

**Articles in Refereed Journals:**

1. E.S. Titi, *Estimations uniformes pour la résolubilité des opérateurs de Navier–Stokes linéarisés*, Comptes Rendus De L’Académie Des Sciences, Paris, Série I **301**(1985), 723–726.
2. E.S. Titi, *On a criterion for locating stable stationary solutions to the Navier–Stokes equations*, Nonlinear Analysis, Theory, Methods and Applications **11** (1987), 1085–1102.
3. V. Barcilon, P. Constantin and E.S. Titi, *Existence of solutions to the Stommel–Charney model of the Gulf Stream*, SIAM Journal on Mathematical Analysis **19** (1988), 1355–1364.
4. P. Constantin and E.S. Titi, *On the evolution of nearly circular vortex patches*, Communications in Mathematical Physics **119** (1988), 177–198.
5. C. Foias, G.R. Sell and E.S. Titi, *Exponential tracking and approximation of inertial manifolds for dissipative nonlinear equations*, Journal of Dynamics and Differential Equations **1** (1989), 199–244.
6. C. Foias, M.S. Jolly, I.G. Kevrekidis, G.R. Sell and E.S. Titi, *On the computation of inertial manifolds*, Physics Letters A **131** (1988), 433–436.
7. E.S. Titi, *Une variété approximante de l’attracteur universel des équations de Navier–Stokes, non linéaire, de dimension finie*, Comptes Rendus De L’Académie Des Sciences, Paris, Série I, **307** (1988), 383–385.
8. E.S. Titi, *On approximate inertial manifolds to the Navier–Stokes equations*, Journal of Mathematical Analysis & Applications **149** (1990), 540–557.
9. M. S. Jolly, and I.G. Kevrekidis and E.S. Titi, *Approximate inertial manifolds for the Kuramoto–Sivashinsky equation: Analysis and computations*, Physica D **44** (1990), 38–60.
10. A. Mahalov, E.S. Titi and S. Leibovich, *Invariant helical subspaces for the Navier–Stokes equations*, Archive of Rational Mechanics & Analysis **112** (1990), 193–222.
11. M. Jolly, I. Kevrekidis and E.S. Titi, *Preserving dissipation in approximate inertial forms for the Kuramoto–Sivashinsky equation*, Journal of Dynamics and Differential Equations **3** (1991), 179–197.
12. E.S. Titi, *Un critère pour l’approximation des solutions périodiques des équations de Navier–Stokes*, Comptes Rendus De L’Académie Des Sciences, Paris, Série I, **312** (1991), 41–43.
13. C. Foias and E.S. Titi, *Determining nodes, finite difference schemes and inertial manifolds*, Nonlinearity **4** (1991), 135–153.
14. D. Jones and E.S. Titi, *On the number of determining nodes for the 2 – D Navier–Stokes equations*, Journal of Mathematical Analysis & Applications **168** (1992), 72–88.
15. C. Foias, M. Jolly, I.G. Kevrekidis and E.S. Titi, *Dissipativity of numerical schemes*, Nonlinearity **4** (1991), 591–613.
16. D. Jones and E.S. Titi, *Determining finite volume elements for the 2 – D Navier–Stokes equations*, Physica D **60** (1992), 165–174.
17. M. Graham, P. Steen and E.S. Titi, *Computational efficiency and approximate inertial manifolds for a Bénard convection system*, Journal of Nonlinear Science **3** (1993), 153–167.
18. C. Devulder, M. Marion and E.S. Titi, *On the rate of convergence of the nonlinear Galerkin methods*, Mathematics of Computation **60** (1993), 495–514.
19. J. Duan, P. Holmes and E.S. Titi, *Global existence theory for a generalized Ginzburg–Landau equation*, Nonlinearity **5** (1992), 1303–1314.
20. N. Aubry, W.–Y. Lian and E.S. Titi, *Preserving symmetries in the proper orthogonal decomposition*, SIAM Journal on Scientific and Statistical Computing **14** (1993), 483–505.
21. G. Berkooz and E.S. Titi, *Galerkin projections and proper orthogonal decomposition for equivariant equations*, Physics Letters A **174** (1993), 94–102.
22. D. Jones and E.S. Titi, *A remark on quasi-stationary approximate inertial manifolds for the Navier–Stokes equations*, SIAM, Journal on Mathematical Analysis **25** (1994), 894–914.
23. A. Doelman and E.S. Titi, *Regularity of solutions and the convergence of the Galerkin method in the Ginzburg–Landau equation*, Numerical Functional Analysis and Optimization **14** (1993), 299–321.
24. G. Ponce, R. Racke, T.C. Sideris and E.S. Titi, *Global stability of large solutions to the 3 – D Navier–Stokes equations*, Communications in Mathematical Physics **159** (1993), 329–341.

25. J. Duan, P. Holmes and E.S. Titi, *Regularity, approximation and asymptotic dynamics for a generalized Ginzburg–Landau equation*, *Nonlinearity* **6** (1993), 915–933.
26. D. Jones and E.S. Titi, *Upper bounds on the number of determining modes, nodes, and volume elements for the Navier–Stokes equations*, *Indiana University Mathematics Journal* **42** (1993), 875–887. (An invited article for a special issue in honor of Professor Ciprian Foias on the Occasion of his 60<sup>th</sup> birthday).
27. C. Foias, M. Jolly, I.G. Kevrekidis and E.S. Titi, *On some dissipative fully discrete nonlinear Galerkin schemes for the Kuramoto–Sivashinsky equation*, *Physics Letters A* **186** (1994), 87–96.
28. Z. Shao and E.S. Titi, *Parameterizing the global attractor of the Navier–Stokes equations by nodal values*, *Numerical Functional Analysis and Optimization* **16** (1995), 547–563.
29. P. Constantin, W. E and E.S. Titi, *Onsager’s conjecture on the energy conservation for solutions of Euler’s equation*, *Communications in Mathematical Physics* **165** (1994), 207–209.
30. D. Jones, L. Margolin and E.S. Titi, *On the effectiveness of the approximate inertial manifolds – computational study*, *Theoretical and Computational Fluid Dynamics* **7** (1995), 243–260.
31. P. Takáč, P. Bollerman, A. Doelman, A. van Harten and E.S. Titi, *Analyticity of essentially bounded solutions to strongly parabolic semilinear systems*, *SIAM Journal on Mathematical Analysis* **27** (1996), 424–448.
32. C.R. Doering and E.S. Titi, *Exponential decay rate of the power spectrum for solutions of the Navier–Stokes equations*, *Physics of Fluids* **7** (1995), 1384–1390.
33. D. Jones and E.S. Titi,  *$C^1$  approximating inertial manifolds for dissipative nonlinear equations*, *Journal of Differential Equations* **127** (1996), 54–86.
34. B. Cockburn, D. Jones and E.S. Titi, *Degrés de liberté déterminants pour équations nonlinéaires dissipatives / Determining degrees of freedom for nonlinear dissipative equations*, *Comptes Rendus De L’Académie Des Sciences, Paris, Série I*, **321** (1995), 563–568.
35. J. Duan, H. Van Ly and E.S. Titi, *The effect of nonlocal interactions on the dynamics of the Ginzburg–Landau equation*, *Zeitschrift für Angewandte Mathematik und Physik (ZAMP)* **47** (1996), 432–455.
36. C.D. Levermore, M. Oliver and E.S. Titi, *Global well-posedness for the lake equations*, *Physica D* **98** (1996), 492–509.
37. B. Cockburn, D. Jones and E.S. Titi, *Estimating the number of asymptotic degrees of freedom for nonlinear dissipative systems*, *Mathematics of Computation* **66** (1997), 1073–1087.
38. P. Collet and E.S. Titi, *Determining nodes for extended dissipative systems*, *Nonlinearity* **9** (1996), 1089–1097.
39. P. Constantin, C.R. Doering and E.S. Titi, *Rigorous estimates of small scales in turbulent flows*, *Journal of Mathematical Physics* **37** (1996), 6152–6156.
40. J. D. Gibbon and E.S. Titi, *Attractor dimension and small length scale estimates for the three-dimensional Navier–Stokes equations*, *Nonlinearity* **10** (1997), 109–119.
41. C.D. Levermore, M. Oliver and E.S. Titi, *Global well-posedness for models of shallow water in a basin with a varying bottom*, *Indiana University Mathematics Journal* **45** (1996), 479–510.
42. M.J. Holst and E.S. Titi, *Determining projections and functionals for weak solutions of the Navier–Stokes equations*, *Contemporary Mathematics* **204** (1997), 125–138.
43. A. Ferrari and E.S. Titi, *Gevrey regularity for nonlinear analytic parabolic equations*, *Communications in Partial Differential Equations* **23** (1998), 1–16.
44. H. Van Ly, K. Mease and E.S. Titi, *Controlling the viscous Burgers’ equation*, *Numerical Functional Analysis and Optimization* **18** (1997), 143–188.
45. B. García–Archilla, J. Novo and E.S. Titi, *Postprocessing the Galerkin method: a novel approach to approximate inertial manifolds*, *SIAM Journal of Numerical Analysis* **35** (1998), 941–972.
46. M. Oliver and E.S. Titi, *Analyticity of the global attractor and the number of determining nodes for a weakly damped driven nonlinear Schrödinger equation*, *Indiana University Mathematics Journal* **47** (1998), 49–73.
47. D. Jones, A. M. Stuart and E.S. Titi, *Persistence of invariant sets for partial differential equations*, *Journal of Mathematical Analysis & Applications* **219** (1998), 479–502.
48. B. García–Archilla, J. Novo and E.S. Titi, *An approximate inertial manifolds approach to postprocessing the Galerkin method for the Navier–Stokes equations*, *Mathematics of Computation* **68** (1999), 893–911.

