

BIBLIOGRAPHY OF ROBERT MILLS STRAIN III

1. PREPRINTS

- (31) Robert M. Strain & Keya Zhu.
The Vlasov-Poisson-Landau System in \mathbb{R}_x^3 , preprint, 50 pages, 2012.
(arXiv:1202.2471v1)
- (30) Hongjie Dong & Robert M. Strain.
On partial regularity of steady-state solutions to the 6D Navier-Stokes equations, *preprint, 18 pages, 2011.* (arXiv:1101.5580v1)
- (29) Robert M. Strain.
Around the Boltzmann equation without angular cut-off, 3 pages, submitted to *Oberwolfach Reports* (2010).
- (28) Robert M. Strain.
Optimal time decay of the non cut-off Boltzmann equation in the whole space, *preprint, 30 pages. 2010* (arXiv:1011.5561v1)

2. ACCEPTED

- (27) Philip T. Gressman, Joachim Krieger & Robert M. Strain.
A non-local inequality and global existence, *Advances in Math.*, 2012, *in press*, 6 pages. (arXiv:1202.4088v1) *doi:10.1016/j.aim.2012.02.017*
- (26) Robert M. Strain & Keya Zhu.
Large-Time Decay of the Soft Potential relativistic Boltzmann equation in \mathbb{R}_x^3 , *Kinetic and Related Models*, 2012, *in press*, 34 pages. (arXiv:1106.1579v1)
- (25) Seung-Yeal Ha, Eunhee Jeong & Robert M. Strain.
Uniform L^1 -stability of the relativistic Boltzmann equation near vacuum, *CPAA*, 2012, *in press*, 22 pages.
- (24) Joachim Krieger & Robert M. Strain.
Global solutions for a non-local diffusion equation with quadratic non-linearity, *Comm. P.D.E.*, 2011, *in press*, 38 pages. (arXiv:1012.2890v2) *doi:10.1080/03605302.2011.643437*
- (23) Yan Guo & Robert M. Strain.
Momentum Regularity and Stability of the Relativistic Vlasov-Maxwell-Boltzmann System, *Comm. Math. Phys.*, 2011, *in press*, 23 pages. (arXiv:1012.1158v2) *doi:10.1007/s00220-012-1417-z*

- (22) Renjun Duan & Robert M. Strain.
On the Full Dissipative Property of the Vlasov-Poisson-Boltzmann System,
HYP2010 Conference Proceedings., 8 pages. 2010, in press
- (21) Peter Constantin, Diego Córdoba, Francisco Gancedo & Robert M. Strain.
On the global existence for the Muskat problem, *J. Eur. Math. Soc.*, 31pp.,
2010, in press (arXiv:1007.3744)

3. REFEREED PUBLICATIONS

- (20) Renjun Duan & Robert M. Strain.
Optimal Large-Time Behavior of the Vlasov-Maxwell-Boltzmann System
in the Whole Space, *Commun. Pure Appl. Math.*, **64** (2011), no. 11,
1497–1546. (arXiv:1006.3605v2) doi:10.1002/cpa.20381
- (19) Philip T. Gressman & Robert M. Strain.
Sharp anisotropic estimates for the Boltzmann collision operator and its
entropy production, *Advances in Math.*, **227** (2011), no. 6, 2349–2384.
(arXiv:1007.1276v1) doi:10.1016/j.aim.2011.05.005
- (18) Jared Speck & Robert M. Strain.
Hilbert Expansion from the Boltzmann equation to Relativistic Fluids,
Comm. Math. Phys. **304** (2011), no. 1, 229–280. (arXiv:1009.5033)
doi:10.1007/s00220-011-1207-z
- (17) Philip T. Gressman & Robert M. Strain.
Global Classical solutions of the Boltzmann equation without angular cut-
off, *J. Amer. Math. Soc.*, **24** (2011), no. 3, 771–847.
doi: 10.1090/S0894-0347-2011-00697-8 (arXiv:1011.5441v1)
- (16) Robert M. Strain.
Coordinates in the relativistic Boltzmann theory, *Kinetic and Related Mod-
els*, **4** (2011), no. 1, 345–359, special issue. (arXiv:1011.5093v1) doi:
10.3934/krm.2011.4.345
- (15) Renjun Duan & Robert M. Strain.
Optimal Time Decay of the Vlasov-Poisson-Boltzmann System in \mathbb{R}^3 ,
Arch. Ration. Mech. Anal., **199** (2011), no. 1, 291–328. (arXiv:0912.1742v1)
doi: 10.1007/s00205-010-0318-6
- (14) Robert M. Strain.
Asymptotic Stability of the relativistic Boltzmann equation for Soft-Potentials,
Comm. Math. Phys., **300** (2010), no. 2, 529–597. (arXiv:1003.4893v1)
doi: 10.1007/s00220-010-1129-1

