Igor Kukavica
Curriculum Vitae

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Education:

Ph.D. Mathematics, Indiana University, August 1993; *thesis advisor:* Ciprian Foias
Performer Diploma in Guitar, Indiana University, May 1992; studio of: Ernesto Bitetti
M.S. Mathematics, University of Ljubljana, Slovenia, July 1988; *thesis advisor:* Matjaž Omladič
B.S. Mathematics, University of Ljubljana, Slovenia, August 1986; *thesis advisor:* Matjaž Omladič

Research Interests:

Partial differential equations (deterministic and stochastic), mathematical fluid dynamics

Positions Held:

September 2004–Present, Professor, University of Southern California
January 2012–May 2012, Visiting Associate, Caltech
September 1998–August 2004, Associate Professor, University of Southern California
September 1997–August 1998, Assistant Professor, University of Southern California
October 1995–August 1997, Assistant Professor, The University of Chicago
October 1993–September 1995, Dickson Instructor, The University of Chicago

Editorial Boards:

August 2015–Present, AIMS Mathematics
January 2013–Present, Applied Mathematics and Optimization
March 2012–Present, Asymptotic Analysis
November 2005–Present, Communications in Pure and Applied Analysis
August 2016–Present, Lecture Notes in Mathematical Fluid Dynamics
August 2012–July 2018, Nonlinear Analysis: Real World Applications

Awards:

USC Mentoring award, 2019
AMS Fellow, 2018
NSF grant, DMS-2205493, July 2022–June 2025,
NSF grant, DMS-1907992, July 2019–June 2022,
NSF grant, DMS-1615239, July 2016–June 2019,
NSF grant, DMS-1311943, July 2013–June 2016
NSF grant, DMS-1009769, July 2010–June 2013
NSF grant, DMS-0604886, July 2006–June 2010
NSF grant, DMS-0306586, July 2003–June 2006
NSF grant DMS-0072662, July 2000–June 2003
NSF grant DMS-9623161, July 1996–June 1999
Alfred P. Sloan Fellowship, 2000
Alfred P. Sloan doctoral dissertation fellowship, 1991
Weber Award, Indiana University, 1990
Prešeren Award, University of Ljubljana, 1987

Ph.D. students with current affiliations:

Mehmet Malcok, Ph.D., 2001, Nationwide insurance
Juan J. Torres, Ph.D., 2006, Orange Coast College
Vlad Vicol, Ph.D., 2010, Courant Institute, NYU
Ednei Reis, Ph.D., 2011, Universidade Tecnológica Federal do Paraná UTFPR, Brazil
Mihaela Ignatova, Ph.D., 2011, Temple University
Yuan Pei, Ph.D., 2014, Western Washington University
Fei Wang, Ph.D., 2016, Shanghai Jiao Tong University
Guher Camliyurt, Ph.D., 2018, Virginia Tech
Weinan Wang, Ph.D., 2019, University of Oklahoma
David Massatt, Ph.D., 2022, Aerospace Corporation
Linfeng Li Ph.D., 2023 (joint with Juhi Jang), Hedrick Assistant Adjunct Professor, UCLA
Quinn Le Ph.D., 2024, Chase Bank
Mustafa Aydin (current)
Qi Xu (current)
Benjamin Ingimarson (current)

Postdoctoral Associates:

Seok Huang, Amjad Tuffaha, Walter Rusin, Weiwei Hu, Wojciech Ozanski, Trinh Nguyen, Pranava Jayanti (current), Abhishek Balakrishna (current)

Publications:

179. (with M.C. Lombardo and M. Sammartino), *On the local analyticity for the Euler equations* (submitted); arXiv:2502.00427.

178. (with M. Aydin and A. Tuffaha), *A free boundary inviscid model of flow-structure interaction* (submitted); arXiv:2501.10331.

177. (with M. Aydin and F. Xu), *Almost global existence for the stochastic Navier-Stokes equations with small $H^{1/2}$ data* (submitted); arXiv:2501.10331.

176. (with L. Li) *Observability from a measurable set for functions in a Gevrey class* (submitted); arXiv:2411.00342.

175. (with W. Ozanski), *Exact boundary controllability of the 3D and 2D incompressible ideal MHD system*, (submitted); arXiv:2410.02588.

174. (with F. Xu), *Global existence of the stochastic Navier-Stokes equations in L^3 with small data* (submitted); arXiv:2410.02919.

173. (with G. Camliyurt and L. Li), *Upper bounds of nodal sets for Gevrey regular parabolic equations*, (submitted); arXiv:2409.09879.

172. (with F. Wang and Y. Zhu), *On Green's function of the vorticity formulation for the 3D Navier-Stokes equations* (submitted); arXiv:2407.10751.

