

CURRICULUM VITAE, MATEI MACHEDON

1. EDUCATIONAL BACKGROUND

B.A./M.S., University of Chicago, 1982
Ph.D., Princeton University, 1986. Advisor: Charles Fefferman

2. EMPLOYMENT BACKGROUND

Prof., University of Maryland, 1998-
Assoc.Prof., University of Maryland, 1994-98
Member, Institute for Advanced Study, Princeton, NJ, 1994-95
Asst.Prof., Princeton University, 1988-94
C.L.E.Moore Instructor/NSF Postdoc, MIT, 1986-88

3. ARTICLES IN REFEREED JOURNALS

1. Estimates for the parametrix of the Kohn Laplacian on certain domains, *Invent. Math.* 91, 339-364 (1988)
2. Szego kernels on pseudoconvex domains with one degenerate eigenvalue, *Annals of Math*, 128, 619-640 (1988)
3. with C.L. Fefferman, J.J.Kohn, Holder estimates on CR manifolds with a diagonalizable Levi form, *Advances in Math*, 84, no.1, 1-90, (1990)
4. with S. Klainerman, Space-time estimates for null forms and the local existence theorem, *Comm. Pure Appl. Math*, vol XLVI, 1221-1268 (1993)
5. with S. Klainerman, On the Maxwell-Klein-Gordon equation with finite energy, *Duke Math Journal*, vol. 74, no. 1, 19-44, (1994)
6. with S. Klainerman, Finite energy solutions of the Yang-Mills equations in \mathbf{R}^{3+1} , *Annals of Math.* 142, 39-119 (1995)
7. with S. Klainerman, Smoothing estimates for null forms and applications, *Duke Math Journal*, 81, no 1, in celebration of John Nash, 99-133 (1996)
8. with S. Klainerman, with appendices by J. Bourgain and D. Tataru, Remark on the Strichartz inequality, *International Math Research Notices* no 5, 201-220 (1996).
9. with S. Klainerman, Estimates for null forms and the spaces $H_{s,\delta}$ *International Math Research Notices* no 17, 853-865 (1996).

10. with S. Klainerman, On the regularity properties of a model problem related to wave maps *Duke Math Journal*, vol. 87, no 3, 553-589, (1997)
11. with S. Klainerman, On the optimal local regularity for gauge field theories, *Differential and Integral Equations*, vol 10, no 6, 1997, pp 1019-1030
12. with S. Klainerman, On the algebraic properties of the $H_{n/2,1/2}$ spaces, *International Math Research Letters*, no 15, 1998 pp 765-774
13. with J. Sterbenz, Almost optimal local well-posedness for the 3+1 dimensional Maxwell-Klein-Gordon equations, *Journal of the AMS*, Vol. 17, no 2, (2004), pp 297-359
14. With S. Klainerman, On the uniqueness of solutions to the Gross-Pitaevskii hierarchy, *Communications in Mathematical Physics* 279, 169-185, (2008)
15. With M. Grillakis, D. Margetis, Second order corrections to mean field evolution of weakly interacting bosons, I, *Communications in Mathematical Physics*, 294, 273-301 (2010)
16. With M. Grillakis, D. Margetis, Second order corrections to mean field evolution of weakly interacting bosons, II, *Advances in Mathematics* Volume 228, Issue 3, (2011), p. 1788-1815
17. With M. Grillakis. Pair excitations and the mean field approximation of interacting bosons, I, *Communications in Mathematical Physics* 2013, 324, Issue 2, pp 601-636 (2013)
18. With M. Grillakis. Beyond mean field: on the role of pair excitations in the evolution of condensates, *Journal of Fixed Point Theory and Applications: Volume 14, Issue 1* (2014), 91-111 (Festschrift Volume in honor of Y. Choquet-Bruhat's 90th birthday)
19. With M. Grillakis, Pair excitations and the mean field approximation of interacting bosons, II, *Communications in PDE*, Vol 42, No 1, 24-67 (2017)
20. With M. Grillakis, Uniform in N estimates for a Bosonic system of Hartree-Fock-Bogoliubov type, *Communications in PDE*, Vol 44, No 12, 1431-1465 (2019)
21. With X. Du, Counterexamples to L^p collapsing estimates

4. FELLOWSHIPS, PRIZES, AND AWARDS

Paul R. Cohen (undergraduate) prize, University of Chicago, 1982
(shared with Chris Sogge)

Alfred P. Sloan Doctoral Dissertation Fellowship, 1985-86

NSF Postdoc. Fellowship, 1986-88

Alfred P. Sloan Fellowship, 1989-1991

Presidential Young Investigator, 1990-95

ICM speaker, Berlin, 1998

5. EDITORSHIPS

Associate Editor, Duke Math Journal 1992- 2000

6. PHD STUDENTS

Jacob Sterbenz (1999-2003),

Xuwen Chen (2008-2012) jointly with M. Grillakis

Elif Kuz (2012-2016) jointly with M. Grillakis

Jackie Chong (2015-19) jointly with M. Grillakis

Xin Dong (2017-) jointly with M. Grillakis