- (13) Robert M. Strain.
Global Newtonian limit for the Relativistic Boltzmann Equation near Vacuum, *SIAM J. Math. Anal.* **42** (2010), no. 4, 1568-1601 . (arXiv:1004.5407v1)
doi: 10.1137/090762695
- (12) Philip T. Gressman & Robert M. Strain.
Global Classical solutions of the Boltzmann equation with Long-Range interactions, *Proc. Nat. Acad. Sci. U. S. A.*, March 30, 2010; 107 (13), 5744-5749. *doi: 10.1073/pnas.1001185107*
- (11) Chiun-Chuan Chen, Robert M. Strain, Tai-Peng Tsai, & Horng-Tzer Yau.
Lower bounds on the blow-up rate of the axisymmetric Navier-Stokes equations II, *Comm. P.D.E.*, **34** (2009), no. 3, 203-232.
(arXiv:0709.4230v1). *doi: 10.1080/03605300902793956*
- (10) Chiun-Chuan Chen, Robert M. Strain, Tai-Peng Tsai, & Horng-Tzer Yau.
Lower bound on the blow-up rate of the axisymmetric Navier-Stokes equations, *Int. Math. Res. Not.*, (2008) Vol. 2008: article ID rnn016, 31 pages.
doi:10.1093/imrn/rnn016. (arXiv:math/0701796v1).
- (9) Robert M. Strain & Yan Guo.
Exponential Decay for Soft Potentials Near Maxwellian,
Arch. Ration. Mech. Anal., **187** (2008), no. 2, 287-339.
- (8) Clément Mouhot & Robert M. Strain.
Spectral gap and coercivity estimates for linearized Boltzmann collision operators without angular cutoff,
J. Math. Pures Appl., **87** (2007), no. 5, 515-535. (arXiv:math/0607495v2).
- (7) Robert M. Strain.
On the Linearized Balescu-Lenard Equation,
Comm. P.D.E., **32** (2007), no. 10, 1551-1586. (arXiv:math/0603490v2).
- (6) Robert M. Strain.
The Vlasov-Maxwell-Boltzmann System in the Whole Space,
Comm. Math. Phys., **268** (2006), no. 2, 543-567. (arXiv:math/0512002v3).
- (5) Robert M. Strain & Yan Guo.
Almost Exponential Decay Near Maxwellian,
Comm. P.D.E., **31** (2006), no. 3, 417-429.
- (4) Robert M. Strain & Yan Guo.
Stability of the Relativistic Maxwellian in a Collisional Plasma,
Comm. Math. Phys., **251** (2004), no. 2, 263-320.

4. ARTICLES IN PROCEEDINGS, ETC

- (3) Robert M. Strain.
Recent results on existence, uniqueness and asymptotic decay rates for collisional kinetic models, in *Oberwolfach Report No. 54/2006*, Classical and Quantum Mechanical Models of Many-Particle Systems, Organised by Anton Arnold (Münster), Carlo Cercignani (Milano), and Laurent Desvillettes (Cachan).
- (2) Brandy Benedict, Min Hung Cho, Jemal Emina Gishe, Rebecca Martel, Robert M. Strain, Brian Tate.
Energy consumption and interference in the BART system, *Industrial Mathematics Modeling Workshop*, Technical Report: CRSC-TR03-37, pp. 19-34, September, 2003.

5. DOCTORAL THESIS

- (1) Robert M. Strain.
An Energy Method in Collisional Kinetic Theory,
Ph.D. dissertation, Division of Applied Mathematics, Brown University, Providence, RI, May 2005.

Download Most of the above papers may be freely downloaded at the following internet address: <http://www.math.upenn.edu/~strain/>
The rest are available upon email request to the author.