171. (with M.S. Aydin), *Euler Equations in Sobolev conormal spaces*, Research in the Mathematical Sciences (to appear); arXiv:2407.18149.

170. (with M.S. Aydin), *Uniform bounds and the inviscid limit for the Navier-Stokes equations with Navier boundary conditions*, SIAM J. Math. Anal. (to appear), arXiv:2307.02201.

169. (with T. Alazard and A. Tuffaha), *Global-in-time weak solutions for an inviscid free surface fluid-structure problem without damping* (submitted); arXiv:2404.09820.

168. (with A. Balakrishna, B. Muha, and A. Tuffaha), *Inviscid fluid interacting with a nonlinear two-dimensional plate*, Interfaces and Free Boundaries (to appear); arXiv:2411.00115.

167. (with L. Li and A. Tuffaha), *On the local existence of solutions to the Navier-Stokes-wave system with a free interface* Applied Mathematics and Optimization (to appear), arXiv:2202.02707.

166. (with Šárka Nečasová and Amjad Tuffaha), *Compressible Euler Equations in an elastic domain* Indiana Univ. Math. J. (to appear),
arXiv:2311.08731.

165. (with W. Ozanski and M. Sammartino), *The inviscid inflow-outflow problem via analyticity*, Archive Rational Mech. Analysis (to appear).

164. (with F. Wang and F. Xu), *Local existence of the stochastic Navier-Stokes equations in the whole space*, Stochastics and PDE (to appear); arXiv:2301.12877.

163. (with A. Tuffaha), *A free boundary inviscid model of flow-structure interaction*, J. Differential Equations **413** (2024), 851–912.

162. (with M. Aydin and M. Ziane), *On asymptotic properties of the Boussinesq equations*, Discrete Contin. Dynam. Systems B **30** (2025), no. 1, 26–43.

161. (with Q. Le), *On the pointwise Schauder estimates for elliptic equations*, Discrete Contin. Dynam. Systems **44** (2024), No. 12, 3734–3759.

160. (with J. Jang and P. Jayanti), *On the mass transfer in the 3D Pitaevskii model*, J. Math. Fluid Mech. **26**, 43 (2024).

159. (with J. Jang and P. Jayanti), *Small-data global existence of solutions for the Pitaevskii model of superfluidity*, Nonlinearity **37** (2024) 39pp.

158. (with L. Li and A. Tuffaha), *On the local existence of solutions to the compressible Navier-Stokes-wave system with a free interface*, J. Math. Fluid Mech. **26** (2024), no. 2, Paper No. 25, 37 pp.

157. (with M.S. Aydin, W. Ozanski, and A. Tuffaha), *Construction of the free-boundary 3D incompressible Euler flow under limited regularity*, J. Differential Equations **394** (2024), 209–236.

156. (with W. Ozanski), *On a model of an elastic body fully immersed in a viscous incompressible fluid with small data*, SIAM J. Math. Anal. **56** (2024), no. 1, 746–761.

155. (with W. Ozanski), *Global well-posedness and exponential decay for a fluid-structure model with small data*, Indiana University Math. J. **72** (2023), no. 6, 2701–2731.

154. (with L. Li and A. Tuffaha), *Maximal regularity for the Neumann-Stokes problem in $H^{r/2,r}$ spaces*, C. R. Math. Rep. Acad. Sci. Canada **45** (2023), 56–63.

153. (with D. Massatt and M. Ziane), *Asymptotic properties of the Boussinesq equations with Dirichlet boundary conditions*, Discrete Contin. Dynam. Systems **43** (2023), 3060–3081.

152. (with A. Tuffaha), *An inviscid free boundary fluid-wave model*, Journal of Evolution Equations **23** (2023) Article 41.

151. (with F. Xu), *Local existence of strong solutions to the stochastic Navier-Stokes equations with L^p data*, J. Diff. Eq. **359** (2023), 183–210.

150. (with D. Massatt), *On the global existence for the Kuramoto-Sivashinsky equation*, J. Dynam. Diff. Eq. **35** (2023), 69–85.

149. (with W. Ożański), *Local-in-time existence of free-surface 3D Euler flow with $H^{2+\delta}$ initial vorticity in a neighborhood of the free boundary*, Nonlinearity **36** (2023), 636–652.

148. (with Q. Le), *On quantitative uniqueness for parabolic equations*, J. Diff. Eq. **341** (2022), 438–480.

147. (with J. Jang and L. Li), *Mach limits in analytic spaces on exterior domains*, Discrete Contin. Dynam. Systems **42** (2022), 3629–3659.

