### Speakers

#### Pr. Patrick Gallinari

SCAI/ ISIR Sorbonne Université



From basic learning techniques to the various theories of information representation in field physics

### Ass. Pr. Jean-Christophe Loiseau

DynFluid Lab Arts & Métiers Paris Tech



System identification / operator learning

Pr. George E. Karniadakis

Assoc. Pr. Khemraj Shukla





**Brown University** 

Physics-Informed Neural Networks (PINN) & PIKAN & Neural Operators

#### Pr. Patrick Gallinari

SCAI/ ISIR Sorbonne Université



Generalization in physics-based deep learning

Pr. Claire Boyer

Université Paris Saclay



A primer on physics-informed machine learning: from PINNs to kernel methods

## Dr. Christophe Millet CEA & ENS Paris Saclay

Elodie Noëlé DGA & CEA



From Graph Neural Networks to learning dynamic graphs

# Pr. Ronan Fablet IMT Atlantique



End-to-end neural data assimilation: application to ocean dynamics

### Dr. Boris Bonev Nvidia



A principled approach to probabilistic machine-learning weather forecast at scale

Pr. Bruno Raffin INRIA

Dr. Alejandro Ribes





On-line training of Deep Surrogates models

### Dr. Alena Shilova INRIA



SciML perspective on solving control problems

### Abbas Kabalan Raphaël Carpintero Perez



Safran Tech



Some industrialized approaches in physics-based machine learning

## Pr. Siddartha Mishra ETH Zurich



Foundation models for PDE