

# Detailed Program of the Parallel Sessions

Note: Each talk will last ~20 minutes + ~5 minutes of questions

MONDAY, March 2										
Rooms	Amphi Cauchy		B 102		B 103		B 202		B 203	
4:00 PM — 4:30 PM	1	PDEs for geophysical problems: modelling, analysis, numerics	2	Risks and extreme events in environment and energy	3	Analysis of nonlinear/nonlocal systems of coupled PDEs	4	Stochastic processes and particle systems I	5	Combinatorial optimization
	1.1	<b>Emile Deléage</b> : <i>Mathematical analysis of an ocean-atmosphere coupling model</i>	2.1	<b>Antoine Franchini</b> : <i>Adaptive confidence intervals for extreme quantiles from heavy-tailed distribution</i>	3.1	<b>Luce Breuil</b> : <i>2-phase model of ageing : Stability analysis of coupled non-linear partial differential equations with age structure</i>	4.1	<b>François Escolan</b> : <i>Uniform-in-N convergence and chaoticity of particle systems under empirical moment constraints</i>	5.1	<b>Camille Richer</b> : <i>On the Computational Complexity of Covering Multi-Interface Networks</i>
	4:30 PM — 5:00 PM	1.2	<b>Sacha Cardonna</b> : <i>Modeling and numerical simulation of floating structures in shallow-water flows</i>	2.2	<b>Laurie Leterrier</b> : <i>Modélisation des températures extrêmes à la surface de la Terre fondée sur la physique du climat</i>	3.2	<b>Charles Elbar</b> : <i>Système à diffusion croisée avec potentiels externes différents et diffusion rapide</i>	4.2	<b>Nicoleta Cazacu</b> : <i>From Microscopic to Macroscopic: Convergence of Particle Systems to Nonlinear Fokker-Planck PDEs</i>	5.2
5:00 PM — 5:30 PM	1.3	<b>Ibtissem Lannabi</b> : <i>A posteriori error estimators and adaptivity for CO2 sequestration</i>	2.3	<b>Marie Temple-Boyer</b> : <i>Reliable criterion for decision-making on critical systems</i>	3.3	<b>Maha Daoud</b> : <i>On a class of fractional elliptic reaction-diffusion systems</i>	4.3	<b>Théo Hérouard</b> : <i>Infinite dimensional Mean-field Belavkin equation: global well-posedness and derivation</i>	5.3	<b>Margot Boyer</b> : <i>Fast SDP certification of neural networks : towards large multi-class datasets</i>

TUESDAY, March 3										
Rooms	B 102		B 103		Amphi Cauchy		B 202		B 203	
9:00 AM — 9:30 AM	6	Structure-fluid interaction: modelling, analysis, numerics	7	Stochastic Optimization	8	Stabilization and Controlability of PDEs	9	Stochastic processes and particle systems II	10	Quantum
	6.1	<b>Martin Oen Paulsen</b> : <i>On the Fritz John problem for a freely floating object</i>	7.1	<b>Lucas Ketels</b> : <i>Bias-Optimal Bounds for SGD: A Computer-Aided Lyapunov Analysis</i>	8.1	<b>Yubo Bai</b> : <i>Lyapunov functions and stability of linear two-dimensional hyperbolic systems</i>	9.1	<b>Sébastien Baudalet</b> : <i>Quantitative convergence of observables for stochastic coalescence with a singular kernel</i>	10.1	<b>Jui Ting Lu</b> : <i>Quantum Approaches to Path Exploration in De Novo Genome Assembly</i>
	9:30 AM — 10:00 AM	6.2	<b>Jessie Levillain</b> : <i>Micro-filament modeling and convergence of an N-link model</i>	7.2	<b>Julien Weibel</b> : <i>Optimized projection-free algorithms for online learning: construction and worst-case analysis</i>	8.2	<b>Vincent Boulard</b> : <i>Geometric observability estimates for abstract heat equations</i>	9.2	<b>Hetranso Ahni</b> : <i>On a stochastic Cucker-Smale model of interacting particles with friction and confining potential</i>	10.2
10:00 AM — 10:30 AM	6.3	<b>Mayssam Mohamad</b> : <i>Energy-Preserving Finite Volume Discretizations for a Thermo-Hydro-Mechanical Model</i>	7.3	<b>Nassim En-Nebbazi</b> : <i>Error Analysis for Stochastic Optimization Schemes</i>	8.3	<b>Bettina Kazandjian</b> : <i>Small-time controllability of Liouville transport equation along a Hamiltonian field</i>	9.3	<b>Thomas Le Guerch</b> : <i>Skew and reflected dynamics appearing as the scaling limit of discrete systems</i>	10.3	<b>Ewen Lallinec</b> : <i>High-order method for Brillouin zone integration</i>

