

Biological Experiments at the Cell Level	Biological Experiments at the Network Level
Modeling and Databases at the Cell Level	Modeling and Databases at the Network Level
Neuromorphic Hardware at the Cell Level	Neuromorphic Hardware at the Network Level



FACETS

Fast Analog Computing with Emergent Transient States



Biological Experiments



Theoretical Studies and Computer-based Models



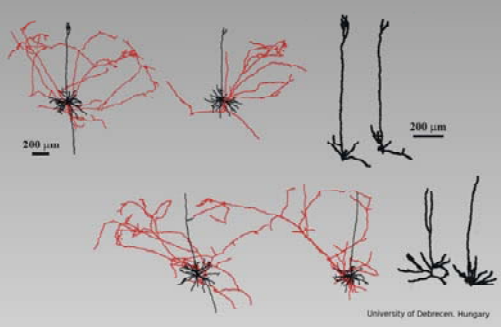
High Precision Neuromorphic Hardware Systems



Large Scale Neuromorphic Hardware Systems

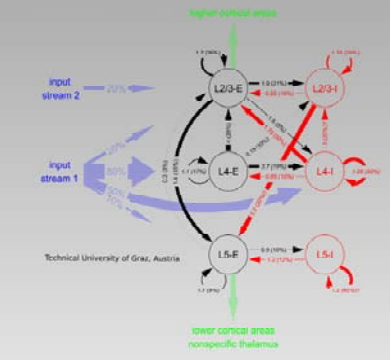
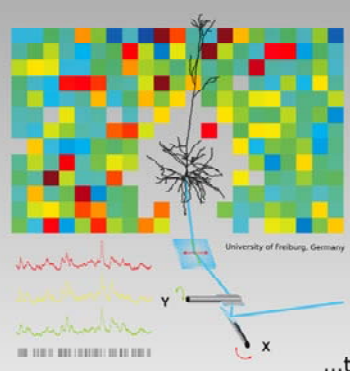
Revealing Structure and Function of Cortical Circuits to Discover New Computational Paradigms

From single neuron morphology...



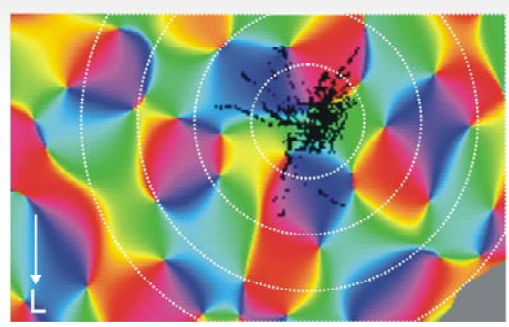
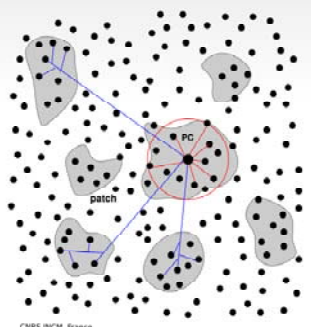
Understanding computational properties of single neurons

...towards functional connectivity...



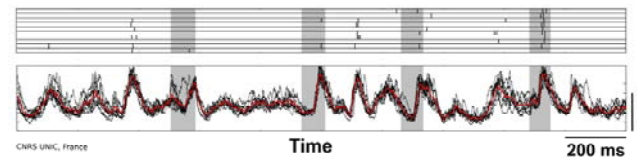
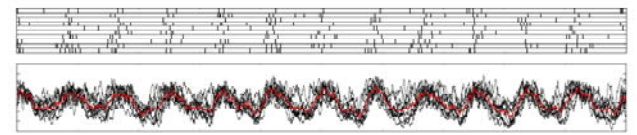
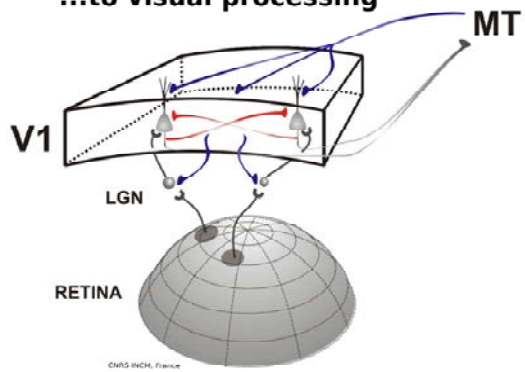
...their interactions in local circuits...

...to cortical maps...



...on the global network level...

...to visual processing



...to understand the principles of sensory processing.

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