

$$T(x) \cdot \frac{\partial}{\partial \theta} f(x, \theta) dx = M \left( T(\xi) \cdot \frac{\partial}{\partial \theta} \ln L(\xi, \theta) \right)$$
$$T(x) \cdot \left( \frac{\partial}{\partial \theta} \ln L(x, \theta) \right) \cdot f(x, \theta) dx = \int_{R_s} T(x) \cdot \left( \frac{\partial}{\partial \theta} \ln L(x, \theta) \right) \cdot f(x, \theta) dx$$

**FMI**Friedrich Miescher Institute  
for Biomedical Research

Computational Neuroscience Initiative Basel presents:

# Christian Machens

 | Champalimaud Centre for the Unknown

Seminar: Friday, November 16 | 13:00 - 14:00

## Robust coding with spiking neural networks

Workshop: Thursday, November 15 | 17:00 - 18:30

Free workshop in room 5.39, coffee and cookies provided, please register at [www.fmi.ch/CNIB](http://www.fmi.ch/CNIB)

## Spikes - and the headaches they have caused

**Thursday/Friday, November 15/16, 2018****Room 5.30**Friedrich Miescher Institute  
for Biomedical Research  
Maulbeerstrasse 66, Basel

Christian Machens, a physicist by training, is searching for a mathematical description of how neurons in the brain coordinate their activity in order to process incoming sensory information. He works closely with experimentalists and develops models for information processing in the brain, as well as new ways to visualize how neurons simultaneously represent sensory information and decisions. Please join us for an exciting talk and workshop about what spikes can tell us.