Rooms	B 102		B 103		B 202		B 203		Amphi Cauchy	
11:00 AM — 11:30 AM	11	PDEs for fluid dynamics	12	Geometric Learning	13	Analysis of nonlinear PDEs	14	Stochastic processes and particle systems III	15	Optimal control and numerical methods
	11.1	<b>Théo Fradin</b> : <i>Well-posedness of the stratified Euler equations</i>	12.1	<b>Eliot Tron</b> : <i>The geometry of neural networks: a Riemannian foliation perspective on robustness.</i>	13.1	<b>Loth Damagui Chabi</b> : <i>Classification of entire and ancient solutions of the diffusive Hamilton-Jacobi equation</i>	14.1	<b>Mateo Deangeli Bravo</b> : <i>Modelling horizontal gene transfer : scaling-limit and ancestral lineage</i>	15.1	<b>Yunus Lesport</b> : <i>Stabilization of Semi-Discrete PDEs by Means of Discontinuous Feedback Laws</i>
	11:30 AM — 12:00 AM	11.2	<b>Philippe Anjolras</b> : <i>Path-connectedness for the incompressible Euler equations</i>	12.2	<b>Bastien Cavarretta</b> : <i>Complexity guarantees and polling strategies for Riemannian direct-search methods</i>	13.2	<b>Matthieu Cadiot</b> : <i>Computer-Assisted Proofs for PDEs on unbonded domains</i>	14.2	<b>Aurélien Velleret</b> : <i>Metastability between the clicks of the Muller ratchet</i>	15.2
12:00 AM — 12:30 AM	11.3	<b>Sagbo Mélain Zinsou</b> : <i>On the analysis and numerical solving of a fluid-structure toy problem</i>	12.3	<b>Agustin Somacal</b> : <i>Natural gradient descent with momentum for physics informed learning</i>	13.3	<b>Anouar Jeddi</b> : <i>Convergence of individual-based models in population dynamics to Hamilton-Jacobi equations</i>	14.3		15.3	<b>Riccardo Daluiso</b> : <i>Control of Collision Orbits</i>

Rooms	B 102		Amphi Cauchy		B 103		B 202		B 203	
4:00 PM — 4:30 PM	16	Control in population dynamics	17	Scientific Machine learning for PDEs	18	Numerical analysis for PDE	19	Optimal control and Wasserstein spaces		
	16.1	<b>Manon De La Tousse</b> : <i>Optimal spatial control strategies for pest/vector elimination by the Sterile Insect Technique in n-patch systems.</i>	17.1	<b>Chih-Kang Huang</b> : <i>Deep Ritz Neural Operators for Phase-field models via energy splitting</i>	18.1	<b>Pierre Anguill</b> : <i>An asymptotic preserving method for the linear transport equation on general meshes</i>	19.1	<b>Martin Morange</b> : <i>The Mortensen observer on the space of probability measures</i>		
	4:30 PM — 5:00 PM	16.2	<b>Gaspard Abel</b> : <i>Reducing Recurrent Competitive Epidemics via Dynamic Resource Allocation</i>	17.2	<b>Nour Hachem</b> : <i>Mathematical and numerical analysis of the robustness of Data-Driven Identification method</i>	18.2	<b>Audrey Gossard</b> : <i>Singular Expansions at Dirichlet-Neumann Junctions for Efficient Computation</i>	19.2	<b>Ernesto Treumun</b> : <i>State-Constrained Optimal Control on Wasserstein Spaces of Riemannian Manifolds</i>	
5:00 PM — 5:30 PM	16.3	<b>David Nahmani</b> : <i>Optimal Dirac controls for time-periodic bistable ODEs, application to population replacement</i>	17.3	<b>Alexandre Pasco</b> : <i>Random sketching of operators and application to learning preconditioners for model order reduction</i>	18.3	<b>Jules Berry</b> : <i>A nonsmooth extension of the Brezzi-Rappaz-Raviart approximation theorem via metric regularity techniques</i>	19.3	<b>Gauthier Thurin</b> : <i>Sliced transport maps</i>		

WEDNESDAY, March 4										
Rooms	B 102		B 103		Amphi Cauchy		B 202		B 203	
9:00 AM — 9:30 AM	20	Modeling human body	21	Probabilistic numerics	22	PDES: Waves and oscillations in complex media	23	Low-rank approximation and tensors		
	20.1	<b>Mabrouk Ben Jaba</b> : <i>The human lung: an impossible-to-model organ?</i>	21.1	<b>Mélodie Monod</b> : <i>NeuralSurv: Deep Survival Analysis with Bayesian Uncertainty Quantification</i>	22.1	<b>Gabriel Claret</b> : <i>Optimisation for the intrinsic impedance scattering problem on extension domains</i>	23.1	<b>Enrica Barrilli</b> : <i>Generalized Additive Decompositions of Symmetric Tensors</i>		
	9:30 AM — 10:00 AM	20.2	<b>Naoufel Cresson</b> : <i>A modeling perspective on retinal degeneration</i>	21.2	<b>Shiva Darshan</b> : <i>Using couplings to analyze and improve Monte Carlo methods</i>	22.2	<b>Yann Bouchereau</b> : <i>Numerical approaches for the long-time simulation of the wave equation in heterogeneous media</i>	23.2	<b>Charles Miranda</b> : <i>Approximation and learning with compositional tensor trains</i>	
10:00 AM — 10:30 AM	20.3	<b>Virginia Bolelli</b> : <i>A mathematical model for cyclic-sequential brain activity: a neural-field approach to heteroclinic dynamics</i>	21.3	<b>Nicolas Corvol</b> : <i>Solving the Car Dealer Replenishment Problem with Combinatorial-Optimization Augmented Machine Learning</i>	22.3	<b>Antonin Chodron de Courcel</b> : <i>Transport and diffusion in saturated media</i>	23.3	<b>Anas El Hachimi</b> : <i>Low-Rank Regularized Convex-Non-Convex Problems for Image Segmentation or Completion</i>		