146. (with Z. Bradshaw and W. Ozanski), *Global existence for the Navier-Stokes equations for intermittent initial daa in half-space*, Arch. Ration. Mech. Anal. **245** (2022), 321–371.

145. (with T. Nguyen, V. Vicol, and F. Wang), *On the Euler+Prandtl expansion for the Navier-Stokes equations*, J. Math. Fluid Mechanics **24** (2022), 46 pp.

144. (with V. Vicol and F. Wang), *Remarks on the inviscid limit problem for the Navier-Stokes equations*, Pure and Applied Functional Analysis **7** (2022), 283–306.

143. (with Z. Bradshaw and T.-P. Tsai), *Existence of global weak solutions to the Navier-Stokes equations in weighted spaces*, Indiana University Math. J. **71** (2022), 191–212.

142. (with M. Novack and V. Vicol), *Exact boundary controllability for the ideal Magneto-Hydrodynamic Equations*, J. Diff. Eq. **318** (2022), 94-112.

141. (with F. Xu and M. Ziane), *Global existence for the stochastic Navier-Stokes equations with small L^p data*, Stochastics and PDE: Analysis and Computation **10** (2021), 160–189.

140. (with W. Ozanski), *An anisotropic regularity condition for the 3D incompressible Navier-Stokes equations for the entire exponent range*, Applied Mathematics Letters **122** (2021), 9 pp.

139. (with J. Jang and L. Li), *Mach limits in analytic spaces*, Journal of Differential Equations **299** (2021), 284–332.

138. (with W. Wang), *Long time behavior of solutions to the 2D Boussinesq equations with zero diffusivity*, J. Dynam. Diff. Eq. **32** (2020), 2061–2077.

137. (with V. Vicol and F. Wang), *The inviscid limit for the Navier-Stokes equations with data analytic only near the boundary*, Arch. Ration. Mech. Anal. **237** (2020), 779–827.

136. (with G. Camliyurt and V. Vicol), *Analyticity up to the boundary for the Stokes and the Navier-Stokes systems*, Transactions of AMS **373** (2020), 3375–3422.

135. (with W. Wang), *Global Sobolev persistence for the fractional Boussinesq equation with zero diffusivity*, Pure and Applied Functional Analysis **5** (2020), 27–45.

134. (with Z. Bradshaw), *Existence of suitable weak solutions to the Navier-Stokes equations for intermittent data*, J. Math. Fluid Mechanics **22** (2020), paper no. 3, 20pp.

133. (with M. Disconzi and A. Tuffaha), *A Lagrangian interior regularity result for the incompressible free boundary Euler equation with surface tension*, SIAM J. Math. Anal. **51** (2019), 3982–4022.

132. (with M. Disconzi), *A priori estimates for the free-boundary Euler equations with surface tension in three dimensions*, Nonlinearity **32** (2019), 3369–3405.

131. (with M. Disconzi), *A priori estimates for the 3D compressible free-boundary Euler equations with surface tension in the case of a liquid*, Evolution Equations and Control Theory **8** (2019), 503–542.

130. (with F. Xu), *Local existence for the stochastic Euler equations with Lévy noise*, Asymptotic Analysis **113** (2019), 1–27.

129. (with W. Rusin and M. Ziane), *On local regularity conditions for the Navier-Stokes equations*, Nonlinearity **32** (2019) 1905–1928.

128. (with G. Camliyurt and F. Wang), *On quantitative uniqueness for elliptic equations*, Math. Z. **1–2** (2019), 227–244.

127. (with G. Camliyurt and V. Vicol), Gevrey regularity of the Navier-Stokes in a half-space, J. Diff. Eq. **265** (2018), 4052–4075.

126. (with G. Camliyurt and F. Wang), *On localization and quantitative uniqueness for the elliptic partial differential equations*, Partial differential equations in fluid mechanics, 68—96, London Math. Soc. Lecture Note Ser., 452, Cambridge Univ. Press, Cambridge, 2018.

125. (with V. Vicol), *A direct approach to Gevrey regularity on the half-space*, Partial differential equations in fluid mechanics, 268—288, London Math. Soc. Lecture Note Ser., 452, Cambridge Univ. Press, Cambridge, 2018.

124. (with B. Kaltenbacher, I. Lasiecka, R. Triggiani, A. Tuffaha, and J.T. Webster), Mathematical theory of evolutionary fluid-flow structure interactions, Birkhäuser, 2018 (book); with A. Tuffaha, An introduction to a fluid-structure model, pp. 1–52. on report2/2016

123. (with I. Ekren and M. Ziane), *Existence of invariant measures for the stochastic damped KdV equation*, Indiana Univ. Math. J. **67** (2018), 1221–1254.