49. C. Cao, M. Rammaha and E.S. Titi, *Gevrey regularity for nonlinear analytic parabolic equations on the sphere*, Journal of Dynamics & Differential Equations **12** (2000), 411–433.
50. H. Van Ly and E.S. Titi *Global Gevrey regularity for 3 – D Bénard convection in porous medium with zero Darcy-Prandtl number*, Journal of Nonlinear Science **9** (1999), 333–362.
51. C. Cao, M. Rammaha and E.S. Titi, *The Navier–Stokes equations on the rotating 2–D sphere: Gevrey regularity and asymptotic degrees of freedom*, Zeitschrift für Angewandte Mathematik und Physik (ZAMP) **50** (1999), 341–360.
52. B. García–Archilla and E.S. Titi, *Postprocessing the Galerkin method: The finite elements case*, SIAM Journal of Numerical Analysis **37** (2000), 470–499.
53. S. Chen, C. Foias, D. Holm, E. Olson, E.S. Titi and S. Wynne, *The Camassa–Holm equations as a closure model for turbulent channel flow*, Physical Review Letters **81** (1998), 5338–5341.
54. S. Chen, C. Foias, D. Holm, E. Olson, E.S. Titi and S. Wynne, *A connection between Camassa–Holm equations and turbulent flows in channels and pipes*, Physics of Fluids **11** (1999), 2343–2353.
55. S. Shvartsman, C. Theodoropoulos, R. Rico-Martinez, I.G. Kevrekidis, E.S. Titi, and T. J. Mountziaris, *Order reduction of nonlinear dynamic models for distributed reacting systems*, Journal of Process Control **10** (2000), 177–184.
56. S. Chen, C. Foias, D. Holm, E. Olson, E.S. Titi, and S. Wynne, *The Camassa–Holm equations and turbulence*, Physica D **133** (1999), 49–65.
57. M. Oliver and E.S. Titi, *Gevrey regularity for the attractor of a partially dissipative model of Bénard convection in a porous medium*, Journal of Differential Equations **163** (2000), 292–311.
58. M. Oliver and E.S. Titi, *Remark on the decay rate of higher order derivatives of solutions to the Navier–Stokes equations in  $\mathbb{R}^n$* , Journal of Functional Analysis **172** (2000), 1–18.
59. B. García–Archilla, J. Novo and E.S. Titi, *Postprocessing Fourier spectral methods: the case of smooth solutions*, Applied Numerical Mathematics **43** (2002), 191–209.
60. J. Novo, S. Wynne and E.S. Titi, *Efficient methods using high accuracy approximate inertial manifolds*, Numerische Mathematik **87** (2001), 523–554.
61. M. Oliver and E.S. Titi, *On the domain of spatial analyticity for solutions of second order nonlinear analytic parabolic and elliptic differential equations*, Journal of Differential Equations **174** (2001), 55–74.
62. C. Foias, D. Holm and E.S. Titi, *The Navier–Stokes-alpha model of fluid turbulence*, Physica D **152** (2001), 505–519. (An invited article for a special issue in honor of Professor V.E. Zakharov on the occasion of his 60<sup>th</sup> birthday).
63. C. Foias, I. Kukavica, M. Jolly and E.S. Titi, *The Lorenz equations as a metaphor for the Navier–Stokes equations*, Discrete and Continuous Dynamical Systems **7** (2001), 403–429.
64. C. Foias, D. Holm and E.S. Titi, *The three dimensional viscous Camassa-Holm equations and their relation to the Navier–Stokes equations and turbulence theory*, Journal of Dynamics and Differential Equations **14** (2002), 1–35.
65. C. Cao, I. Kevrekidis and E.S. Titi, *Numerical criterion for the stabilization of steady states of the Navier–Stokes equations*, Indiana University Mathematics Journal, **50** (2001), 37–96. (An invited article for a special issue in honor of Professors Ciprian Foias and Roger Temam).
66. P.G. Kevrekidis, I. G. Kevrekidis, A. R. Bishop and E. S. Titi, *A continuum approach to discreteness*, Physics Review E **65** No.4 (2002), 046613 (13 pages).
67. C. Cao and E.S. Titi, *Global well-posedness and finite dimensional global attractor for a 3 – D planetary geostrophic viscous model*, Communications on Pure and Applied Mathematics **56** (2003), 1–36.
68. Y. Chung and E. S. Titi, *Inertial manifolds and Gevrey regularity for the Moore–Greitzer model of an axial-flow compressor*, Journal Nonlinear Science **13** (2003), 1–26.
69. L. Margolin, E.S. Titi and S. Wynne, *The postprocessing Galerkin and nonlinear Galerkin methods – a truncation analysis point of view*, SIAM Journal of Numerical Analysis **41** (2003), 695–714.
70. E. Olson and E.S. Titi, *Determining modes for continuous data assimilation in 2 – D turbulence*, Journal of Statistical Physics **113** (2003), 799–840.

71. P. Constantin, I. Kevrekidis and E.S. Titi, *Remarks on a Smoluchowski equation*, Discrete and Continuous Dynamical Systems **11** (2004), 101–112.
72. H. Bellout, S. Benachour and E.S. Titi, *Finite-time singularity versus global regularity for hyperviscous Hamilton-Jacobi-like equations*, Nonlinearity **16** (2003), 1967–1989.
73. A.A. Ilyin and E.S. Titi, *Attractors to the two-dimensional Navier-Stokes– $\alpha$  model: An  $\alpha$ -dependence study*, Journal of Dynamics and Differential Equations **15** (2003), 751–777.
74. C. Cao, D. Holm and E.S. Titi, *Traveling wave solutions for a class of one-dimensional nonlinear shallow water wave models*, Journal of Dynamics and Differential Equations **16(1)** (2004), 167–178.
75. P. Constantin, I.G. Kevrekidis and E.S. Titi, *Asymptotic states of a Smoluchowski equation*, Archive of Rational Mechanics & Analysis **174(3)** (2004), 365–384.
76. M.I. Vishik, E.S. Titi and V.V. Chepyzhov, *Trajectory attractor approximations of the 3D Navier–Stokes system by a Leray– $\alpha$  model*, Russian Mathematical Dokladi (Translated from Russian) **71** (2005), 92–95.
77. C. Cao, E.S. Titi and M. Ziane, *A “horizontal” hyper-diffusion 3 – D thermocline planetary geostrophic model: well-posedness and long time behavior*, Nonlinearity **17** (2004), 1749–1776.
78. A. Cheskidov, D. D. Holm, E. Olson, and E.S. Titi, *On a Leray– $\alpha$  model of turbulence*, Royal Society London, Proceedings, Series A, Mathematical, Physical & Engineering Sciences **461** (2005), 629–649.
79. A. Ilyin, A. Miranville and E. S. Titi, *Small viscosity sharp estimates for the global attractor of the 2-D damped-driven Navier–Stokes equations*, Communications in Mathematical Sciences **2** (2004), 403–426.
80. P. Constantin, E.S. Titi and J. Vukadinovic, *Dissipativity and Gevrey regularity of a Smoluchowski equation*, Indiana University Mathematics Journal **54(4)** (2005), 949–970.
81. C. Cao, D. Holm and E.S. Titi, *On the Clark– $\alpha$  model of turbulence: global regularity and long-time dynamics*, Journal of Turbulence **6(20)** (2005), 1–11.
82. J. Gibbon and E.S. Titi, *Cluster formation in complex multi-scale systems*, Royal Society London, Proceedings, Series A, Mathematical, Physical & Engineering Sciences **461** (2005), 3089–3097.
83. D. Holm and E.S. Titi, *Computational models of Turbulence: The LANS– $\alpha$  model and the role of global analysis*, Feature Article: SIAM News **38(7)**, September 2005.
84. A.A. Ilyin and E.S. Titi, *Sharp estimates for the number of degrees of freedom for the damped-driven 2D Navier–Stokes equations*, Journal of Nonlinear Science **16(3)** (2006), 233–253.
85. C. Cao and E.S. Titi, *Global well-posedness of the three-dimensional viscous primitive equations of large scale ocean and atmosphere dynamics*, Annals of Mathematics **166(1)** (2007), 245–267.
86. A.A. Ilyin, E.M. Lunasin and E.S. Titi, *A modified-Leray– $\alpha$  subgrid scale model of turbulence*, Nonlinearity **19** (2006), 879–897.
87. E. Olson and E.S. Titi, *Viscosity versus vorticity stretching: global well-posedness for a family of the Navier–Stokes alpha-like models*, Nonlinear Analysis **66(11)** (2007), 2427–2458.
88. P. Constantin, B. Levant and E.S. Titi, *Analytic study of shell models of turbulence*, Physica D **219(2)** (2006), 120–141.
89. V.V. Chepyzhov, E.S. Titi, and M.I. Vishik, *On the convergence of solutions of the Leray– $\alpha$  model to the trajectory attractor of the 3D Navier–Stokes system*, Journal of Discrete and Continuous Dynamical Systems - Series A **17(3)** (2007), 33–52.
90. A.A. Ilyin and E.S. Titi, *The damped-driven 2D Navier-Stokes system on large elongated domains*, Journal of Mathematical Fluid Mechanics **10(2)** (2007), 159–175. DOI 10.1007/s00021-006-0226-6.
91. Y. Cao and E.S. Titi, *Trivial stationary solutions to the Kuramoto–Sivashinsky and certain nonlinear elliptic equations*, Journal of Differential Equations **231** (2006), 755–767.
92. S.I. Chernyshenko, P. Constantin, J.C. Robinson and E.S. Titi, *A posteriori regularity of the three-dimensional Navier-Stokes equations from numerical computations*, Journal of Mathematical Physics **48** (2007), 065204. (An invited article for a special issue in Fluid Dynamics). arXiv:math/0607181.
93. J. Linshiz and E.S. Titi, *Analytical study of certain magnetohydrodynamics– $\alpha$  models*, Journal of Mathematical Physics **48** (2007), 065504. (An invited article for a special issue in Fluid Dynamics).

