1 Publication list

1. **Hybrid Multiscale Methods I. Hyperbolic Relaxation Problems**. G. Dimarco, L. Pareschi, Communications in Mathematical Sciences, Vol 4, No. 1, pp.155-177, (2006).

2. **Hybrid Multiscale Methods II. Kinetic Equations.** G. Dimarco, L. Pareschi. SIAM Multiscale Modeling and Simulation Vol 6., No 4, pp. 1169-1197 (2007)

3. **A Moving Interface Method for Dynamic Kinetic-fluid Coupling**. P.Degond, G. Dimarco, L. Mieussens. Journal of Computational Physics Vol. 227, pp. 1176-1208, (2007).

4. **Domain Decomposition Techniques and Hybrid Multiscale Methods for Kinetic Equations**. G. Dimarco, L. Pareschi, Proceedings of the 11th International Conference on Hyperbolic problems: Theory, Numerics, Applications, pp. 457-464 (2007).

5. **A remark on the finite number of particles effect in Monte Carlo methods for kinetic equations**. G. Dimarco, P. Foscari, L. Pareschi. Proceedings of the 6th International Congress on Industrial and Applied Mathematics ICIAM07 Volume 7, Issue 1, pp. 1041003-1041004 (2007).

6. **Hybrid Simulation of Ion Acoustic Waves Including Coulomb Collisions**. R. Caflisch, G. Dimarco, Bruce Cohen, Andris Dimits, C.M. Wang, Yanghong Huang. 49th Annual Meeting of the Division of Plasma Physics, Novembre 12-16, 2007; Orlando, Florida, USA. Bulletin of the American Physical Society Vol 52, N 11.

7. **A Hybrid Monte Carlo Method for Coulomb Collisions**. R. Caflisch, G. Dimarco, Bruce Cohen, Andris Dimits, C.M. Wang, Yanghong Huang. 49th Annual Meeting of the Division of Plasma Physics, Novembre 12-16, 2007; Orlando, Florida, USA. Bulletin of the American Physical Society Vol 52, N 11.

8. **Simulation of sheath problems with an accelerated Monte Carlo method**. R. Caflisch, G. Dimarco, Bruce Cohen, Andris Dimits, C.M. Wang, Yanghong Huang, 49th Annual Meeting of the Division of Plasma Physics, Novembre 12-16, 2007; Orlando, Florida, USA. Bulletin of the American Physical Society Vol 52, N 11.

9. **Modeling and Numerical Methods for Multiscale Hyperbolic and Kinetic Equations**. G. Dimarco. Annali on line dell' Universitá di Ferrara Vol.I 2 (2007) (PhD thesis).

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11. **Modelli e Metodi Numerici per Equazioni Iperboliche e Cinetiche Multiscala**. G. Dimarco. Bollettino dell'Unione Matematica Italiana: La Matematica nella Società e nella cultura, Vol.2, pp. 235-238 (2009) .

12. **Fluid Solver Independent Hybrid Methods for Multiscale Kinetic equations**. G. Dimarco, L. Pareschi. SIAM Journal on Scientific Computing Vol. 32 issue 2, pp. 603-634 (2010).

13. **A Multiscale Kinetic-Fluid Solver With Dynamic Localization Of Kinetic Effects**. P. Degond, G. Dimarco, L. Mieussens. Journal of Computational Physics, Vol. 229, Issue 13, pp. 4907-4933 (2010).

14. **Direct simulation Monte Carlo schemes for Coulomb interactions in plasmas**. G. Dimarco, R. Caflisch, L. Pareschi. Communications in Applied and Industrial Mathematics, Vol. 1, Issue 1, pp. 72-91 (2010).

15. **Simulation of non equilibrium plasmas with a numerical noise reduced particle in cell method.** P. Degond, F. Deluzet, G. Dimarco, G. Gallice, P. Santagati and C. Tessieras. In Proceedings of the 27th International Symposium on Rarefied Gas Dynamics. Pacific Grove, California, AIP Conference Proceedings, Vol. 133, pp. 1112-1117 (2010).

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19. **Fluid simulations with localized Boltzmann upscaling by Direct Simulation Monte-Carlo**, Degond, P., Dimarco, G., Journal of Computational Physics, Volume 231, Issue 6, 20 (2012), 2414–2437.

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21. **The hybrid moment guided Monte Carlo method for the Boltzmann equation,** Dimarco, G., Kinetic and Related Models, Vol 6, pp. 291-315 (2013).

22. **Asymptotic preserving Implicit-Explicit Runge-Kutta methods for non linear kinetic equations**, Dimarco, G.; Pareschi, L., SIAM Journal of Numerical Analysis, Vol. 51, pp. 1064-1087 (2013) .

23. **Towards an ultra efficient kinetic scheme. Part I: basics on the BGK equation**, G. Dimarco, R. Loubere. Journal of Computational Physics, Vol. 255, pp. 680-698 (2013).

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27. **A smooth transition approach between the Vlasov-Poisson and the Euler-Poisson system**, G. Dimarco, L. Mieussens and V. Rispoli. Proceedings of the 21st International Conference on Domain Decomposition Methods. Domain Decomposition Methods in Science and Engineering XXI, Lecture Notes in Computational Science and Engineering 98, Springer-Verlag 2014.

28. **Numerical methods for kinetic equations.** G. Dimarco , L. Pareschi, to appear in Acta Numerica (2014).

29. **An asymptotic preserving automatic domain decomposition method for the Vlasov-Poisson-BGK system with applications to plasmas.** G. Dimarco, L. Mieussens and V. Rispoli, submitted to Journal of Computational Physics (2013).

30. **A multiscale fast semi-Lagrangian method for rarefied gas dynamics**, G. Dimarco, R. Loubere and V. Rispoli. Submitted (2014).