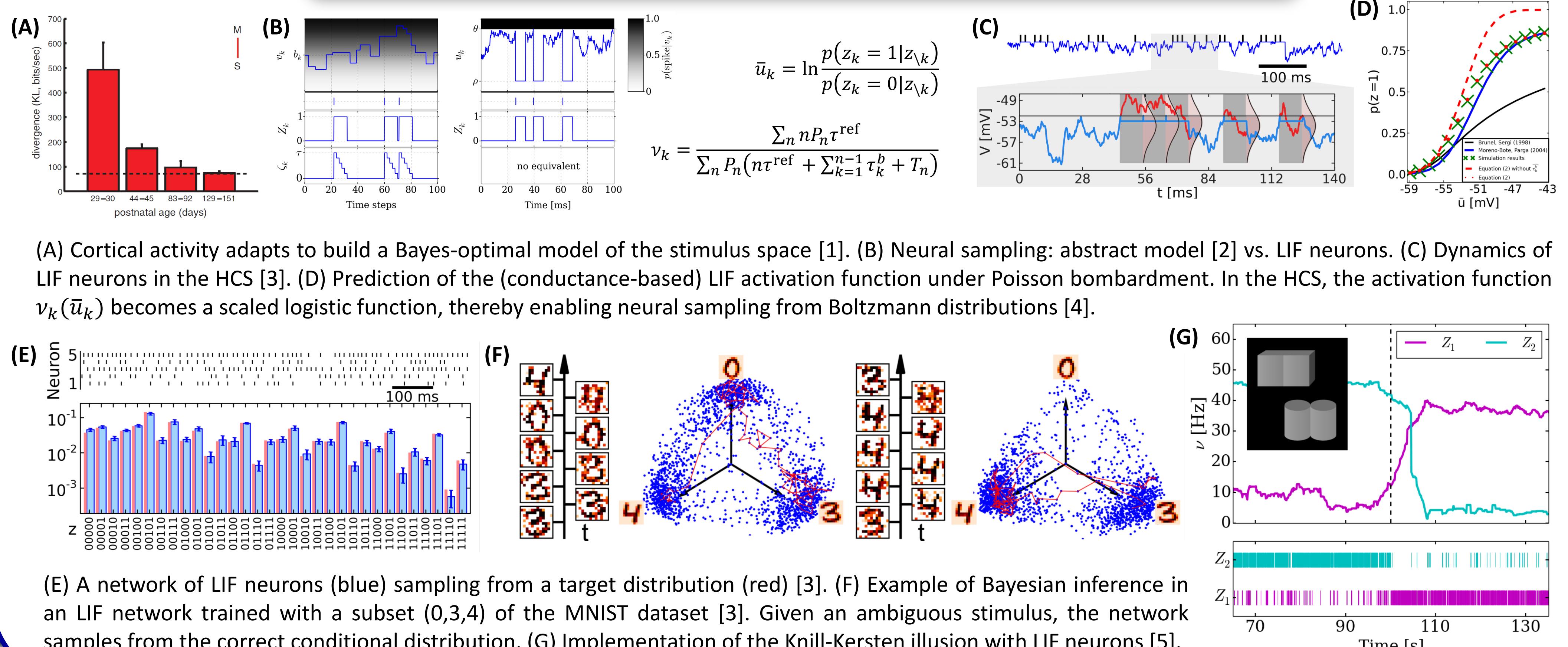
Mihai A. Petrovici\*, Liziwei Leng\*, Oliver Breitwieser\*, David Stöckel\*, Ilja Bytschok, Roman Martel, Johannes Bill, Johannes Schemmel, Karlheinz Meier

