



Symposium on the Physics of Information in Matter

November 2nd, 2022

Lectures: AMOLF canteen, 2nd floor

Registration, breaks, lunch, and poster session: hall downstairs

Wifi: amolfguest / pw: AmolfGuest

Program

09:15-09:45 Arrival

Session 1: chair: Said Rodriguez

09:45-10:00 Welcome

10:00-10:30 **Patty Stabile** (TU/e) - *InP Photonic Integrated Neural Networks*

10:30-11:00 **Corentin Coulais** (UvA) - *Reinventing the wheel*

Coffee break

Session 2: chair: Jorik van de Groep

11:20-11:50 **Hans Hilgenkamp** (UTwente) - *Routes for storing and processing information in matter, towards more energy-efficient information technologies*

11:50-12:20 **Marc Serra Garcia** (AMOLF) - *Nanomechanics as an emergent platform for information technologies*

Lunch and posters

Session 3: chair: Tom Shimizu

13:00-13:30 **Elisabetta Chicca** (RUG) - *Spike-based local synaptic plasticity models and BEOL compatible memristive devices*

13:30-14:20 Posters & hot topic breakout sessions

Subject

Can materials learn?

Embedded computing

Limits to information transmission

Moderator

Beatriz Noheda (RUG)

Yoeri van de Burgt (TU/e)

Pieter Rein ten Wolde (AMOLF)

Tea break

Session 4: chair: Marianne Bauer

14:40-15:10 **Eliška Greplová** (TU Delft) - *Multiverse of Engineered Quantum Topology*

15:10-15:40 **Greg Stephens** (VU) - *From partial observations to long timescales through maximally predictive states*

Tea break

Session 5: chair: Martin van Hecke

16:00-16:45 **Arvind Murugan** (UChicago) - *Learning without neurons*

Drinks and posters