94. P. Constantin, C. Fefferman, E.S. Titi and A. Zarnescu *Regularity of coupled two-dimensional Nonlinear Fokker-Planck and Navier-Stokes Systems*, Communications in Mathematical Physics **270**(3) (2007), 789–812.
95. Y. Cao, E.M. Lunasin and E.S. Titi, *Global well-posedness of three-dimensional viscous and inviscid simplified Bardina turbulence models*, Communications in Mathematical Sciences **4**(4) (2006), 823–848.
96. P. Constantin, B. Levant and E.S. Titi, *A note on the regularity of inviscid shell model of turbulence*, Physics Review E **75** (2007), 016304.
97. A.A. Ilyin and E.S. Titi, *On the domain of analyticity and small scales for the solutions of the damped-driven 2D Navier–Stokes equations*, Dynamics of Partial Differential Equations **4**(2) (2007), 111–127.
98. P. Constantin, B. Levant and E.S. Titi, *Sharp lower bounds for the dimension of the global attractor of the Sabra shell model of turbulence*, Journal of Statistical Physics **127**(6) (2007), 1173–1192.
99. C. Cao, J. Qin and E.S. Titi, *Regularity criterion for solutions of three-dimensional turbulent channel flows*, Communications in Partial Differential Equations **33**(1-3) (2008), 419–428.
100. B. Khouider and E.S. Titi, *An inviscid regularization for the surface quasi-geostrophic equation*, Communications on Pure and Applied Mathematics **61**(10) (2008), 1331–1346.
101. R. Benzi, B. Levant, I. Procaccia and E.S. Titi, *Statistical properties of nonlinear shell models of turbulence from linear advection models: rigorous results*, Nonlinearity **20**(6) (2007), 1431–1443.
102. E.M. Lunasin, S. Kurien, M. Taylor and E.S. Titi, *A study of the Navier-Stokes– $\alpha$  model for two-dimensional turbulence*, Journal of Turbulence **8**(1) (2007), 1–21.
103. C. Bardos and E.S. Titi, *Euler equations of incompressible ideal fluids*, Uspekhi Matematicheskikh Nauk, UMN **62**:3(375) (2007), 5–46; also in Russian Mathematical Surveys, **62**(3) (2007), 409–451.
104. V.V. Chepyzhov, E.S. Titi, and M.I. Vishik, *On convergence of trajectory attractors of 3D Navier–Stokes– $\alpha$  model as  $\alpha$  approaches 0*, Matematicheskii Sbornik **198**:12 (2007), 3–36.
105. Z. Artstein, I.G. Kevrekidis, M. Slemrod and E.S. Titi, *Slow observables of singularly perturbed differential equations*, Nonlinearity **20** (2007), 2463–2481.
106. R. Kupferman, C. Mangoubi and E.S. Titi, *A Beale-Kato-Majda breakdown criterion for an Oldroyd-B fluid in the creeping flow regime*, Communications in Mathematical Sciences **6**(1) (2008), 235–256.
107. Z. Artstein, J. Linshiz and E.S. Titi, *Young measure approach to computing slowly advancing fast oscillations*, SIAM, Multiscale Modeling and Simulation **6**(4) (2007), 1085–1097.
108. C. Bardos, J. Linshiz and E.S. Titi, *Global regularity for a Birkhoff-Rott– $\alpha$  approximation of the dynamics of vortex sheets of the 2D Euler equations*, Physica D **237** (2008), 1905–1911. *An invited article for a special issue in the occasion of 250 years for the Euler Equations.*
109. G. Katriel, R. Kupferman and E.S. Titi, *Long-time limit for a class of quadratic infinite-dimensional dynamical systems inspired by models of viscoelastic fluids*, Journal of Differential Equations **245** (2008), 2771–2784.
110. E. Lunasin, S. Kurien and E.S. Titi, *Spectral scaling of  $\alpha$ -models for two-dimensional turbulence*, Journal of Physics A **41** (2008), 344014 (10pp). *(An invited article for a special issue in honor of Professor Darryl D. Holm in the occasion of his 60<sup>th</sup> birthday).*
111. Y. Cao, Z.H. Musslimani and E.S. Titi, *Nonlinear Schrödinger-Helmholtz equation as numerical regularization of the nonlinear Schrödinger equation*, Nonlinearity **21** (2008), 879–898.
112. B.J. Geurts, A. Kuczaj and E.S. Titi, *Regularization modeling for large-eddy simulation of homogeneous isotropic decaying turbulence*, Journal of Physics A **41** (2008), 344008 (29pp). *(An invited article for a special issue in honor of Professor Darryl D. Holm in the occasion of his 60<sup>th</sup> birthday).*
113. E. Olson and E.S. Titi, *Determining modes and Grashof number in 2D turbulence: a numerical case study*, Theoretical and Computational Fluid Dynamics **22**(5) (2008), 327–339.
114. C. Cao and E.S. Titi, *Regularity criteria for the three-dimensional Navier–Stokes equations*, Indiana University Mathematics Journal **57**(6) (2008), 2643–2662. *(An invited article for a special issue in honor of Professor Ciprian Foias in the occasion of his 75<sup>th</sup> birthday).*
115. V.K. Kalantarov, B. Levant and E.S. Titi, *Gevrey regularity of the global attractor of the 3D Navier-Stokes-Voigt equations*, Journal of Nonlinear Science **19** (2009), 133–152.

116. B. Ettinger and E.S. Titi, *Global existence and uniqueness of weak solutions of 3-D Euler equations with helical symmetry in the absence of vorticity stretching*, SIAM, Journal on Mathematical Analysis **41(1)** (2009), 269–296.
117. Y. Cao, Z.H. Musslimani and E.S. Titi, *Modulation theory for self-focusing in the nonlinear Schrödinger-Helmholtz equation*, Numerical Functional Analysis and Optimization **30** (2009), 46–69.
118. A.-C. Bennis, R. Lewandowski and E.S. Titi, *Simulations de l'écoulement turbulent marin avec un modèle de déconvolution*, Comptes Rendus De L'Académie Des Sciences, Paris, Série I **347** (2009) 445-450.
119. B. Levant, F. Ramos and E.S. Titi, *On the statistical properties of the 3D incompressible Navier-Stokes-Voigt model*, Communications in Mathematical Sciences **8(1)** (2010), 277–293. (An invited article for a special issue in honor of Professor Andrew Majda in the occasion of his 60<sup>th</sup> birthday).
120. C. Bardos, U. Frisch, W. Pauls, S.S. Ray, and E.S. Titi, *Entire solutions of hydrodynamical equations with exponential dissipation*, Communications in Mathematical Physics **293** (2010), 519-543.
121. V.K. Kalantarov and E.S. Titi, *Global attractors and determining modes for the 3D Navier–Stokes–Voigt equations*, Chinese Annals of Mathematics, Series B, **30(6)** (2009), 697–714. (An invited article for a special issue in honor of Professor Andrew Majda in the occasion of his 60<sup>th</sup> birthday).
122. C. Bardos, J. Linshiz and E.S. Titi, *Global regularity and convergence of a Birkhoff-Rott– $\alpha$  approximation of the dynamics of vortex sheets of the 2D Euler equations*, Communications on Pure and Applied Mathematics **63(6)** (2010), 697–746.
123. Y. Cao and E.S. Titi, *On the rate of convergence of the two-dimensional  $\alpha$ -models of turbulence to the Navier-Stokes equations*, Numerical Functional Analysis and Optimization **30(11 & 12)** (2009), 1231–1271.
124. C. Bardos and E.S. Titi, *Loss of smoothness and energy conserving rough weak solutions for the 3d Euler equations*, Discrete and Continuous Dynamical Systems - Series S **3(2)** (2010), 185–197. (An invited article for a special issue on honor of Professor V. Solonnikov in the occasion of his 75<sup>th</sup> birthday).
125. J. Linshiz and E.S. Titi, *On the convergence rate of the Euler– $\alpha$ , inviscid second-grade fluid, model to the Euler equations*, Journal of Statistical Physics **138(1)** (2010), 305–332.
126. A. Larios and E.S. Titi, *On the higher-order global regularity of the inviscid Voigt-regularization of three-dimensional hydrodynamic models*, Discrete and Continuous Dynamical Systems - Series S **14(2)** (2010), 603–627. (An invited article for a special issue in honor of Professor Peter Kloeden on the occasion of his 60<sup>th</sup> birthday).
127. F. Ramos and E.S. Titi, *Invariant measures for the 3D Navier-Stokes-Voigt equations and their Navier-Stokes limit*, Discrete and Continuous Dynamical Systems - Series S **28(1)** (2010), 375–403. (An invited article for a special issue in honor of Professor Roger Temam on the occasion of his 70<sup>th</sup> birthday).
128. H. Bessaih, F. Flandoli and E.S. Titi, *Stochastic attractors for shell phenomenological models of turbulence*, Journal of Statistical Physics **140** (2010), 688–717.
129. C. Cao and E.S. Titi, *Global regularity criterion for the 3D Navier–Stokes equations involving one entry of the velocity gradient tensor*, Archive of Rational Mechanics & Analysis **202** (2011), 919–932.
130. A.V. Babin, A.A. Ilyin, and E.S. Titi, *On the regularization mechanism for the spatially periodic Korteweg–de Vries equation*, Communications on Pure and Applied Mathematics **64** (2011), 591–648.
131. Z. Artstein, C.W. Gear, I.G. Kevrekidis, M. Slemrod and E.S. Titi, *Analysis and computation of a discrete KdV-Burgers type equation with fast dispersion and slow diffusion*, SIAM Journal on Numerical Analysis **49(5)** (2011), 2124–2143.
132. K. Hayden, E. Olson and E.S. Titi, *Discrete data assimilation in the Lorenz and 2D NavierStokes equations*, Physica D **240** (2011), 1416–1425.
133. C. Cao and E.S. Titi, *Global well-posedness of the 3D primitive equations with partial vertical turbulence mixing heat diffusion*, Communications in Mathematical Physics **310** (2012), 537–568.  
arXiv-1010.5286[Math.AP]
134. A. Farhat, L. Panetta, E.S. Titi and M.B. Ziane, *Long-time behavior of a two-layer model of baroclinic quasi-geostrophic turbulence*, Journal of Mathematical Physics **53** (2012), 115603. (An invited article for a special issue in honor of Professor Peter Constantin on the occasion of his 60<sup>th</sup> birthday).

