

NUMKIN 2016

Monday 17th to Friday 21st October

Monday/11h-11h15/ **Welcome**

11h15-12h05/ **Natalia Tronko**

Verification of Gyrokinetic codes : from theory to numerical implementations.

14h-15h/ **Alberto Bottino**

*Monte-Carlo finite elements gyrokinetic simulations of Alfvén modes in tokamaks.
Verification of GK codes on linear collisionless dynamics of axisymmetric modes in tokamaks : Current status of verification on GAMs.*

15h-16h/ **Francesco Palermo**

New damping mechanism of geodesic acoustic modes investigated by global gyrokinetic simulations.

16h-16h30/ **Coffee break**

16h30-17h/ **Timo Kiviniemi**

Implicit solvers in full-f gyrokinetic particle-in-cell simulation and extension to SOL.

17h-17h30/ **Aaron Scheinberg**

Benchmarking linear global simulations in ORB5 and GENE.

17h30-18h/ **James Martin-Collar**

To be announced.

Tuesday/8h30–9h20/ **Nicolas Crouseilles**

Uniformly accurate particle-in-cell method for the long time behavior of the 2d Vlasov-Poisson equation with strong magnetic field.

9h20–10h10/ **Mohammed Lemou**

Averaging and simulating highly-oscillatory transport equations with varying frequency.

10h10–10h40/ **Coffee break**

10h40–11h30/ **Martin Campos Pinto**

From particle methods to hybrid semi-lagrangian schemes.

13h30–15h30/ **Working groups and coffee break**

15h30–16h10/ **Tao Xiong**

On the asymptotic limit of the Vlasov-Maxwell system with a strong magnetic field.

16h10–16h50/ **Sever Hirstoaga**

Sequential performance and parallelization of a Particle-in-Cell Code.

16h50–17h/ **Short break**

17h–17h50/ **Mihai Bostan**

Multi-scale analysis for transport equations and applications.

17h50–18h20/ **Thao Ha**

Towards the heterogeneous multiscale method for simulation of the trajectory of the particle submitted to non-uniform electric field and strong magnetic field in 2D-2V.

Wednesday/8h30–9h10/ **Bruno Després**

New weak formulations for resonant Maxwell's equations and first numerical results.

9h10–9h50/ **Benjamin Graille**

To be announced.

9h50–10h15/ **David Coulette**

Implicit kinetic schemes.

10h15–10h45/ **Coffee break**

10h45–11h30/ **Paul Dellar**

To be announced.

afternoon/ **Free or working groups**

Thursday/8h30–9h20/ **Mehdi Badsì**

Bi-kinetic modeling of the stationary plasma wall transition with a parallel to the wall magnetic field.

9h20–9h45/ **Nhung Pham**

Numerical methods for the reduced Vlasov equation.

9h45–10h10/ **Erwan Deriaz**

Adaptive simulation of Vlasov equations in arbitrary dimension using interpolatory hierarchical bases.

10h10–10h40/ **Coffee break**

10h40–11h30/ **François Dubois**

Recovering the full Navier Stokes equations with lattice Boltzmann schemes.

13h30–14h/ **Charles Ehlacher**

Linear instabilities with kinetic electrons in global, full-f simulations.

14h–14h30/ **Yuuichi Asahi**

Benchmarking of global full-f gyrokinetic codes.

14h30–15h/ **Nicolas Bouzat**

Targeting Realistic Geometry in Tokamak code Gysela.

15h–15h50/ **Guillaume Latu**

Numerical methods and optimizations that enhance semi-lagrangian gyrokinetic calculations.

Thursday/15h50-16h20/ **Coffee break**

16h20-17h10/ **Yaman Güçlü**

Screw-pinch simulations in Selalib : from reduced drift-kinetics to gyro-kinetics.

17h10-18h/ **Katharina Kormann**

Massively parallel semi-Lagrangian solution of the 6d Vlasov-Poisson problem.

Friday: Selalib day

Friday/8h30-10h/ **Yaman Güçlü & Julien Bigot**

Inputs/Outputs strategies

Friday/10h-10h30/ **Coffee break**

Friday/8h30-10h/ **Pierre Navaro & Katharina Kormann**

Publication