

# List of Publications

Luan T. Hoang

March 6, 2024

48. Luan Hoang, *Asymptotic expansions with subordinate variables for solutions of the Navier–Stokes equations*, 1–40, submitted. Preprint  
DOI: 10.48550/arXiv.2403.03132
47. Luan Hoang, Michael S. Jolly, *Intrinsic expansions in large Grashof numbers for the steady states of the Navier–Stokes equations*, 1–25, submitted. Preprint  
DOI: 10.48550/arXiv.2402.13346
46. Luan Hoang, *A new form of asymptotic expansion for non-smooth differential equations with time-decaying forcing functions*, 1–39, submitted. Preprint  
DOI: 10.48550/arXiv.2309.10949
45. Luan Hoang, Thinh Kieu, *Anisotropic flows of Forchheimer-type in porous media and their steady states*, 1–35, submitted. Preprint  
DOI: 10.48550/arXiv.2306.05316
44. Luan Hoang, *On the finite time blow-ups for solutions of nonlinear differential equations*, 1–29, submitted. Preprint  
DOI: 10.48550/arXiv.2303.10153
43. Luan Hoang, *Behavior near the extinction time for systems of differential equations with sublinear dissipation terms*, 1–22, submitted. Preprint  
DOI: 10.48550/arXiv.2211.17241
42. Luan Hoang, *Asymptotic expansions about infinity for solutions of nonlinear differential equations with coherently decaying forcing functions*, *Annali della Scuola Normale Superiore di Pisa, Classe di Scienze*, Vol. XXV, No. 1 (2024), 311–370.  
DOI: 10.2422/2036-2145.202109\_004
41. Ciprian Foias, Luan Hoang, Michael S. Jolly, *On Galerkin approximations of the Navier–Stokes equations in the limit of large Grashof numbers*, *Communications on Pure and Applied Analysis*, Volume 23, Issue 2 (2024), 269–303.  
DOI: 10.3934/cpaa.2024010
40. Luan Hoang, *The Navier–Stokes equations with body forces decaying coherently in time*, *Journal of Mathematical Analysis and Applications*, Vol. 531, Issue 2, Part 1 (2024), 127863 (39 pages).  
DOI: 10.1016/j.jmaa.2023.127863
39. Luan Hoang, *Long-time behavior of solutions of superlinear systems of differential equations*, *Dynamical Systems*, Vol. 39, No. 1 (2024), 79–107.  
DOI: 10.1080/14689367.2023.2234845

38. Emine Celik, Luan Hoang, Thinh Kieu, *Studying a doubly nonlinear model of slightly compressible Forchheimer flows in rotating porous media*, Turkish Journal of Mathematics, Turkish Journal of Mathematics, Vol. 47, No. 3 (2023), 949–987.  
DOI: 10.55730/1300-0098.3405
37. Dat Cao, Luan Hoang, Thinh Kieu, *Infinite series asymptotic expansions for decaying solutions of dissipative differential equations with non-smooth nonlinearity*, Qualitative Theory of Dynamical Systems, Volume 20, Issue 3 (2021), 62, 38 pp.  
DOI: 10.1007/s12346-021-00502-9
36. Emine Celik, Luan Hoang, Thinh Kieu, *Slightly compressible Forchheimer flows in rotating porous media*, Journal of Mathematical Physics, Volume 62 (2021), Issue 7, 073101, 39 pp.  
DOI: 10.1063/5.0047754
35. Dat Cao, Luan Hoang, *Asymptotic expansions with exponential, power, and logarithmic functions for non-autonomous nonlinear differential equations*, Journal of Evolution Equations, Volume 21, Issue 2, 1179–1225, 2021.  
DOI: 10.1007/s00028-020-00622-w
34. Luan Hoang, *Asymptotic expansions for the Lagrangian trajectories from solutions of the Navier–Stokes equations*, Communications in Mathematical Physics, Volume 383, Issue 2, 981–995 (2021).  
DOI: 10.1007/s00220-020-03863-5
33. Luan Hoang, Edriss Titi, *Asymptotic expansions in time for rotating incompressible viscous fluids*, Annales de l’Institut Henri Poincaré. Analyse Non Linéaire, Volume 38, Issue 1, January–February 2021, 109–137.  
DOI: 10.1016/j.anihpc.2020.06.005
32. Dat Cao, Luan Hoang, *Asymptotic expansions in a general system of decaying functions for solutions of the Navier–Stokes equations*, Annali di Matematica Pura ed Applicata, Vol. 199, No. 3 (2020), 1023–1072.  
DOI: 10.1007/s10231-019-00911-3
31. Dat Cao, Luan Hoang, *Long-time asymptotic expansions for Navier–Stokes equations with power-decaying forces*, Proceedings of the Royal Society of Edinburgh: Section A Mathematics, Vol. 150, No. 2 (2020), 569–606.  
DOI: 10.1017/prm.2018.154
30. Luan Hoang, Thinh Kieu, *Global estimates for generalized Forchheimer flows of slightly compressible fluids*, Journal d’Analyse Mathématique, March 2019, Volume 137, Issue 1, 1–55.  
DOI: 10.1007/s11854-018-0064-5
29. Emine Celik, Luan Hoang, Thinh Kieu, *Doubly nonlinear parabolic equations for a general class of Forchheimer gas flows in porous media*, Nonlinearity, Vol. 31, No. 8