BrainScaleS

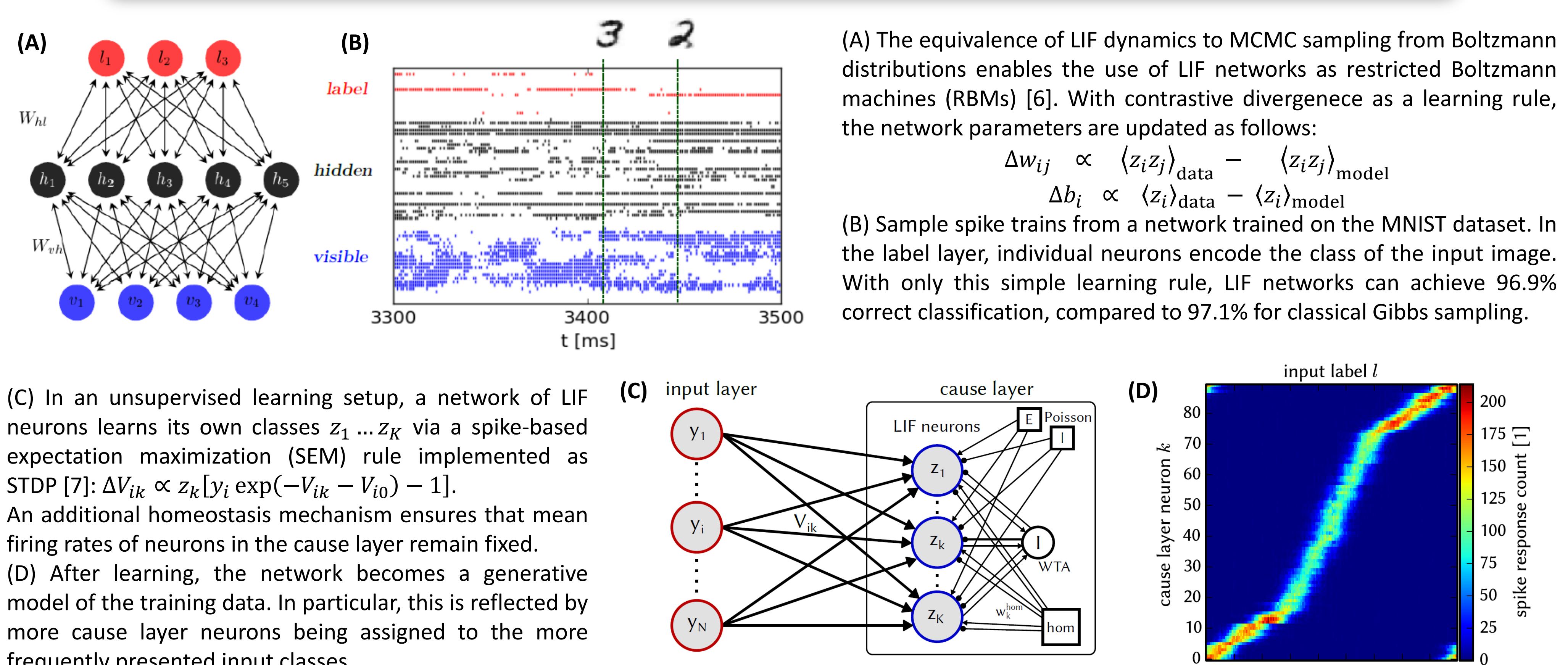


The  
Manfred  
Stark  
Foundation

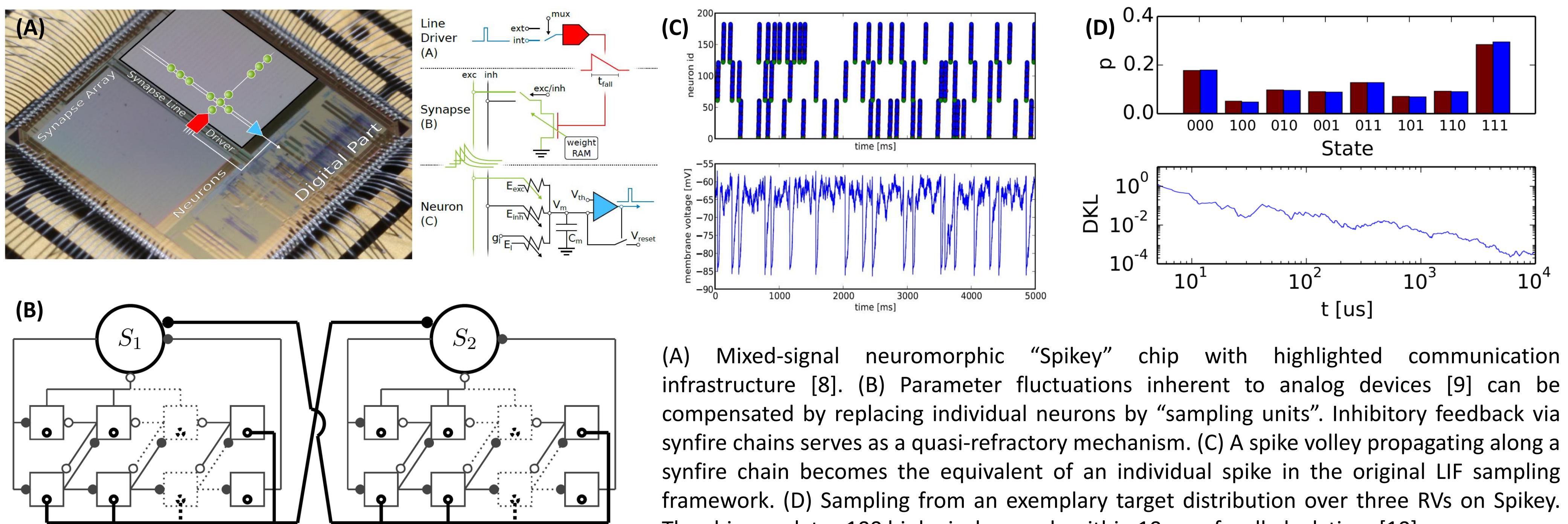
## LIF sampling in the high-conductance state