122. (with G. Camliyurt), *On the Lagrangian and Eulerian analyticity for the Euler equations*, Physica D **376–377** (2018), 121–130.

121. (with F. Wang), *Far field regularity for the supercritical quasi-geostrophic equation*, Communications in Mathematical Sciences **16** (2018), 393–410.

120. (with G. Camliyurt), *Quantitative unique continuation for a parabolic equation*, Indiana Univ. Math. J. **67** (2018), 657–678.

119. (with M. Disconzi), *On the local existence for the Euler equations with free boundary for compressible and incompressible fluids*, C. R. Math. Acad. Sci. Paris **356** (2018), 306–311.

118. (with A. Tuffaha), *A sharp regularity result for the Euler equation with a free interface*, Asymptotic Analysis **106** (2018), 121–145.

117. (with K. Ugurlu and M. Ziane), *On the Galerkin approximation and strong norm bounds for the stochastic Navier-Stokes equations with multiplicative noise*, Differential Integral Equations **31** (2018), 173—186.

116. (with A. Tuffaha and V. Vicol), *On the local existence for the 3D Euler equation with a free interface*, Appl. Math. Optim. **76** (2017), 535–563.

115. (with W. Rusin and M. Ziane), *Localized anisotropic regularity conditions for the Navier-Stokes equations*, Journal of Nonlinear Science **27** (2017), 1725–1742.

114. (with I. Ekren and M. Ziane), *Existence of invariant measures for the stochastic damped Schrödinger equation*, Stochastics and PDE: Analysis and Computation **5** (2017), 343–367.

113. (with I. Ekren and M. Ziane), *Existence of invariant measures for some damped stochastic dispersive equations*, C. R. Math. Acad. Sci. Paris **355** (2017), 676–679.

112. (with W. Rusin and M. Ziane), *An anisotropic partial regularity criterion for the Navier-Stokes equations*, J. Math. Fluid Mech. **19** (2017), 123-133.

111. (with M. Ignatova, I. Lasiecka, and A. Tuffaha), *Small data global existence for a fluid-structure model*, Nonlinearity **30** (2017), 848–898.

110. (with V. Vicol and F. Wang), *The van Dommelen and Shen singularity in the Prandtl equations*, Advances in Mathematics **307** (2017), 288–311.

109. (with G. Camliyurt), *A local asymptotic expansion for a solution of the Stokes system*, Evol. Equ. Control Theory **5** (2016), 647–659.

108. (with V. Vicol and F. Wang), *On the ill-posedness of active scalar equations with odd singular kernels*, Proceedings of the Eighth Congress of Romanian Mathematicians, New Trends in Differential Equations, Control Theory and Optimization

(2016), 185–200.

107. (with M. Ignatova), *On the local existence of the free-surface Euler equation with surface tension*, Asymptotic Analysis **100** (2016), 63–86.

106. (with P. Constantin and V. Vicol), *Contrast between Lagrangian and Eulerian analytic regularity properties of Euler equations*, Ann. I. Poincaré **33** (2016), 1569–1588.

105. (with M. Sammartino and M.C. Lombardo), *Zero viscosity limit for analytic solutions of the primitive equations*, Arch. Rational Mech. Anal. **222** (2016), 14–45.

104. (with A. Tuffaha, V. Vicol, and F. Wang), *On the existence for the free interface 2D Euler equation with a localized vorticity condition*, Appl. Math. Optim. **73** (2016), 523–544.

103. (with A. Bensoussan, I. Lasiecka, S. Mitter, R. Temam, and R. Triggiani), *Preface: In memory of A.V. Balakrishnan*, Appl. Math. Optim. **73** (2016), 391–392.

102. (with W. Hu, F. Wang, and M. Ziane), *Review for Boussinesq equations with zero viscosity or zero diffusivity*, Recent Progress in the Theory of the Euler and Navier-Stokes equations, J.C. Robinson, J.L. Rodrigo, W. Sadowski, and A. Vidal-López editors, London Mathematical Society Lecture Note Series (2016), 77-95.

101. (with Z. Bradshaw and Z. Grujić), *Analyticity radii and the Navier-Stokes equations: recent results and applications*, *Recent Progress in the Theory of the Euler and Navier-Stokes equations*, J.C. Robinson, J.L. Rodrigo, W. Sadowski, and A. Vidal-López editors, London Mathematical Society Lecture Note Series (2016), 22–36.

100. (with M. Ignatova and L. Ryzhik), *The Harnack inequality for second-order parabolic equations with divergence-free drifts of low regularity*, Comm. PDE **41** (2016), 208–226.