135. C. Bardos, E.S. Titi and E. Wiedemann, *The vanishing viscosity as a selection principle for the Euler equations: The case of 3D shear flow; La viscosité évanescence comme critère de sélection pour les solutions de l'équation d'Euler: Le cas du flot de cisaillement*, Comptes Rendus De L'Académie Des Sciences, Paris, Série I, Mathématique **350(15)** (2012), 757–760.
136. C. Cao, A. Farhat and E.S. Titi, *Global well-posedness of an inviscid three-dimensional pseudo-Hasegawa-Mima model*, Communications in Mathematical Physics **319(1)** (2013), 195–229. DOI 10.1007/s00220-012-1626-5.
137. C.R. Doering, I. Kukavica and E.S. Titi, *Introduction to special issue: incompressible fluids, turbulence and mixing*, Journal of Mathematical Physics **53** (2012), 115501.
138. C. Foias, M. Jolly, R. Kravchenko and E.S. Titi, *A determining form for the 2D Navier-Stokes equations - the Fourier modes case*, Journal of Mathematical Physics **53** (2012), 115623. (An invite article for a special issue in honor of Professor Peter Constantin on the occasion of his 60<sup>th</sup> birthday).
139. A. Larios, E. S. Titi, *Higher-order global regularity of an inviscid Voigt-regularization of the three-dimensional inviscid resistive magnetohydrodynamic equations*, Journal of Mathematical Fluid Mechanics **16** (2014), 5976. DOI 10.1007/s00021-013-0136-3. arXiv:1104.0358.
140. C. Bardos and E.S. Titi, *Mathematics and turbulence: where do we stand?*, Journal of Turbulence **14(3)** (2013), 42–76.
141. J.D. Gibbon and E.S. Titi, *3D incompressible Euler with a passive scalar: a road to blow up?*, Journal of Nonlinear Science, **23(6)** (2013), 993–1000. (2013), DOI 10.1007/s00332-013-9175-4.
142. L. Biferale and E.S. Titi, *On the global regularity of a helical-decimated version of the 3D Navier-Stokes equations*, Journal of Statistical Physics **151** (2013), 1089–1098.
143. C. Bardos, M. Lopes Filho, D. Niu, H. Nussenzveig Lopes and E.S. Titi, *Stability of viscous, and instability of non-viscous, 2D weak solutions of incompressible fluids under 3D perturbations*, SIAM, Journal on Mathematical Analysis **45(3)** (2013), 1871–1885.
144. J. Lowengrub, E.S. Titi and K. Zhao, *Analysis of a mixture model of tumor growth*, European Journal of Applied Mathematics **24** (2013), 691–734.
145. C. Cao, S. Ibrahim, K. Nakanishi and E.S. Titi, *Finite-time blowup for the inviscid primitive equations of oceanic and atmospheric dynamics*, Communications in Mathematical Physics **337**(2015), 473–482. DOI: 10.1007/s00220-015-2365-1. arXiv:1210.7337[math.AP].
146. A. Larios, E. Lunasin and E.S. Titi, *Global well-posedness for the 2D Boussinesq system with anisotropic viscosity and without heat diffusion*, Journal of Differential Equations **255** (2013), 2636–2654.
147. Y. Guo and E.S. Titi, *Persistence of analyticity for quasi-linear wave equations: an energy-like approach*, Bulletin of Institute of Mathematics, Academia Sinica (New Series) **8(4)** (2013), 445–479. (An invited article for a special issue in honor of Professor Neil Trudinger on the occasion of his 70<sup>th</sup> birthday). arXiv:1301.0137
148. A. Azouani, E. Olson and E.S. Titi, *Continuous data assimilation using general interpolant observables*, Journal of Nonlinear Science **24(2)** (2014), 277–304. DOI 10.1007/s00332-013-9189-y. arXiv:1304.0997.
149. A. Biswas, M.S. Jolly, V. Martinez and E.S. Titi, *Dissipation length scale estimates for turbulent flows - a Wiener algebra approach*, Journal of Nonlinear Science **24** (2014) 441–471. DOI 10.1007/s00332-014-9195-8. arXiv:1310.3496
150. C. Foias, M. Jolly, R. Kravchenko and E.S. Titi, *A unified approach to determining forms for the 2D Navier-Stokes equations – the general interpolants case*, Uspekhi Matematicheskikh Nauk **69(2)** (2014) 177–200; also Russian Mathematical Surveys, **69(2)** (2014), 359–381. (An invited article for a special issue in memory of Professor Mark Vishik). arXiv:1309.0247
151. P. Gérard, Y. Guo and E.S. Titi, *On the radius of analyticity of solutions to the cubic Szegő equation*, Annales de l'Institut Henri Poincaré (C) Analyse Non Linéaire **32** (2015), 97–108. DOI 10.1016/j.anihpc.2013.11.001. arXiv:1303.6148
152. C. Cao, J. Li and E.S. Titi, *Local and global well-posedness of strong solutions to the 3D primitive equations with vertical eddy diffusivity*, Archive of Rational Mechanics & Analysis **214(1)** (2014) 35–76. (DOI) 10.1007/s00205-014-0752-y. arXiv:1312.6035

