



UNIVERSITÉ DE LILLE

# Asymptotic behaviors of systems of PDEs arising in physics and biology - 6th edition -

June 29 – July 3, 2026

# Asymptotic Behavior of systems of PDE arising in physics and biology: theoretical and numerical points of view

6th edition

June 29<sup>th</sup>-July 3<sup>rd</sup> 2026 – Lille



Asymptotic Behavior of systems of PDE arising in physics and  
biology: theoretical and numerical points of view  
6<sup>th</sup> edition

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Département de Chimie - Lille

**Monday**

📍 Amphithéâtre 006, C15 Building

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- 13:30 Welcome (C15 Building main hall)
- 14:30 **Endre Süli**  
*Navier–Stokes–Fokker–Planck Systems: Existence and Equilibration of Global Weak Solutions*
- 15:30 **Tino Laidin**  
*Kinetic modeling of congestion constraints: application to bacterial collective dynamics*
- 16:00 Coffee break (Salle 007, C15 Building)
- 16:30 "Ice breaker" poster session (Amphithéâtre 006, C15 Building)



- 09:30     **José A. Cañizo**  
*Self-similar behaviour of linear kinetic equations*
- 10:30     **Bérénice Grec**  
*Kinetic and fluid equations with stiff potentials confining to a domain*
- 11:00     Coffee break (Salle 007, C15 Building)
- 11:30     **Tooryanand Seetohul**  
*Landau damping around inhomogeneous stationary states of the Vlasov-HMF model*
- 12:00     **Niccolò Tassi**  
*Asymptotic behaviour and uniform-in-time approximation of nonlocal Fokker-Planck equations*
- 12:30     Lunch (Restaurant universitaire Barrois)
- 14:00     **Katharina Hopf**  
*Convergence of a finite-volume scheme for rank-deficient cross-diffusion systems via Young measure solutions*
- 15:00     **Raksha Devi**  
*Implicit-time Discontinuous Galerkin method for 1D blood flow model embedded in 3D*
- 15:30     Coffee break (Salle 007, C15 Building)
- 16:00     **Laura Kanzler**  
*Quantitative Fluid Approximation for Heavy Tailed Kinetic Equations*
- 17:00     **Sebastian Thom**  
*Mean-field limit for interacting particles on adaptive networks*



- 09:30     **Joackim Bernier**  
*Almost periodic solutions to nonlinear Schrödinger equations*
- 10:30     **Robin Roussel**  
*Energy minimization for rotating Bose–Einstein condensates using a finite volume scheme*
- 11:00     Coffee break (Salle 007, C15 Building)
- 11:30     **Nikita Simonov**  
*The Logarithmic Sobolev Inequality: Stability, Instability, and Improved Convergence Rates for the Ornstein–Uhlenbeck Flow*
- 12:00     **Théo Fradin**  
*The stratified Euler equation in the sharp stratification limit*
- 12:30     Lunch (Restaurant universitaire Barrois)
- 14:00     Free afternoon
- 19:30     Conference dinner (Restaurant "Le Couvent des Minimes")



- 09:30     **André Schlichting**  
*Gradient flow structure of the DLSS equation via diffusive transport and its structure-preserving discretization*
- 10:30     **Artur Stephan**  
*Derivation of the fourth order DLSS equation with nonlinear mobility via chemical reactions*
- 11:00     Coffee break (Salle 007, C15 Building)
- 11:30     **Tommaso Tenna**  
*From the multi-species Boltzmann equation to an isentropic two-phase flow model*
- 12:00     **Cyrian Marczewski**  
*On a posteriori error analysis over star-shaped elements*
- 12:30     Lunch (Restaurant universitaire Barrois)
- 14:00     **Nicolas Seguin**  
*Thermodynamically coherent models for three-phase transition*
- 15:00     **Emile Deléage**  
*Mathematical analysis of an ocean-atmosphere coupling model*
- 15:30     Coffee break (Salle 007, C15 Building)
- 16:00     **Jessica Guerand**  
*Gehring-Type Lemma for Kinetic and Ultraparabolic Equations*
- 17:00     **Mohamed Lazhar Tayeb**  
*Relative Entropy and Hilbert Expansion Methods in Asymptotic Limits of Kinetic-Field Systems*