- (2018) 3617–3650.  
DOI: 10.1088/1361-6544/aabf05
28. Ciprian Foias, Luan Hoang, Jean-Claude Saut, *Navier and Stokes meet Poincaré and Dulac*, J. Appl. Anal. Comput., Volume 8, Number 3, (June 2018) 727–763. (survey)  
DOI: 10.11948/2018.727
  27. Luan Hoang, Vincent Martinez, *Asymptotic expansion for solutions of the Navier-Stokes equations with non-potential body forces*, J. Math. Anal. Appl., Volume 462, Issue 1, (1 June 2018) 84–113.  
DOI: 10.1016/j.jmaa.2018.01.065
  26. Emine Celik, Luan Hoang, Thinh Kieu, *Generalized Forchheimer flows of isentropic gases*, J. Math. Fluid Mech., (March 2018) Volume 20, Issue 1, 83–115.  
DOI: 10.1007/s00021-016-0313-2
  25. Luan Hoang, Eric Olson, James Robinson, *Continuity of pullback and uniform attractors*, J. Differential Equations, Volume 264, Issue 6, (15 March 2018) 4067–4093.  
DOI: 10.1016/j.jde.2017.12.002
  24. Luan Hoang, Thinh Kieu, *Interior estimates for generalized Forchheimer flows of slightly compressible fluids*, Advanced Nonlinear Studies, 17(4), (October 2017) 739–767.  
DOI: 10.1515/ans-2016-6027
  23. Luan Hoang, Vincent Martinez, *Asymptotic expansion in Gevrey spaces for solutions of Navier-Stokes equations*, Asymptotic Analysis, (2017), vol. 104, no. 3–4, 167–190.  
DOI: 10.3233/ASY-171429
  22. Emine Celik, Luan Hoang, Akif Ibragimov, Thinh Kieu, *Fluid flows of mixed regimes in porous media*, J. Math. Phys., Volume 58 (2017), No. 2, 023102, 30 pp.  
DOI: 10.1063/1.4976195
  21. Emine Celik, Luan Hoang, *Maximum estimates for generalized Forchheimer flows in heterogeneous porous media*, J. Differential Equations, Volume 262, Issue 3 (5 February 2017), 2158–2195.  
DOI: 10.1016/j.jde.2016.10.043
  20. Luan Hoang, Truyen Nguyen, Tuoc Phan, *Local gradient estimates for degenerate elliptic equations*, Advanced Nonlinear Studies, Volume 16, Issue 3 (Aug 2016), 479–489.  
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  19. Emine Celik, Luan Hoang, *Generalized Forchheimer flows in heterogeneous porous media*, Nonlinearity, Volume 29, Number 3 (March 2016), 1124–1155.  
DOI: 10.1088/0951-7715/29/3/1124
  18. Luan Hoang, Akif Ibragimov, Thinh Kieu, Zeev Sobol, *Stability of solutions to generalized Forchheimer equations of any degree*, Journal of Mathematical Sciences (via