153. C. Cao, A. Farhat and E.S. Titi, *Global regularity for an inviscid three-dimensional slow limiting ocean dynamics model*, Communications in Information and Systems (CIS), **13(1)** (2013), 97–122. (An invited article for a special issue in honor of Professor Marshall Slemrod on the occasion of his 70<sup>th</sup> birthday). arXiv:1311.6064
154. C. Cao, J. Li and E.S. Titi, *Global well-posedness of strong solutions to the 3D primitive equations with horizontal eddy diffusivity*, Journal of Differential Equations **257** (2014), 4108–4132. arXiv:1401.1234
155. Y. Guo, M. A. Rammaha, S. Sakuntasathien, E.S. Titi, D. Toundykov, *Hadamard well-posedness for a hyperbolic equation of viscoelasticity with supercritical sources and damping*, Journal of Differential Equations **257** (2014), 3778–3812. arXiv:1308.0720
156. Y. Guo, K. Simon and E.S. Titi, *On a nonlinear system of coupled KdV equations*, Communications in Mathematical Sciences **13(5)** (2015), 1261–1288. arXiv:1310.1130
157. M.C. Lopes-Filho, A.L. Mazzucato, D. Niu, H.J. Nussenzveig-Lopes and E.S. Titi, *Planar limits of three-dimensional incompressible flows with helical symmetry*, Journal of Dynamics and Differential Equations **26** (2014), 843–869. DOI 10.1007/s10884-014-9411-0. arXiv:1304.2082
158. A. Azouani and E.S. Titi, *Feedback control of nonlinear dissipative systems by finite determining parameters - a reaction-diffusion paradigm*, Evolution Equations and Control Theory (EECT) **3(4)** (2014), 579–594. doi:10.3934/eect.2014.3.579. arXiv:1301.6992
159. M. Lopes Filho, H. Nussenzveig Lopes, E.S. Titi and A. Zang, *Convergence of the 2D Euler- $\alpha$  to Euler equations in the Dirichlet case: indifference to boundary layers*, Physica D **292-293** (2015), 51–61. arXiv:1403.5682
160. C. Cao, J. Li and E.S. Titi, *Global well-posedness for the 3D primitive equations with only horizontal viscosity and diffusion*, Communications on Pure and Applied Mathematics **69** (2016), 1492–1531. DOI: 10.1002/cpa.21576. arXiv:1406.1995
161. M.S. Jolly, T. Sadigov and E.S. Titi, *A determining form for the damped driven nonlinear Schrödinger equation - Fourier modes case*, Journal of Differential Equations **258(8)** (2015), 2711–2744. doi:10.1016/j.jde.2014.12.023. arXiv:1406.2626[math.AP]
162. H. Bessaih, E. Olson and E.S. Titi, *Continuous assimilation of data with stochastic noise*, Nonlinearity **28** (2015), 729–753. doi:10.1088/0951-7715/28/3/729. arXiv:1406.1533
163. V. Kalantarov and E.S. Titi, *Finite-parameters feedback control for stabilizing damped nonlinear wave equations*, Nonlinear analysis and optimization, 115–133, Contemporary Mathematics **659**, American Mathematical Society, Providence, RI, 2016. arXiv:1501.00556
164. A. Farhat, M.S. Jolly and E.S. Titi, *Continuous data assimilation for the 2D Bénard convection through velocity measurements alone*, Physica D **303** (2015), 59–66. arXiv:1410.1767
165. M. Lopes Filho, H. Nussenzveig Lopes, E.S. Titi and A. Zang, *On the approximation of 2D Euler equations by second-grade fluid model with Dirichlet boundary conditions*, Journal of Mathematical Fluid Mechanics **17(2)** (2015), 327–340. arXiv:1412.6587
166. M. Abu Hamed, Y. Guo and E.S. Titi, *Inertial manifolds for certain sub-grid Scale  $\alpha$ -models of turbulence*, SIAM Journal on Applied Dynamical Systems (SIADS) **14(3)** (2015), 1308–1325. arXiv:1409.4810
167. Y. Guo and E.S. Titi, *On the backward behavior of some dissipative evolution equations*, Physica D **306** (2015), 34–47. doi:10.1016/j.physd.2015.05.011. arXiv:1502.07434[math.AP]
168. A. Farhat, E. Lunasin and E.S. Titi, *Abridged dynamic continuous data assimilation for the 2D Navier-Stokes equations*, Journal of Mathematical Fluid Mechanics **18(1)** (2016), 1–23. DOI: 10.1007/s00021-015-0225-6. arXiv:1504.05978[math.AP]
169. A. Farhat, E. Lunasin and E.S. Titi, *Data assimilation algorithm for 3D Bénard convection in porous media employing only temperature measurements*, Journal of Mathematical Analysis and Applications, **438(1)** (2016), 492–506. arXiv:1506.08678[math.AP]
170. J. Li and E.S. Titi, *Global well-posedness of the 2D Boussinesq equations with vertical dissipation*, Archive of Rational Mechanics & Analysis **220(3)** (2016), 983–1001. DOI: 10.1007/s00205-015-0946-y. arXiv:1502.06180[math.AP]
171. J. Li, E.S. Titi, Z. Xin, *On the uniqueness of weak solutions to the Ericksen-Leslie liquid crystal model in  $\mathbb{R}^2$* , Mathematical Models and Methods in Applied Sciences **26(4)** (2016), 803–822. arXiv:1410.1119[math.AP]



172. D.A.F. Albanez, H.J. Nussenzweig Lopes and E.S. Titi, *Continuous data assimilation for the three-dimensional Navier-Stokes— $\alpha$  model*, *Asymptotic Analysis* **97(1-2)** (2016), 139–164. (DOI) 10.3233/ASY-151351. arXiv:1408.5470[math.AP]
173. J. Li and E.S. Titi, *Global well-posedness of strong solutions to a tropical climate model*, *Discrete and Continuous Dynamical Systems - Series S* **36(8)** (2016), 4495–4516. doi:10.3934/dcds.2016.36.4495. (An invited article for a special issue in honor of Professor Peter Lax on the occasion of his 90<sup>th</sup> birthday). arXiv:1504.05285[math.AP]
174. M. Gesho, E. Olson and E.S. Titi, *A computational study of a data assimilation algorithm for the two-dimensional Navier–Stokes equations*, *Communications in Computational Physics* **19(4)** (2016), 1094–1110. doi:10.4208/cicp.060515.161115a. arXiv:1505.01234[math.DS]
175. P. Markowich, E.S. Titi and S. Trabelsi, *Continuous data assimilation for the three-dimensional Brinkman-Forchheimer-extended Darcy Model*, *Nonlinearity* **29(4)** (2016), 1292–1328. <http://dx.doi.org/10.1088/0951-7715/29/4/1292>. arXiv:1502.00964[math.AP]
176. J. Li and E.S. Titi, *A tropical atmosphere model with moisture: global well-posedness and relaxation limit*, *Nonlinearity* **29** (2016), 2674–2714. <https://doi.org/10.1088/0951-7715/29/9/2674>. arXiv:1507.05231[math.AP]
177. Y. Guo, I. Hacinliyan and E.S. Titi, *Helmholtz— $\alpha$  regularization and its modulation theory for the elliptic-elliptic Davey-Stewartson system*, *Journal of Mathematical Physics* **57** (2016), 081502. <https://doi.org/10.1063/1.4960047>. arXiv:1605.01804[math.AP]
178. J. Li and E.S. Titi, *Recent mathematical advances concerning certain classes of geophysical flows*. In: Yoshikazu Giga and Antonín Novotný (editors) *Handbook of Mathematical Analysis in Mechanics of Viscous Fluids*. pages 933–971. Springer, Cham (2018). [https://doi.org/10.1007/978-3-319-13344-7\\_22](https://doi.org/10.1007/978-3-319-13344-7_22). arXiv:1604.01695[math.AP]
179. C. Foias, C. Mondaini and E.S. Titi, *A discrete data assimilation scheme for the solutions of the 2D Navier-Stokes equations and their statistics*, *SIAM Journal on Applied Dynamical Systems (SIADS)* **15(4)** (2016), 2109–2142. <https://DOI:10.1137/16M1076526>. arXiv:1602.05995[math.AP]
180. J. Li and E.S. Titi, *Existence and uniqueness of weak solutions to viscous primitive equations for a certain class of discontinuous initial data*, *SIAM, Journal of Mathematical Analysis* **49(1)** (2017), 1–28. <https://DOI:10.1137/15M1050513>. arXiv:1512.00700[math.AP]
181. A. Farhat, E. Lunasin and E.S. Titi, *Continuous data assimilation algorithm for a 2D Bénard convection through horizontal velocity measurements alone*, *Journal of Nonlinear Science* **27** (2017), 1065–1087. <https://DOI:10.1007/s00332-017-9360-y>. arXiv:1602.00042[math.AP]
182. A. Farhat, E. Lunasin and E.S. Titi, *On the Charney conjecture of data assimilation employing temperature measurements alone: the paradigm of 3D planetary geostrophic model*, *Mathematics of Climate and Weather Forecasting* **2(1)** (2016), 61–74. <https://DOI:10.1515/mcwf-2016-0004>. arXiv:1608.04770[math.AP]
183. M.U. Altaf, E.S. Titi, T. Gebrael, O. Knio, L. Zhao, M.F. McCabe and I. Hoteit, *Downscaling the 2D Bénard convection equations using continuous data assimilation*, *Computational Geosciences (COMG)* **21(3)** (2017), 393–410. DOI 10.1007/s10596-017-9619-2. arXiv:1512.04671[math.OC]
184. M.S. Jolly, V.R. Martinez and E.S. Titi, *A data assimilation algorithm for the subcritical surface quasi-geostrophic equation*, *Advanced Nonlinear Studies* **17(1)** (2017), 167–192. <https://doi.org/10.1515/ans-2016-6019>. (An invited article for a special issue in memory of Professor Abbas Bahri). arXiv:1607.08574[math.AP]
185. C. Foias, M.S. Jolly, D.D. Lithio and E.S. Titi, *One-dimensional parametric determining form for the two-dimensional Navier-Stokes equations*, *Journal of Nonlinear Science* **27** (2017), 1513–1529. <https://DOI:10.1007/s00332-017-9375-4>. arXiv:1604.01727[math.DS]
186. M.S. Jolly, T. Sadigov and E.S. Titi, *Determining form and data assimilation algorithm for weakly damped and driven Korteweg-de Vries equation - Fourier modes case*, *Nonlinear Analysis: Real World Applications* **36** (2017), 287–317. <https://doi.org/10.3934/eect.2017027>. arXiv:1510.02730[math.DS]
187. C. Cao, J. Li and E.S. Titi, *Strong solutions to the 3D primitive equations with only horizontal dissipation: near  $H^1$  initial data*, *Journal of Functional Analysis* **272(11)** (2017), 4606–4641. <https://doi.org/10.1016/j.jfa.2017.01.018>. arXiv:1607.06252[math.AP]