99. (with F. Wang and M. Ziane), *Persistence of regularity for solutions of the Boussinesq equations in Sobolev spaces*, Adv. Diff. Eq. **21** (2016), 85–108.

98. (with Z. Bradshaw and Z. Grujić), *Local analyticity radii of solutions to the 3D Navier-Stokes equations with analytic forcing*, J. Diff. Eq. **259** (2015), 3955-3975.

97. (with F. Wang), Weighted decay for the surface quasi-geostrophic equation, Commun. Math. Sci. **13** (2015), 1599–1614.

96. (with P. Constantin and V. Vicol), *On the inviscid limit of the Navier-Stokes equations*, Proceedings of AMS **143** (2015), 3075–3090.

95. (with M. Coti Zelati, A. Huang, R. Temam, and M. Ziane), *The primitive equations of the atmosphere in presence of vapor saturation*, Nonlinearity **28** (2015), 625–668.

94. (with W. Hu and M. Ziane), *Sur l'existence locale pour une équation de scalaire actif*, C. R. Math. Acad. Sci. Paris **353** (2015), 241–245.

93. (with W. Hu and M. Ziane), *Persistence of regularity for a viscous Boussinesq equations with zero diffusivity*, Asymptotic Analysis **91** (2015), 111-124.

92. (with N. Glatt-Holtz, V. Vicol, and M. Ziane), *Existence and regularity of invariant measures for the three dimensional stochastic primitive equations*, J. Math. Phys. **55** (2014), 34 pp.

91. (with V. Vicol), *Moments for strong solutions of the 2D stochastic Navier-Stokes equations in a bounded domain*, Asymptotic Analysis **90** (2014), 189–206.

90. (with N. Masmoudi, V. Vicol, and T. Wong), *On the local well-posedness of the Prandtl and the hydrostatic Euler equations with multiple monotonicity regions*, SIAM J. Math. Anal. **46** (2014), 3865–3890.

89. (with S. Benachour, W. Rusin, and M. Ziane), *Anisotropic estimates for the two-dimensional Kuramoto-Sivashinsky equation*, J. Dynamics Diff. Eq. **26** (2014), 461–476.

88. (with W. Rusin and M. Ziane), *A class of large BMO^{-1} non-oscillatory data for the Navier-Stokes equations*, J. Math. Fluid Mechanics **16** (2014), 293–305.

87. (with Y. Pei, W. Rusin, and M. Ziane), *Primitive equations with continuous initial data*, Nonlinearity **27** (2014), 1135–1155.

86. (with A. Tuffaha), *A regularity result for the incompressible Euler equation with a free interface*, Applied Mathematics and Optimization, Appl. Math. Optim. **69** (2014), 337–358.

85. (with M. Ignatova, I. Lasiecka, and A. Tuffaha), *On well-posedness and small data global existence for an interface damped free boundary fluid-structure model*, Nonlinearity **27** (2014), 467–499.

84. (with M. Ignatova and L. Ryzhik), *The Harnack inequality for second-order elliptic equations with divergence-free drifts*, Commun. Math. Sci. **12** (2014), 681–694.

83. (with W. Hu and M. Ziane), *On the regularity for the Boussinesq equations in a bounded domain*, J. Math. Phys. **54** (2013), 10 pp.

82. (with W. Rusin and M. Ziane), *A class of solutions of the Navier-Stokes equations with large data*, J. Diff Eq. **255** (2013), 1492–1514.

81. (with W. Rusin and M. Ziane), *Solutions of the Navier-Stokes equations for large oscillatory data*, Adv. Differential

Equations **18** (2013), 549–586.

80. (with A. Mazzucato and A. Tuffaha), *Sharp trace regularity for an anisotropic elasticity system*, Proc. Amer. Math. Soc. **141** (2013), 2673–2682.

79. (with M. Ignatova), *Strong unique continuation for the Navier-Stokes equation with non-analytic forcing*, J. Dynam. Diff. Eq **25** (2013), 1-15.

78. (with V. Vicol), *On the local existence of analytic solutions to the Prandtl boundary layer equations*, Commun. Math. Sci **11** (2013), 269–292.

77. (with A. Tuffaha), *Regularity of solutions of a free boundary problem of fluid-structure interaction*, Indiana Univ. Math. J. **61** (2012), 1817–1859.

76. (with A. Tuffaha), *On the 2D free boundary Euler equation*, Evolution Equations and Control Theory **1** (2012), 297–314.

75. (with M. Ignatova and M. Ziane), *Local existence of solutions to the free boundary value problem for the primitive equations of the ocean*, Journal of Mathematical Physics **53** (2012), 17pp.