- 09:30 **Ankur Ankur**  
*Virtual Element Scheme for a Fourth-Order Poisson-Nernst-Planck-Navier-Stokes System: Mass-Conservative and Non-Conservative Schemes*
- 10:00 **Tuan Tung Nguyen**  
*Qualitative Behavior of Three-Species Drift-Diffusion Equations for Memristors*
- 10:30 **Sara Xhahysa**  
*Multiphase cross-diffusion models for tissue structures*
- 11:00 Coffee break (Salle 007, C15 Building)
- 11:30 **Marie-Hélène Vignal**  
*Asymptotic-Preserving Schemes*



## Poster session

📍 Salle 007, C15 Building  
🕒 Monday 29<sup>th</sup>, 16:30-18:30

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### Alejandro Barea Moreno

*Does Speed Matter? Investigating the Role of Cell Speed Heterogeneity in Collective Migration*

### Hizia Bounadja

*On decay rate of a Timoshenko System with Dual-Phase-Lag Thermoelasticity in unbounded domains*

### Abdoul Aziz Diallo

*Periodic solution computation for spatio-temporal conservative systems: Application to the 1D Mckean-Vlasov model*

### Nourelhouda Khedhiri

*A strong approximation in  $L^2$  for the solutions of the Maxwell system with highly oscillating periodic coefficients*

### Simon Loin

*A kinetic model of quorum sensing*

### Flora Philipp

*Chemotaxis Compressible Navier–Stokes Equations Modeling Vascular Network Formation*

### Sebastian Tapia Mandiola

*Numerical simulations of a quasilinear Gross-Pitaevskii equation with vanishing and non-vanishing conditions at infinity*

### Giacomo Vizzari

*Energy scaling for von Kármán elastic plates with positional constraints*

### Giscard Leonel Zouakeu Wouadji

*Analysis of multiphase flows models*

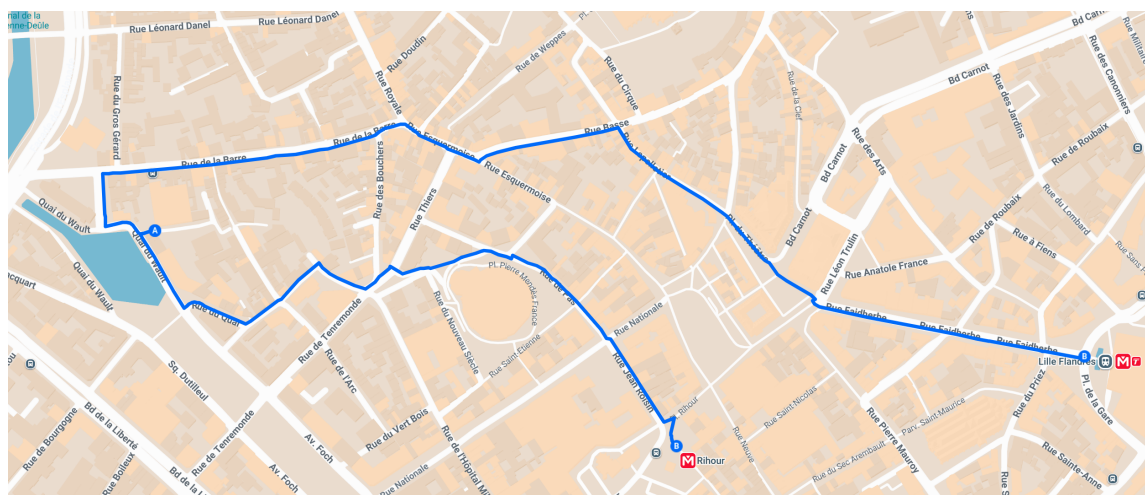




# How to come to the restaurant "Couvent des Minimes"

From Lille railway stations: take Line 1 subway and stop at station *Gare Lille Flandres* or *Rihour*.

The restaurant is located on Quai du Wault.



# How to access to work rooms in C15 Building

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Two work rooms have been booked in C15 Building for the ABPDE participants who need some time and place for working. These rooms (007 and 008) are located close to Amphithéâtre 006.

- Room 007 (coffee breaks, poster session)
- Amphithéâtre 006 (talks)
- Rooms 007 and 008