188. E. Lunasin and E.S. Titi, *Finite determining parameters feedback control for distributed nonlinear dissipative systems - a computational study*, Evolution Equations and Control Theory (EECT) **6(4)** (2017), 535–557. <https://doi.org/10.3934/eect.2017027>. arXiv:1506.03709[math.AP]
189. A. Larios, M.R. Petersen, E.S. Titi, and B. Wingate, *A computational investigation of the finite-time blow-up of the 3D incompressible Euler equations based on the Voigt regularization*, Theoretical and Computational Fluid Dynamics **32(1)** (2018), 23–34. doi:10.1007/s00162-017-0434-0. arXiv:1512.07877[math.AP]
190. J. Cyranka, P.B. Mucha, E.S. Titi and P. Zgliczyński, *Stabilizing the long-time behavior of the forced Navier-Stokes and damped Euler systems by large mean flow*, Physica D **369** (2018), 18–29. <https://doi.org/10.1016/j.physd.2017.12.010>. arXiv:1601.04612[math.AP]
191. V. Kalantarov and E.S. Titi, *Global stabilization of the Navier-Stokes-Voigt and the damped nonlinear wave equations by finite number of feedback controllers*, Discrete and Continuous Dynamical Systems – Series B **23(3)** (2018), 1325–1345. doi:10.3934/dcdsb.2018153. (An invited article for a special issue in memory of Professor Igor Chueshov). arXiv:1706.00162[math.AP]
192. C. Mondaini, E.S. Titi, *Uniform in time error estimates for the postprocessing Galerkin method applied to a data assimilation algorithm*, SIAM Journal on Numerical Analysis **56(1)** (2018), 78–110. <https://doi.org/10.1137/16M110962X>. arXiv:1612.06998[math.NA]
193. S. Hittmeir, R. Klein, J. Li and E.S. Titi, *Global well-posedness for passively transported nonlinear moisture dynamics with phase changes*, Nonlinearity **30** (2017), 3676–3718. arXiv:1610.00060[math.AP]
194. C. Bardos and E.S. Titi, *Onsager’s conjecture for the incompressible Euler equations in bounded domains*, Archive of Rational Mechanics & Analysis **228(1)** (2018), 197–207. (DOI) 10.1007/s00205-017-1189-x. arXiv:1707.03115[math.AP]
195. A. Kostianko, E.S. Titi and S. Zelik, *Large dispersion, averaging and attractors: three 1D paradigms*, Nonlinearity **31** (2018) R317R350. <https://doi.org/10.1088/1361-6544/aae175>. arXiv:1601.00317[math.AP].
196. Q. Jiu, D. Niu, E.S. Titi and Z. Xin, *Axisymmetric Euler– $\alpha$  equations without swirl: existence, uniqueness and Radon measure valued solutions*, Pure and Applied Functional Analysis **4(3)** (2019), 573–588. arXiv:0907.2348[math.AP]
197. J. Li and E.S. Titi, *The primitive equations as the small aspect ratio limit of the Navier-Stokes equations: rigorous justification of the hydrostatic approximation*, Journal de Mathématiques Pures et Appliquées **124** (2019), 30–58. <https://doi.org/10.1016/j.matpur.2018.04.006>. arXiv:1706.08885[math.AP]
198. M.S. Jolly, V.R. Martinez, T. Sadigov and E.S. Titi, *A determining form for the subcritical surface quasi-geostrophic equation: Modal case*, Journal of Dynamics and Differential Equations **31** (2019), 1457–1494. (An invited article for a special issue in memory of Professor George Sell). <https://doi.org/10.1007/s10884-018-9652-4>. arXiv:1705.01700[math.AP]
199. A. Farhat, H. Johnston, M.S. Jolly and E.S. Titi, *Assimilation of nearly turbulent Rayleigh-Bénard flow through vorticity or local circulation measurements: a computational study*, Journal of Scientific Computing (JOMP) **77(3)** (2018), 1519–1533. <https://doi.org/10.1007/s10915-018-0686-x>. arXiv:1709.02417[math.AP]
200. A. Biswas, C. Foias, C. Mondaini and E.S. Titi, *Downscaling data assimilation algorithm with applications to statistical solutions of the Navier–Stokes equations*, Annales de l’Institut Henri Poincaré (C) Analyse Non Linéaire **36** (2019), 295–326. <https://doi.org/10.1016/j.anihpc.2018.05.004>. arXiv:1711.04067[math.AP]
201. C. Cao, Y. Guo and E.S. Titi, *Global strong solutions for a three-dimensional Hasegawa-Mima model with partial dissipation*, Journal of Mathematical Physics **59** (2018), 071503. <https://doi.org/10.1063/1.5022099>. arXiv:1801.02327[math.AP]
202. C. Bardos, P. Gwiazda, A. Świerczewska-Gwiazda, E.S. Titi and E. Wiedemann, *On the extension of Onsager’s conjecture for general conservation laws*, Journal of Nonlinear Science **29(2)** (2019), 501–510. DOI:10.1007/s00332-018-9496-4. arXiv:1806.02483[math.AP]
203. X. Liu and E.S. Titi, *Global existence of weak solutions to the compressible primitive equations of atmospheric dynamics with degenerate viscosities*, SIAM, Journal on Mathematical Analysis **51(3)** (2019), 1913–1964. arXiv:1808.03975[math.NA].

204. E.S. Titi and S. Trabelsi, *Global well-posedness of a 3D MHD model in porous media*, Journal of Geometric Mechanics **11(4)** (2019), 621–637. (An invited article for a special issue in honor of Professor Darryl Holm in the occasion of his 75th birthday). doi:10.3934/jgm.2019031. arXiv:1805.10661[math.AP]
205. M.S. Jolly, V.R. Marteniz, E. Olson and E.S. Titi, *Continuous data assimilation with blurred-in-time measurements of the surface quasi-geostrophic equation*, Chinese Annals of Mathematics, Series B, **40(5)** (2019), 721–764. (An invited article for a special issue in honor of Professor Andrew Majda in the occasion of his 70<sup>th</sup> birthday). DOI: 10.1007/s11401-019-0158-0. arXiv:1809.00106[math.AP]
206. E. Celik, E. Olson and E.S. Titi, *Spectral filtering of interpolant observables for a discrete-in-time downscaling data assimilation algorithm*, SIAM Journal on Applied Dynamical Systems (SIADS) **18(2)** (2019), 1118–1142. DOI: 10.1137/18M1218480. arXiv:1809.08654[math.DS]
207. C. Bardos, E.S. Titi and E. Wiedemann, *Onsager’s conjecture with physical boundaries and an application to the vanishing viscosity limit*, Communications in Mathematical Physics **370** (2019), 291–310. (DOI) <https://doi.org/10.1007/s00220-019-03493-6>. arXiv:1803.04939[math.AP]
208. T. Luo and E.S. Titi, *Non-uniqueness of weak solutions to hyperviscous Navier-Stokes equations - on sharpness of J.-L. Lions exponent*, Calculus of Variations and Partial Differential Equations **59:92**(2020), 15 pages. DOI: 10.1007/s00526-020-01742-4. arXiv:1808.07595[math.AP]
209. C. Cao and E.S. Titi, *Regularity “in large” for the 3D Salmon’s planetary geostrophic model of ocean dynamics*, Mathematics of Climate and Weather Forecasting **6** (2020), 1–15. <https://doi.org/10.1515/mcwf-2020-0001>. arXiv:1012.5656.
210. S. Desamsetti, H.P. Dasari, S. Langodan, E.S. Titi, O. Knio and I. Hoteit, *Efficient dynamical downscaling of general circulation models using continuous data assimilation*, Quarterly Journal of the Royal Meteorological Society **145(724)** (2019), 3175–3194. DOI: 10.1002/qj.3612. arXiv:1907.13008[physics.ao-ph]
211. H.A. Ibdah, C. Mondaini and E.S. Titi, *Uniform in time error estimates for fully discrete numerical schemes of a data assimilation algorithm*, IMA Journal of Numerical Analysis, **40** (2020), 2584–2625. doi:10.1093/imanum/drz043. arXiv:1805.01595[math.NA]
212. C. Bardos, P. Gwiazda, A. Świerczewska-Gwiazda, E.S. Titi and E. Wiedemann, *Onsager’s conjecture in bounded domains for the conservation of entropy and other companion laws*, Proceedings of the Royal Society A **485(2230)** (2019), 20190289. <https://doi.org/10.1098/rspa.2019.0289>. arXiv:1902.07120[math.AP]
213. B. García-Archilla, J. Novo and E.S. Titi, *Uniform in time error estimates for a finite element method applied to a downscaling data assimilation algorithm*, SIAM, Journal on Numerical Analysis **58(1)** (2020), 410–429. <https://doi.org/10.1137/19M1246845>. arXiv:1807.08735[math.NA]
214. C. Cao, Y. Guo and E.S. Titi, *Global regularity for a rapidly rotating constrained convection model of tall columnar structure with weak dissipation*, Journal of Differential Equations **269** (2020), 8736–8769. arXiv:1810.03596[math.AP]
215. X. Liu and E.S. Titi, *Well-posedness of strong solutions to the anelastic equations for viscous flows*, Journal of Mathematical Fluid Mechanics **22(3):39** (2020), 25 pages. <https://doi.org/10.1007/S00021-020-0491-9>. arXiv:1906.12233[math.AP].
216. C. Cao, Q. Lin and E.S. Titi, *On the well-posedness of reduced 3D primitive geostrophic adjustment model with weak dissipation*, Journal of Mathematical Fluid Mechanics **22(3):32** (2020), 34 pages. <https://doi.org/10.1007/s00021-020-00495-6>. arXiv:1903.09937[math.AP]
217. S. Hittmeir, R. Klein, J. Li and E.S. Titi, *Global well-posedness for the primitive equations coupled to a nonlinear moisture dynamics model with phase changes*, Nonlinearity **33** (2020), 3206–3236. <https://doi.org/10.1088/1361-6544/ab834f>. arXiv:1907.11199[math.AP].
218. Y. Cao, M.S. Jolly, E.S. Titi and J.P. Whitehead, *Algebraic bounds on the Rayleigh-Bénard attractor*, Nonlinearity **34** (2021), 509–531. <https://doi.org/10.1088/1361-6544/abb1c6>. arXiv:1905.01399[math.AP]
219. L. Hoang and E.S. Titi, *Asymptotic expansion in time for rotating incompressible viscous fluids*, Annales de l’Institut Henri Poincaré (C) Analyse Non Linéaire **38(1)** (2021), 109–137. <https://doi.org/10.1016/j.anihpc.2020.06.005>. arXiv:1910.09449[math.AP]