74. *On the decay of solutions of the Navier-Stokes system with potential forces*, Mathematical Aspects of Fluid Mechanics, J.C. Robinson, J.L. Rodrigo, and W. Sadowski Editors, London Mathematical Society Lecture Note Series: 402, Cambridge University press, 2012, 235–250.

73. (with M. Ignatova, I. Lasiecka, and A. Tuffaha), *On well-posedness for a free boundary fluid-structure model*, J. Math. Phys. **53** (2012), 13 pp.

72. (with C. Doering and E.S. Titi), *Introduction to special issue: Incompressible fluids, turbulence and mixing*, J. Math. Phys. **11** (2012), 3 pp.

71. (with A. Tuffaha), *Well-posedness for the compressible Navier-Stokes-Lamé system with a free interface*, Nonlinearity **25** (2012), 3111-3137.

70. (with Y. Pei), *An estimate on the parabolic fractal dimension of the singular set for solutions of the Navier-Stokes system*, Nonlinearity **25** (2012), 2775–2783.

69. (with M. Ignatova), *Strong unique continuation for higher order elliptic equations with Gevrey coefficients*, J. Diff. Eq. **252** (2012), 2983–3000.

68. (with A. Tuffaha), *Solutions to a fluid-structure interaction free boundary problem*, Discrete Contin. Dynam. Systems **32** (2012), 1355–1389.

67. (with V. Vicol), *On the analyticity and Gevrey-class regularity up to the boundary for the Euler equations*, Nonlinearity **24** (2011), 765–796.

66. (with A. Tuffaha and M. Ziane), *Strong solutions to a Navier-Stokes-Lamé system on a domain with a non-flat boundary*, Nonlinearity **24** (2011), 159–176.

65. (with E. Reis), *Asymptotic expansion for solutions of the Navier-Stokes equations with potential forces*, J. Diff. Eq. **250** (2011), 607–622.

64. (with R. Temam, V. Vicol, and M. Ziane), *Local existence and uniqueness for the hydrostatic Euler equations on a bounded domain* J. Diff. Eq. **250** (2011), 1719–1746.

63. *Partial regularity for the Navier-Stokes equations with a force in a Morrey space*, J. Math. Anal. Appl. **374** (2011), 573–584.

62. (with V. Vicol), *Domain of analyticity for solutions of the three-dimensional Euler equations in half space, Discrete Contin. Dynam. Systems* **29** (2011), 285–303.

61. (with R. Temam, V. Vicol, and M. Ziane), Local existence and uniqueness for the hydrostatic Euler equations on a bounded domain, C. R. Math. Acad. Sci. Paris **348** (2010), 639–645.

60. (with M. Ignatova), *Unique continuation and complexity of solutions to parabolic partial differential equations with Gevrey coefficients* Adv. Diff. Eq. **15** (2010), 953–975.

59. *On regularity for the Navier-Stokes equations in Morrey spaces*, Discrete Contin. Dynam. Systems **26** (2010), 1319–1328.

58. (with A. Tuffaha and M. Ziane), *Strong solutions to a fluid structure interaction system*, Adv. Diff. Eq **15** (2010), 231–254.

57. *Partial regularity results for solutions of the Navier-Stokes system*, J. Rodrigo and J.C. Robinson editors, Proceedings of the workshop on "Partial differential equations and fluid mechanics," Warwick, 2009.

56. *The fractal dimension of the singular set for solutions of the Navier-Stokes system*, Nonlinearity **22** (2009), 2889–2900.

55. (with A. Tuffaha and M. Ziane), *Strong solutions to a nonlinear fluid structure interaction system*, J. Diff. Eq. **247** (2009), 1452–1478.

54. *On the weighted decay for solutions of the Navier-Stokes system*, Nonlinear Anal. **70** (2009), 2466–2470.

53. (with V. Vicol), *On the radius of analyticity of solutions to the three-dimensional Euler equations*, Proc. Amer. Math. Soc. **137** (2008), 669–677.

52. (with M. Ziane), *Uniform gradient bounds for the primitive equations of the ocean*, Differential Integral Equations **21**

(2008), 837–849.

51. *Regularity for the Navier-Stokes equations with a solution in a Morrey space*, Indiana Univ. Math. J. **57** (2008), 2843–2860.

50. (with V. Vicol), *On local uniqueness of weak solutions to the Navier-Stokes system with BMO^{-1} initial datum*, J. Dynam. Differential Equations **20** (2008), 719–732.

49. *On partial regularity for the Navier-Stokes equations*, Discrete Contin. Dynam. Systems **21** (2008), 717–728.

