

# Symposium Advanced neuromorphic computing hardware: Towards efficient machine learning (SYNC)

jointly organised by  
the Semiconductor Physics Division (HL),  
the Thin Films Division (DS), the Dynamics and Statistical Physics Division (DY), and  
Physics of Socio-economic Systems Division (SOE)

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## Overview of Invited Talks and Sessions

(Lecture hall Audimax 1)

### Invited Talks

SYNC 1.1	Wed	10:00–10:30	Audimax 1	<b>Equilibrium Propagation: a Road for Physics-Based Learning</b> — •DAMIEN QUERLIOZ
SYNC 1.2	Wed	10:30–11:00	Audimax 1	<b>Machine Learning and Neuromorphic Computing: Why Physics and Complex Systems are Indispensable</b> — •INGO FISCHER
SYNC 1.3	Wed	11:00–11:30	Audimax 1	<b>Photonic Tensor Core Processor and Photonic Memristor for Machine Intelligence</b> — •VOLKER SORGER
SYNC 1.4	Wed	11:45–12:15	Audimax 1	<b>Material learning with disordered dopant networks</b> — •WILFRED VAN DER WIEL
SYNC 1.5	Wed	12:15–12:45	Audimax 1	<b>In-memory computing with non-volatile analog devices for machine learning applications</b> — •JOHN PAUL STRACHAN

### Sessions

SYNC 1.1–1.5	Wed	10:00–12:45	Audimax 1	<b>Symposium: Advanced neuromorphic computing hardware: Towards efficient machine learning</b>
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