220. C. Cao, J. Li and E.S. Titi, *Global well-posedness of the 3D primitive equations with horizontal viscosity and vertical diffusivity*, *Physica D* **412** (2020), 132606. <https://doi.org/10.1016/j.physd.2020.132606>. arXiv:1703.02512[math.AP]
221. I. Hoteit, E.S. Titi, et al. (total 34 co-authors), *Towards an end-to-end analysis and prediction system for weather, climate, and marine applications in the red sea*, *Bulletin of the American Meteorological Society (BAMS)* (in final form 28 August 2020), January 2021, E99–E122. <https://doi.org/10.1175/BAMS-D-19-0005.1>.
222. X. Liu and E.S. Titi, *Zero Mach number limit of the compressible primitive equations, Part I: Well-prepared initial data*, *Archive of Rational Mechanics & Analysis* **238** (2020), 705–747. <https://doi.org/10.1007/s00205-020-01553-z>. arXiv:1905.09367[math.AP]
223. C. Cao, Y. Guo and E.S. Titi, *Global well-posedness for a rapidly rotating convection model of tall columnar structure in the limit of infinite Prandtl number*, *Journal of Evolution Equations* **21** (2021), 2923–2954. (An invited article for a special issue on “Evolution Equations – New Perspectives for Theory and Applications” in honor of Professor Matthias Hieber on the Occasion of his 60<sup>th</sup> birthday). <https://doi.org/10.1007/s00028-020-00644-4>. arXiv:2003.03478[math.AP].
224. S. Ibrahim, Q. Lin and E.S. Titi, *Finite-time blowup and ill-posedness in Sobolev spaces of the inviscid primitive equations with rotation*, *Journal of Differential Equations* **286** (2021), 557–577. <https://doi.org/10.1016/j.jde.2021.03.037>. arXiv:2009.04017[math.AP]
225. X. Liu and E.S. Titi, *Local well-posedness of strong solutions to the three-dimensional compressible primitive equations*, *Archive of Rational Mechanics & Analysis* **241** (2021), 729–764. <https://doi.org/10.1007/s00205-021-01662-3>. arXiv:1806.09868[math.AP]
226. C. Bardos and E.S. Titi,  *$C^{0,\alpha}$  boundary regularity for the pressure in weak formulation of the 2d Euler equations*, *Philosophical Transactions of the Royal Society A* **380** (2022), 20210073. <https://doi.org/10.1098/rsta.2021.0073>. arXiv:2107.05703[math.AP]
227. J. Li, E.S. Titi and G. Yuan, *The primitive equations approximation of the anisotropic horizontally viscous 3D Navier-Stokes equations*, *Journal of Differential Equations* **306** (2022), 492–524. <https://doi.org/10.1016/j.jde.2021.10.048>. arXiv:2106.00201[math.AP]
228. R. Denk, Y. Giga, H. Kozono, J. Saal, G. Simonett and E.S. Titi, *Preface*, *Journal of Evolution Equations* (2021), Special Issue in Honor of Matthias Hieber on the Occasion of his 60<sup>th</sup> Birthday (appeared online), <https://doi.org/10.1007/s00028-021-00751-w>.
229. T.E. Ghoul, S. Ibrahim, Q. Lin and E.S. Titi, *On the effect of rotation on the life-span of analytic solutions to the 3D inviscid primitive equations*, *Archive of Rational Mechanics & Analysis* **243** (2022), 747–806. <https://doi.org/10.1007/s00205-021-01748-y>. arXiv:2010.01740[math.AP]
230. C. Bardos, Trinh T. Nguyen, Toan T. Nguyen and E.S. Titi, *The inviscid limit for the 2d incompressible Navier-Stokes equations in bounded domains*, *Kinetic and Related Models (KRM)* **15(3)** (2022), 317–340. Dedicated to the memory of Professor Robert T. Glassey. doi: 10.3934/krm.2022004. arXiv:2111.14782[math.AP]
231. S. Desamsetti, H. Prasad Dasari, S. Langodan, Y. Viswanadhapalli, R. Attada, T.M. Luong, O. Knio, E.S. Titi and I. Hoteit, *Enhanced simulation of the Indian summer monsoon rainfall using continuous data assimilation*, *Frontiers in Climate* (section Predictions and Projections) 25 February 2022. <https://doi.org/10.3389/fclim.2022.817076>. arXiv:2201.10954 [physics.ao-ph].
232. Y. Cao, M.S. Jolly and E.S. Titi, *Determining form for the 2D Rayleigh–Bénard problem*, *Pure and Applied Functional Analysis*, **7(1)** (2022), 99–132. (An invited article for a special issue in honor of Professor Ciprian Foias on the occasion of his 85<sup>th</sup> birthday). arXiv:1907.00387[math.AP]
233. X. Liu, M. Thomas and E.S. Titi, *Well-posedness of Hibler’s dynamical sea-ice model*, *Journal of Nonlinear Science* **32:49** (2022). <https://doi.org/10.1007/s00332-022-09803-y>. arXiv:2104.09264[math.AP]
234. Q. Lin, X. Liu, and E.S. Titi, *On the effect of fast rotation and vertical viscosity on the lifespan of the 3D primitive equations*, *Journal of Mathematical Fluid Mechanics* **24:73** (2022). <https://doi.org/10.1007/s00021-022-00705-3>. arXiv:2203.04922[math.AP]

235. O. Saporta-Katz, E.S. Titi, H. Gildor and V. Rom-Kedar, *A dynamic-kinematic 3D model for density-driven ocean circulation flows: Construction, global well-posedness and dynamics*, *Journal of Nonlinear Science* **33:1** (2023). <https://doi.org/10.1007/s00332-022-09837-2>. arXiv:2105.09739[physics.geo-ph]
236. D.W. Boutros and E.S. Titi, *Onsager’s conjecture for subgrid scale  $\alpha$ -models of turbulence*, *Physica D* **443** (2023), 133553. (An invited article for a special issue in memory of Charles R. Doering). <https://doi.org/10.1016/j.physd.2022.133553>. arXiv:2207.03416[math.AP]
237. E.S. Titi and S. Trabelsi, *Global well-posedness of a three-dimensional Brinkman-Forchheimer-Bénard convection model in porous media*, *Discrete and Continuous Dynamical Systems - Series S* (2022), (appeared online). <https://doi.org/10.3934/dcdss.2022165>. (An invited article for a special issue on “Partial Differential Equations and Semigroups in Applied Analysis” in honor of Professor Jerome A. Goldstein on the Occasion of his 80<sup>th</sup> birthday). arXiv:2204.03531[math.AP].
238. H. Bercovici, P. Constantin, A. Tannenbaum, R. Temam, and E.S. Titi, *Remembrances of Ciprian Ilie Foias: Ciprian Ilie Foias (1933–2020)*, *Notices of the American Mathematical Society* **69(9)** October 2022, 1529–1545. <https://doi.org/10.1090/noti2545>.
239. M.A. Hammoud, O. Le Maître, E.S. Titi, I. Hoteit and O. Knio, *Continuous and discrete data assimilation with noisy observations for the Rayleigh-Bénard convection: A computational study*, *Computational Geosciences: Modeling, Simulation and Data Analysis* **27** (2023), 63–79. <https://doi.org/10.1007/s10596-022-10180-4>. arXiv:2211.02828[math.DS].
240. M.A. Hammoud, E.S. Titi, I. Hoteit and O. Knio, *CDAnet: A physics-informed deep neural network for downscaling fluid flows*, *Journal of Advances in Modeling Earth Systems (JAMES), Special Section: Machine learning application to Earth system modeling* **14(12)** (2022), 1–22. (Appeared online 12 December 2022). <https://doi.org/10.1029/2022MS003051>
241. X. Liu and E.S. Titi, *Zero Mach number limit of the compressible primitive equations: Ill-prepared initial data*, *Journal of Differential Equations* **356** (2023), 1–58. <https://doi.org/10.1016/j.jde.2023.01.031>. arXiv:2208.02329[math.AP].
242. D. Basari, P. Bella, E. Feireisl, F. Oschmann and E.S. Titi, *On the incompressible limit of a strongly stratified heat conducting fluid*, *Journal of Mathematical Fluid Mechanics* **25:56** (2023). An invited article for a special issue on the occasion of the 100<sup>th</sup> anniversary of Olga Ladyzhanskaya. <https://doi.org/10.1007/s00021-023-00791-x>. arXiv:2212.10902[math.AP].
243. S. Hittmeir, R. Klein, J. Li and E.S. Titi, *Global well-posedness for the thermodynamically refined passively transported nonlinear moisture dynamics with phase changes*, *Journal of Nonlinear Science* **33:65** (2023). <https://doi.org/10.1007/s00332-023-09915-z>. arXiv:2206.13471[math.AP].
244. D.W. Boutros, S. Markfelder and E.S. Titi, *On energy conservation for the hydrostatic Euler equations: An Onsager conjecture*, *Calculus of Variations and Partial Differential Equations*, **62:219** (2023), (40 pages). <https://doi.org/10.1007/s00526-023-02558-8>. arXiv:2208.08334[math.AP].
245. E. Carlson, A. Larios and E.S. Titi, *Super-exponential convergence rate of a nonlinear continuous data assimilation algorithm: The 2D Navier-Stokes equations paradigm*, (2023), (accepted). *Journal of Nonlinear Science*. arXiv:2304.01128[math.AP].