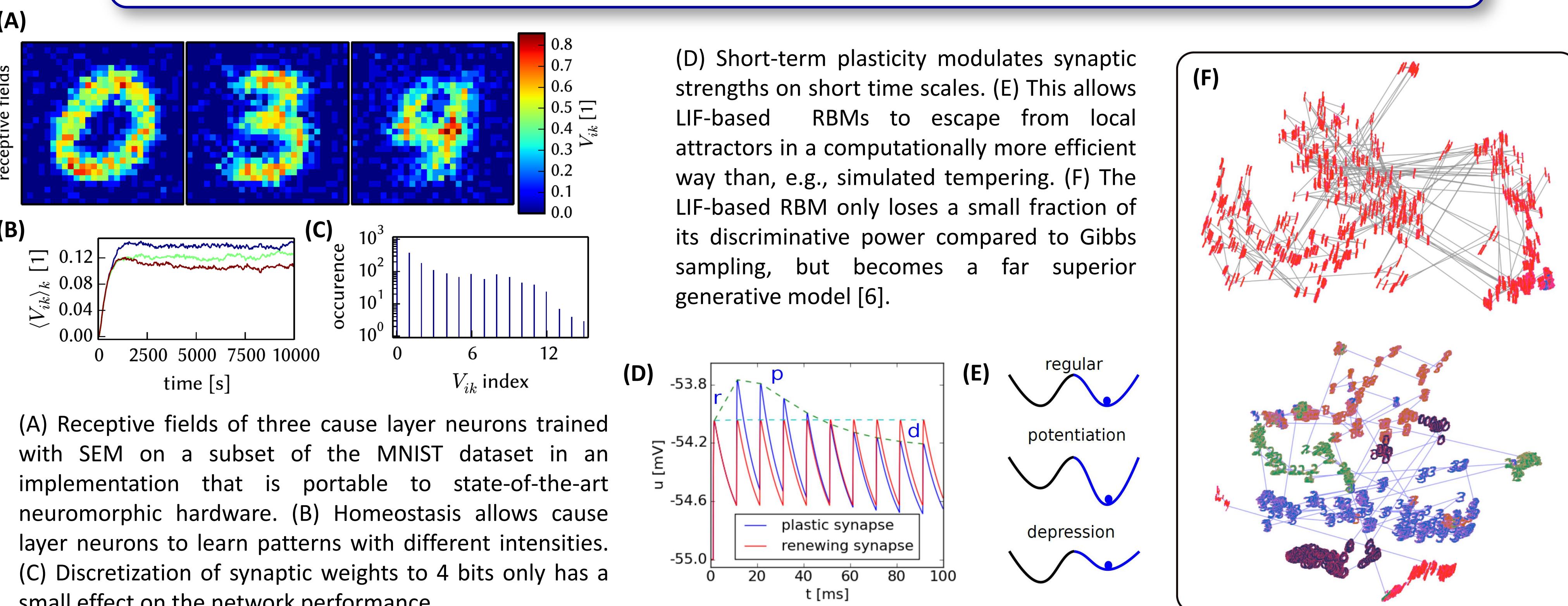
## Supervised & unsupervised learning in spiking networks



## Neuromorphic implementation



## Spike-based plasticity in generative & discriminative models



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- [10] Petrovici, M. A.\*., Stöckel, D.\*., Bytschok, I., Bill, J., Pfeil, T., Schemmel, J. & Meier, K. (2015). Fast sampling with neuromorphic hardware. *Advances in Neural Information Processing Systems (NIPS) 2015*.