48. (with M. Ziane), *On the regularity of the primitive equations of the ocean*, Nonlinearity **20** (2007), 2739–2753.

47. (with M. Ziane), *The regularity of solutions of the primitive equations of the ocean in space dimension three*, C. R. Math. Acad. Sci. Paris **345** (2007), 257–260.

46. (with M. Ziane), *Navier-Stokes equation with regularity in one direction*, J. Math. Phys. **48** (2007), 10 pp.

45. (with J.J. Torres), *Weighted L^p decay for solutions of the Navier-Stokes equations*, Comm. PDE **32** (2007), 819–831.

44. *Log-log convexity and backward uniqueness*, Proc. Amer. Math. Soc. **135** (2007), 2415–2421.

43. (with M. Ziane), *On the regularity of the Navier-Stokes equation in a thin periodic domain*, J. Diff. Eq. **234** (2007), 485–506.

42. (with M. Ziane), *Sur la régularité des solutions des équations de Navier-Stokes dans un domaine mince pérydice de faible épaisseur*, C. R. Math. Acad. Sci. Paris **344** (2007), 97–102.

41. (with M. Ziane), *Régularité conditionnelle des équations de Navier-Stokes*, C. R. Math. Acad. Sci. Paris **343** (2006), 31–36.

40. *Role of the pressure for validity of the energy equality for solutions of the Navier-Stokes equation*, J. Dynam. Diff. Eq. **18** (2006), 461–482.

39. (with M. Ziane), *Regularity of the Navier-Stokes equation in a thin periodic domain with large data*, Discrete Contin. Dynam. Systems **16** (2006), 67–86.

38. *Pressure integrability conditions for uniqueness of mild solutions*, J. Diff. Eq. **223** (2005), 427–441.

37. (with M. Ziane), *One component regularity for the Navier-Stokes equation*, Nonlinearity **19** (2006), 453–469.

36. (with J.J. Torres), *Weighted bounds for the velocity and the vorticity for the Navier-Stokes equations*, Nonlinearity **19** (2006), 293–303.

35. *On Fourier Parametrization of Global Attractors for Equations in One Space Dimension*, Discrete Contin. Dynam. Systems **13** (2005), 553–560.

34. (with M. Malcok), *Backward behavior of solutions of the Kuramoto-Sivashinsky equation*, J. Math. Anal. Appl. **307** (2005), 455–464.

33. (with J.C. Robinson), *Distinguishing smooth functions by a finite number of point values, and a version of the Takens embedding theorem*, Physica D **196** (2004), 45–66.

32. *Backward uniqueness for solutions of linear parabolic equations*, Proc. Amer. Math. Soc. **132** (2004), 1755–1760.

31. *Spatial complexity of solutions of higher order partial differential equations*, Nonlinearity **7** (2004), 459–476.

30. *Fourier parametrization of attractors for dissipative equations in one space dimension*, J. Dynam. Diff. Eq. **15** (2003), 473–484.

29. *On local uniqueness of solutions of the Navier-Stokes equations with bounded initial data*, J. Diff. Eq. **194** (2003), 39–50.

28. *Length of vorticity nodal sets for solutions of the Navier-Stokes system*, Comm. PDE **28** (2003), 771–793.

27. (with Z. Grujić), *A remark on time-analyticity for the Kuramoto-Sivashinsky equation*, Nonlinear Analysis **52** (2003), 69–78.

26. *Space-time decay for solutions of the Navier-Stokes equations*, Indiana Univ. Math. J. **50** (2001), 205–222.

25. *Interior gradient bounds for the 2D Navier-Stokes system*, Discrete Contin. Dynam. Systems **7** (2000), 873–882.

24. (with P.K. Friz and J.C. Robinson), *Nodal parametrisation of analytic attractors*, Discrete Contin. Dynam. Systems **7** (2000), 643–657.

23. (with C. Foias, M.S. Jolly, and E.S. Titi), *The Lorenz equation as a metaphor for the Navier-Stokes equations*, Discrete Contin. Dynam. Systems **7** (2001), 403–429.

22. *Quantitative uniqueness and vortex degree estimates for solutions of the Ginzburg-Landau equation*, Electron. J. Differential Equations **2000** (2000), 1–15 (electronic).

21. *A ladder inequality for the Navier-Stokes equation*, Nonlinearity **13** (2000), 639–652.

20. *On the dissipative scale for the Navier-Stokes equation*, Indiana Univ. Math. J. **48** (1999), 1057–1081.

19. (with Z. Grujić), *Space analyticity for the nonlinear heat equation in a bounded domain*, J. Diff. Eq. **154** (1999), 42–54.

18. *Self-similar variables and the complex Ginzburg-Landau equation*, Comm. PDE **24** (1999), 545–562.