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17. Luan Hoang, Eric Olson, James Robinson, *On the continuity of global attractors*, Proc. Amer. Math. Soc., Volume 143, Number 10 (2015), 4389–4395.  
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  16. Luan Hoang, Truyen Nguyen, Tuoc Phan, *Gradient estimates and global existence of smooth solutions to a cross-diffusion system*, SIAM Journal on Mathematical Analysis, SIAM Journal on Mathematical Analysis, Volume 47, Issue 3 (2015), 2122–2177.  
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  15. Luan Hoang, Akif Ibragimov, Thinh Kieu, *A family of steady two-phase generalized Forchheimer flows and their linear stability analysis*, J. Math. Phys. 55, Issue 12 (2014), 123101, 32 pp.  
DOI: 10.1063/1.4903002
  14. Luan Hoang, Thinh Kieu, Tuoc Phan, *Properties of generalized Forchheimer flows in porous media*, “Problems of Mathematical Analysis”, volume 76 (July-August 2014), and in “Journal of Mathematical Sciences”, Vol. 202 No. 2 (October 2014), 259–332.  
DOI: 10.1007/s10958-014-2045-2
  13. Luan Hoang, *Incompressible fluids in thin domains with Navier friction boundary conditions (II)*, Journal of Mathematical Fluid Mechanics, Volume 15, Issue 2, (June 2013) 361–395.  
DOI: 10.1007/s00021-012-0123-0
  12. Luan Hoang, Akif Ibragimov, Thinh Kieu, *One-dimensional two-phase generalized Forchheimer flows of incompressible fluids*, J. Math. Anal. Appl., Volume 401, Issue 2, (May 2013) 921–938.  
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  11. Luan Hoang, Akif Ibragimov, *Qualitative study of generalized Forchheimer flows with the flux boundary condition*, Advances in Differential Equations, Volume 17, Numbers 5-6, (May/June 2012) 511–556.  
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  9. Luan Hoang, Akif Ibragimov, *Structural stability of generalized Forchheimer equations for compressible fluids in porous media*, Nonlinearity, Volume 24, Number 1 (January 2011) 1–41.  
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8. Luan Hoang, George R Sell, *Navier–Stokes equations with Navier boundary conditions for an oceanic model*, Journal of Dynamics and Differential Equations, Volume 22, Number 3 (September 2010), 563–616.  
DOI: 10.1007/s10884-010-9189-7
7. Luan Hoang, *Incompressible fluids with Navier friction boundary conditions in thin domains (I)*, Journal of Mathematical Fluid Mechanics, Volume 12, Number 3 (August 2010), 435–472.  
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6. Eugenio Aulisa, Lidia Bloschanskaya, Luan Hoang, Akif Ibragimov, *Analysis of generalized Forchheimer equations of compressible fluids in porous media*, Journal of Mathematical Physics 50, Issue 10, (2009), 103102, 44 pp.  
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5. Ciprian Foias, Luan Hoang, Basil Nicolaenko, *On the helicity in 3D Navier–Stokes equations II: The statistical case*, Communications in Mathematical Physics, Volume 290, Issue 2 (2009), 679–717.  
DOI: 10.1007/s00220-009-0827-z
4. Ciprian Foias, Luan Hoang, Eric Olson, Mohammed Ziane, *The normal form of the Navier–Stokes equations in suitable normed spaces*, Annales de l’Institut Henri Poincaré - Analyse Non Linéaire, Volume 26, Issue 5 (September-October 2009), 1635–1673.  
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3. Luan Hoang, *A basic inequality for the Stokes operator related to the Navier boundary condition*, Journal of Differential Equations, Volume 245, Issue 9 (November 2008), 2585–2594.  
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1. Ciprian Foias, Luan Hoang, Eric Olson, Mohammed Ziane, *On the solutions to the normal form of the Navier–Stokes equations*, Indiana University Mathematics Journal, Vol. 55, No 2 (2006) 631–686.  
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