#### Articles in Refereed Proceedings & Preprints:

1. H.S. Brown, M.S. Jolly and I.G. Kevrekidis and E.S. Titi, *Use of approximate inertial manifolds in bifurcation calculations*, *Proceedings of NATO Advanced Research Workshop on: Continuation and Bifurcations : Numerical Techniques and Applications*, September 18 – 22, 1989, Belgium, D. Roose et al. (eds.), pp. 9–23, Kluwer Academic Publishers.
2. A. Bloch and E.S. Titi, *On the dynamics of rotating elastic beams*, *Proceedings of: New Trends in Systems Theory*, July 9–11, 1990, Genoa, Italy: G. Conte, A.M. Perdon and B. Wyman, eds., Birkhäuser, Boston, Basel, Berlin.

3. A. Doelman and E.S. Titi, *On the exponential rate of convergence of the Galerkin approximation in Ginzburg–Landau equation*, Proceedings of the NATO Advanced Research Workshop: Asymptotic and Numerical Methods for Partial Differential Equations with Critical Parameters, M. Garbey and H.G. Kaper, eds., Kluwer Academic Publishers, Dordrecht, 1993, pp. 241–252.
4. S. Shvartsman, C. Theodoropoulos, R. Rico-Martinez, I.G. Kevrekidis, E.S. Titi, and T. J. Mountziaris, *Order reduction of nonlinear dynamic models for distributed reacting systems*, Proceedings of DYCOPS-5, Corfou, Greece, June 1997, C. Georgakis, ed., pp.674–681.
5. C. Cao and E.S. Titi, *Asymptotic behavior of viscous  $1 - D$  scalar conservation law with Neumann boundary conditions*, Third Palestinian Mathematics Conference, Bethlehem University, West Bank, Mathematics & Mathematics Education, S. Elaydi, R. Abu Saris, M. Saleh, S. K. Jain and E. S. Titi, editors, World Scientific, 2002.
6. K.R. Ríos-Soto, C. Castillo-Chavez, M. Neubert, E.S. Titi, A. Yakubu, *Epidemic spread in population at demographic equilibrium*, “Mathematical Studies on Human Diseases Dynamics: Emerging Paradigms and Challenges”, Proceeding Snowbird Conference, July 17–21, 2005. Eds. A. Gumel (Chief Editor), C. Castillo-Chavez, R.E. Mickens and D.P. Clemence, Contemporary Mathematics Vol. 410, AMS (2006), pages 280–297.
7. A. Larios and E.S. Titi, *Global regularity vs. finite-time singularities: some paradigms on the effect of boundary conditions and certain perturbations*, “Recent Progress in the Theory of the Euler and Navier-Stokes Equations”, J.C. Robinson, J.L. Rodrigo, W. Sadowski, & A. Vidal-López, editors. London Mathematical Society Lecture Notes, **No. 430** (2016), pages 96–125, Cambridge University Press, doi:10.1017/CBO9781316407103.007. arXiv:1401.1534
8. A. Larios and E.S. Titi, *A blow-up criterion for the 3D Euler equations via the Euler-Voigt inviscid regularization*, Preprint (2015). arXiv:1507.08203[math.AP]
9. A. Farhat, E. Lunasin and E.S. Titi, *A data assimilation algorithm: the paradigm of the 3D Leray– $\alpha$  model of turbulence*, “Nonlinear Partial Differential Equations Arising from Geometry and Physics”, Cambridge University Press, London Mathematical Society, Lecture Notes Series, (2018). arXiv:1702.01506[math.AP].
10. C. Mondaini, E.S. Titi, *Postprocessing Galerkin method applied to a data assimilation algorithm: a uniform in time error estimate*, Preprint (2016), arXiv:1612.06998[math.NA]
11. X. Liu and E.S. Titi, *Local well-posedness of strong solutions to the three-dimensional compressible primitive equations*, Preprint (2018). arXiv:1806.09868[math.AP].
12. Yoshikazu Giga, Matthias Hieber, Peter Korn, Edriss S. Titi, (Editors), *Mathematical Advances in Geophysical Fluid Dynamics*. Oberwolfach Report No. **17** (2020), no. 2/3, pp. 857–876. DOI 10.4171/OWR/2020/15
13. Yoshikazu Giga, Matthias Hieber, Peter Korn, Edriss S. Titi, (Editors), *Mathematical Advances in Geophysical Fluid Dynamics*, Oberwolfach Report No. **19** (2022), no. 4, pp. 2961–3003. DOI 10.4171/OWR/2022/51
14. L. Huysmans and E.S. Titi, *Non-uniqueness of the vanishing viscosity limit for passive scalar transport along an incompressible flow*, Oberwolfach Reports – OWR (2022). Workshop on “Mathematical Advances in Geophysical Fluid Dynamics”, co-organized Y. Giga, M. Hieber, P. Korn and E.S. Titi.
15. D.W. Boutros, S. Markfelder and E.S. Titi, *On energy conservation for the hydrostatic Euler equations: an Onsager conjecture*, Oberwolfach Reports – OWR (2022). Workshop on “Mathematical Advances in Geophysical Fluid Dynamics”, co-organized Y. Giga, M. Hieber, P. Korn and E.S. Titi.

#### Articles Submitted or in Preparation for Publication:

1. C. Bardos, D.W. Boutros and E.S. Titi, *Hölder regularity of the pressure for weak solutions of the 3D Euler equations in bounded domains*, (2023), (submitted). arXiv:2304.01952[math.AP].
2. D.W. Boutros, S. Markfelder and E.S. Titi, *Nonuniqueness of generalised weak solutions to the primitive and Prandtl equations*, (2023), (submitted). arXiv:2305.14505[math.AP].
3. C. Bardos, X. Liu and E.S. Titi, *Derivation of a generalized quasi-geostrophic approximation for inviscid flows in a channel domain: The fast waves correction*, (2023), (submitted). arXiv:2304.08303[math.AP].

4. X. Liu and E.S. Titi, *Rigorous justification of the hydrostatic approximation limit of viscous compressible flows*, (2023), (submitted). arXiv:2305.08213[math.AP].
5. P. Korn and E.S. Titi, *Global well-posedness of the primitive equations of large-scale ocean dynamics with the Gent-McWilliams-Redi eddy parametrization model*, (2023), (submitted). arXiv:2304.03242[math.AP].
6. L. Huysmans and E.S. Titi, *Non-uniqueness and inadmissibility of the vanishing viscosity limit of the passive scalar transport equation*, (2023), (submitted). arXiv:2307.00809[math.AP].
7. R. Nickl and E.S. Titi, *On posterior consistency of data assimilation with Gaussian process priors: the 2D Navier-Stokes equations*, (2023), (submitted). arXiv:2307.08136[math.ST]
8. M.A. Hammoud, E.S. Titi, I. Hoteit and O. Knio, *Downscaling using CDAnet under observational and model noises: The Rayleigh-Bénard convection paradigm*, (2023), (submitted). arXiv:2310.11945[math.DS]
9. E. Koronaki, N. Evangelou, C. Martin-Linares, E.S. Titi and I.G. Kevrekidis, *Nonlinear dimensionality reduction then and now: AIMS for dissipative PDEs in the ML era*, (2023), (submitted). arXiv:2310.15816 [math.DS]
10. M.A. Hammoud, N. Raboudi, E.S. Titi, O. Knio and I. Hoteit, *Paradigm shift in data assimilation: Reinforcement learning for chaotic systems*, (2023), (submitted).
11. R. Klein, J. Li, X. Liu, E.S. Titi, *A-priori estimates of solutions to a compressible primitive equations with vertical diffusion*, (in preparation).
12. S. Hittmeir, R. Klein, X. Liu, E.S. Titi, *Local well-posedness of strong solutions to a system of equations governing the dynamics of moist air in the atmosphere*, (in preparation).
13. X. Liu, E.S. Titi, *Global stability of the equilibrium with physical vacuum for the free boundary problem of compressible primitive equations*, (in preparation).
14. A. Biswas, R. Price and E.S. Titi, *Discrete data assimilation with model uncertainty and observational error*, (in preparation).
15. C. Cao and E.S. Titi, *Regularity criterion on pressure for the three-dimensional Navier–Stokes equations with partial Dirichlet boundary conditions*, (in preparation).
16. M. Lopes Filho, H. Nussenzveig Lopes, E.S. Titi and A. Zang, *Convergence of 3D Euler– $\alpha$  to Euler equations with Dirichlet boundary conditions*, (in preparation).
17. C. Bardos, E.S. Titi and A. Zang, *Global weak solutions for the 2D & 3D inviscid Leray– $\alpha$  in bounded domains and their convergence to Euler equations*, (in preparation).
18. C. Bardos and E.S. Titi, *Remarks in recent advances concerning boundary effects and vanishing viscosity limit of the Navier-Stokes equations*, (in preparation).
19. C. Bardos and E.S. Titi, *Anomalous dissipation in a disc*, (in preparation).
20. A. Farhat, S. Hauk and E.S. Titi, *Long-time behavior of the Stommel-Charney model of the gulf-stream*, (in preparation).