

Tobias Holck Colding: Publications

1. T.H. Colding and W.P. Minicozzi II, A dichotomy for minimal submanifolds, preprint.
2. T.H. Colding, F. Martín, and W.P. Minicozzi II, Minimal surfaces with rapid area growth, preprint.
3. T.H. Colding and W.P. Minicozzi II, Heat equations in analysis, geometry and probability, preprint.
4. T.H. Colding and W.P. Minicozzi II, Minimal submanifolds confined in space, preprint.
5. T.H. Colding and W.P. Minicozzi II, Liouville theorem for immersed minimal surfaces in any codimension, preprint.
6. T.H. Colding and W.P. Minicozzi II, Distance between minimal surfaces and flows, preprint.
7. T.H. Colding and W.P. Minicozzi II, Deficit functions and the log Sobolev inequality, *Journal of Functional Analysis*, 291 (2026), no. 12, Paper No. 111628.
8. T.H. Colding and W.P. Minicozzi II, *Foundations of analysis*, MIT Press, to appear.
9. T.H. Colding and W.P. Minicozzi II, Connections between geometry and PDE, in *Forward from the Fields Medal. Fields Institute Communications series*, Springer.
10. T.H. Colding and W.P. Minicozzi II, Quantitative uniqueness for mean curvature flow, *Journal of Mathematical Study*, Vol. 58, No. 4, 500-512 December 2025.
11. T.H. Colding and W.P. Minicozzi II, Gradient estimates for scalar curvature, preprint.
12. T.H. Colding and W.P. Minicozzi II, Singularities of Ricci flow and diffeomorphisms, *Publ. Math. Inst. Hautes Études Sci.* 142 (2025), 75-152.
13. T.H. Colding and W.P. Minicozzi II, Minimal submanifolds, *Encyclopedia of mathematical physics. Vol. 1. Condensed matter and statistical physics & classical and quantum gravity*, 402-417, Academic Press, Amsterdam, 2025.
14. T.H. Colding and W.P. Minicozzi II, A strong Frankel theorem for shrinkers, *Compositio Mathematica*, Volume 161, Issue 5, May 2025, 947-958.
15. T.H. Colding, Weak solutions in the sense of Calabi, in "The legacy of Eugenio Calabi (1923-2023)", *Notices of the AMS*, Volume 71, Number 11, 1502-1520, December 2024.

16. T.H. Colding and W.P. Minicozzi II, Eigenvalue lower bounds and splitting for modified Ricci flow, *Advanced Nonlinear Studies*, 24 (2024), no. 1, 178–188.
17. T.H. Colding and W.P. Minicozzi II, Propagation of symmetries for Ricci shrinkers, *Advanced Nonlinear Studies*, 23 (2023), no. 1, ans-2022–0071.
18. T.H. Colding and W.P. Minicozzi II, Jesse Douglas, *Biographical Memoirs of the National Academy of Sciences*,
https://www.nasonline.org/wp-content/uploads/2024/10/Douglas_Jesse.pdf.
19. T.H. Colding and W.P. Minicozzi II, Singularities and diffeomorphisms, *Notices of the International Consortium of Chinese Mathematicians*, Vol. 10, No. 1 (2022), 112–116.
20. T.H. Colding, Evolution of form and shape, *ICM–International Congress of Mathematicians. Vol. II. Plenary lectures*, 826–871, EMS Press, Berlin, [2023], 2023.
21. T.H. Colding and W.P. Minicozzi II, Parabolic frequency on manifolds, *Int. Math. Res. Not. IMRN* 2022, no. 15, 11878–11890.
22. T.H. Colding and W.P. Minicozzi II, In search of stable geometric structures, *Notices of the AMS*, Vol. 66, no. 11 (2019) 1785–1791.
23. T.H. Colding and W.P. Minicozzi II, Regularity of elliptic and parabolic systems, *Annales scientifiques de l’Ecole normale supérieure*, (4) 56 (2023), no. 6, 1883–1921.
24. T.H. Colding and W.P. Minicozzi II, Complexity of parabolic systems, *Publ. Math. Inst. Hautes Etudes Sci.* 132 (2020) 83–135.
25. T.H. Colding and W.P. Minicozzi II, Liouville properties, *ICCM Not.* 7 (2019), no. 1, 16–26.
26. T.H. Colding, D. Gabai, and D. Ketover, Geometric methods in Heegaard theory (with appendix by T.H. Colding and D. Gabai), *Surveys in Differential Geometry*, Vol. 25, No. 1 (2020), 33–70.
27. T.H. Colding and W.P. Minicozzi II, Optimal bounds for ancient caloric functions, *Duke Math. J.* 170 (2021), no. 18, 4171–4182.
28. T.H. Colding and W.P. Minicozzi II, Wandering singularities, *J. Differential Geom.*, 119 (2021) 403 – 420.
29. T.H. Colding and W.P. Minicozzi II, Dynamics of closed singularities, *Annales de l’Institut Fourier*, Tome 69 (2019) no. 7, 2973–3016.
30. T.H. Colding and W.P. Minicozzi II, Analytical properties for degenerate equations. *Geometric Analysis, In Honor of Gang Tian’s 60th Birthday*, Progress in Mathematics series by Birkhauser. Editors: Jingyi Chen, Peng Lu, Zhiqin Lu, and Zhou Zhang, Vol. 333, (2020) 57–70.

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35. T.H. Colding and W.P. Minicozzi II, Committee ranking, preprint.
36. T.H. Colding, D. Gabai and D. Ketover, On the classification of Heegaard splittings, *Duke Math. J.*, Vol. 167, No. 15 (2018) 2833–2856.
37. T.H. Colding and W.P. Minicozzi II, Differentiability of the arrival time, *Comm. Pure and Appl. Math*, Vol. LXIX, (2016) 2349–2363.
38. T.H. Colding and D. Gabai, Effective Finiteness of irreducible Heegaard splittings of non Haken 3-manifolds, *Duke Math. J.*, Vol. 167, No. 15 (2018) 2793–2832.
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40. T.H. Colding and W.P. Minicozzi II, Łojasiewicz inequalities and applications, *Surveys in Differential Geometry*, Vol. 19 Regularity and evolution of nonlinear equations Essays dedicated to Richard Hamilton, Leon Simon, and Karen Uhlenbeck, International Press (2015), 63–82.
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