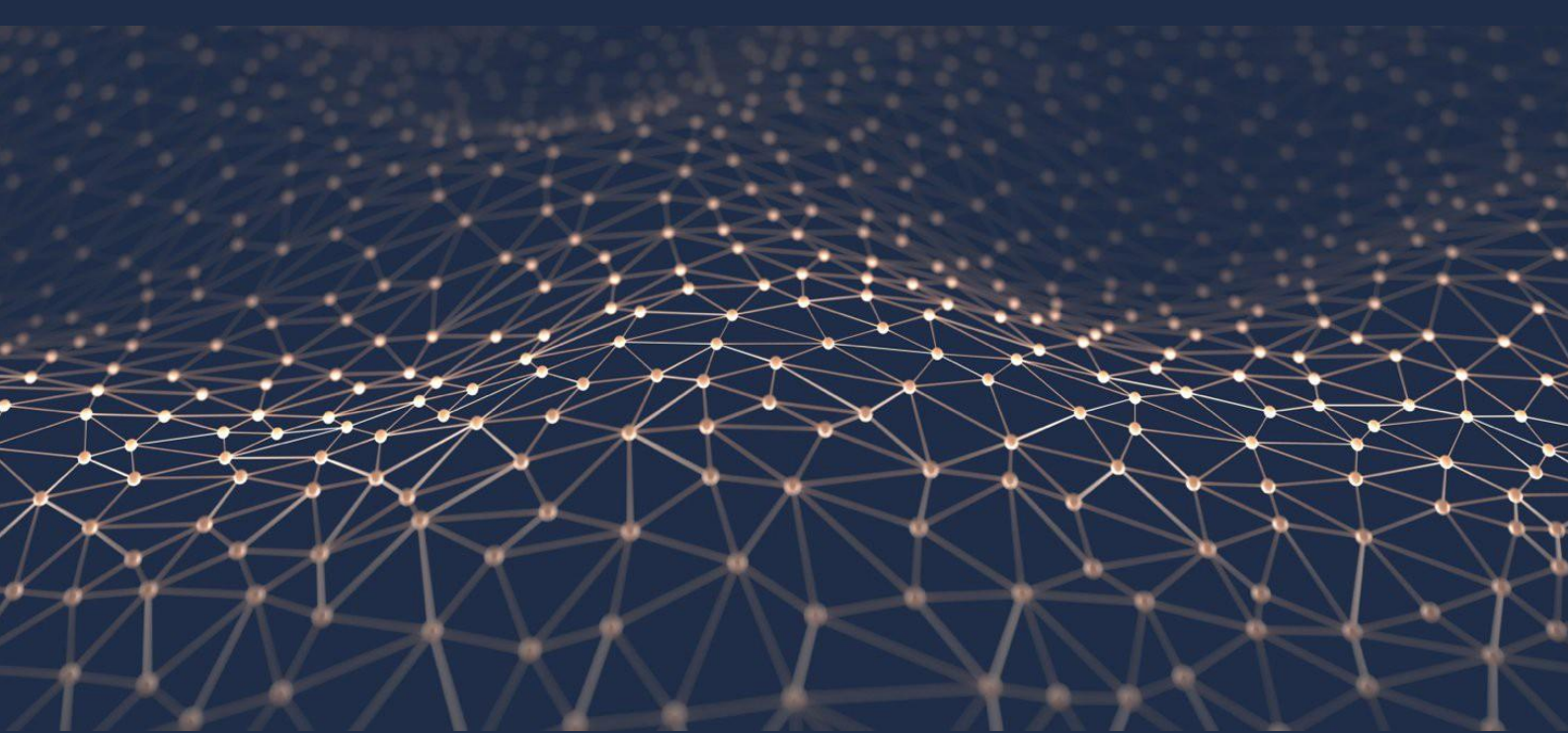


NEUROMORPHIC MAGNONICS WORKSHOP

APRIL 24TH – 26TH, 2024

PARIS



PROGRAM

WEDNESDAY, APRIL 24TH

- 2 :00 pm Welcome speach
- 2 :30 pm **Tutorial – Flavio Abreu Araujo**
Neuromorphic spintronics and its magnonic wink
- 3:15 pm **Tutorial – Adam Papp**
Introduction to SpinTorch
- 4:00 pm Coffee Break
- 4:30 pm **Invited talk – Kilian Stenning**
Neuromorphic Overparameterisation: Generalisation and Few-Shot Learning in Multilayer Physical Neural Networks of Nanomagnetic Arrays
- 5:15 pm **Tutorial – Giovanni Finocchio**
Tutorial on computing
- 6:00 pm End of Day 1
- 7:30 pm **Workshop dinner**
On the Seine River

THURSDAY, APRIL 25TH

- 9:00 am **Animator – Paolo Bortolotti**
- 9:15 am **Philipp Pirro**
Presentation of European Project CoSPiN
- 9:45 am **Sebastiaan van Dijken**
Presentation of European Project MANNGA
- 10:15 am Coffee Break
- 10:45 am **Helmut Schultheiss**
Presentation of European Project NIMFEIA
- 11:15 am **Madjid Anane**
Presentation of European Project k-NET
- 11:45 am **Florin Ciubotaru**
Presentation of European Project SPIDER
- 12:15 Lunch break
- 1:45 pm **1h30 Round table**
- 3:15 pm **Invited talk – Mikhail Kostylev**
- 3:45 pm Coffee Break
- 4:15 pm **Invited talk – Joo Von Kim**
Multimode parametric excitations for nonlinear magnonic computing
- 4:45 pm **Gabriel Soares**
Mutual inhibition between parametrically excited spin wave modes
- 5:05 pm **Anton Lutsenko**
Magnonic Fabry-Pérot resonators as programmable phase shifters and energy concentrators
- 5:25 pm **Poster Session**
- 7:00 pm End of Day 2

FRIDAY, APRIL 26TH

- 9:00 am **Invited talk – Dedalo Sanz Hernandez**
Spintronic Radio-Frequency Neural Networks
- 9:30 am **Kevin Fripp**
Nanoscale chiral magnonic resonators as two-dimensional spin-wave scatterers for neuromorphic computing applications
- 9:50 am **Salvatore Perna**
Bistability of P-modes and Chaos in FMR in BiYIG nanodisks
- 10:10 am **Abbas Koujok**
Hybrid magnonic-oscillator system: towards the development of hybrid artificial network structures
- 10:25 am Coffee Break
- 10:55 am **Jamal Berakdar**
PT-symmetry assisted logic operations
- 11:15 am **Invited talk – Christopher Heins**
Floquet Magnons in a Periodically-Driven Magnetic Vortex
- 11:45 am **Tobias Farchy**
Training Neuromorphic Computing Devices for Time Series and Digit Recognition using Non-Linear Spin Wave Interference
- 12:05 Lunch break**
- 1:30 pm **Thibaut Devolder**
- 1:45 pm **Abbas Hamadeh**
Dynamical diversity of magnetization dynamics in interacting systems through tunable coupling strength
- 2:00 pm **Maryam Massouras**
Noncommutativity of Parametric Excitations in YIG disks: a promising playground for magnonic-based computing
- 2:15 pm **Maria Cocconcelli**
Reconfiguring Magnonic Devices with Magnetic MEMS
- 2:30 pm **Andrey Shytov**
Analytical modelling of magnonic resonators and their application for neuromorphic computing
- 2:45 pm **Hugo Merbouche**
Non-degenerate parametric excitation in YIG nanostructures for k-space neuromorphic computing

Around 3 pm – End of Day 3 and end of the workshop