17. (with Z. Grujić), *The space analyticity for the Navier-Stokes and related equations with initial data in L^p*, J. Funct. Anal. **152** (1998), 447–466.

16. *Quantitative uniqueness for second order elliptic operators*, Duke Math. J. **91** (1998), 225–240.

15. (with K. Nyström), *Unique continuation on the boundary for Dini domains*, Proceedings of AMS **126** (1998), 441–446.

14. *Level sets for the stationary Ginzburg-Landau equation*, Calc. Var. **5** (1997), 511–521.

13. (with P. Constantin, C. Foias, and A.J. Majda), *Dirichlet quotients for periodic 2 dimensional Navier-Stokes equations*, J. Math Pures Appl. **76** (1997), 125–153.

12. (with C. Foias and M.S. Jolly), *Localization of attractors by their analytic properties*, Nonlinearity **9** (1996), 1565–1581.

11. *Level sets of the vorticity and the stream function for the 2D periodic Navier-Stokes equations with potential forces*, J. Diff. Eq. **126** (1995), 374–388.

10. *Hausdorff measure of level sets for solutions of parabolic equations*, International Mathematics Research Notices No. 13 (1995), 671–682.

9. *Nodal volumes for eigenfunctions of analytic regular elliptic problems*, J. d'Analyse Mathématique **67** (1995), 269–280.

8. (with C. Foias), *Determining nodes for the Kuramoto-Sivashinsky equation*, J. Dynam. Diff. Eq. **7** (1995), 365–373.

7. *Hausdorff length of level sets for solutions of the Ginzburg-Landau equation*, Nonlinearity **8** (1995), 113–129.

6. *Oscillations of solutions of the Kuramoto-Sivashinsky equation*, Physica D **76** (1994), 369–374.

5. *An absence of certain class of periodic solutions in the Navier-Stokes equations*, J. Dynam. Diff. Eq. **6** (1994), 175–183.

4. *An upper bound for the winding number for solutions of the Ginzburg-Landau equation*, Indiana Univ. Math. J. **41** (1992), 825–836.

3. *On the number of determining nodes for the Ginzburg-Landau equation*, Nonlinearity **5** (1992), 997–1006.

2. *On the behavior of the solutions of the Kuramoto-Sivashinsky equations for negative time*, J. Math. Anal. Appl. **166** (1992), 601–606.

1. *On the time analyticity radius of the solutions of the 2 dimensional Navier-Stokes equations*, J. Dynam. Diff. Eq. **3** (1991), 611–618.

Invited Lectures:

Feb. 3, 1993, Colloquium, Brown University
Feb. 8, 1993, Colloquium, University of Tennessee
Jul. 14, 1993, special session, SIAM conference, Philadelphia
Nov. 12, 1993, Conference Dynamics Days in Columbia, MO
Jan. 26, 1995, Colloquium, Michigan State University
Jan. 30, 1995, Colloquium, University of Texas, Austin
Feb. 10, 1995, Colloquium, UC Riverside
Apr. 12, 1995, Applied Mathematics seminar, University of Chicago
May 4, 1995, Analysis seminar, University of Notre Dame
May 17, 1995, Analysis seminar, Northwestern University
Jun. 1, 1995, contributed talk at the conference Approximation Dynamics with Applications to Numerical Analysis, Columbia, Missouri
Jun. 15, 1995, Applied Mathematics seminar, University of Geneva
Jul. 6, 1995, Conference ICIAM 95, Hamburg, Germany (mini-symposium Dynamics of Partial Differential Equations)
Aug. 28, 1995, Cambridge, UK; workshop Singularities in PDEs
Dec. 13, 1995, analysis seminar, Universidad de Chile
Dec. 20, 1995, analysis seminar, Universidad Catolica
Jun. 17, 1996, seminar, Beijing Normal University
Jun. 24, 1996, US-Chinese Conference on Recent Developments in Diff. Eq. and Applications, Hongzhou, China
Jan. 15, 1997, applied mathematics seminar, UC Irvine
Jan. 21, 1997, Colloquium, University of Texas, Austin
Feb. 3, 1997, Colloquium, University of Illinois, Chicago
Feb. 26, 1997, Colloquium, UC Davis
Mar. 4, 1997, Colloquium, University of Southern California
May 8, 1998, analysis seminar, UC Los Angeles
May 15 and 20, 1998, analysis seminar, Université de Nice
Jun. 9, 1998, University of Minnesota, Conference in honor of John Ball
Jun. 19, 1998, Colloquium, Université de Nice
Aug. 12, 1998, analysis seminar, Universidad de Chile
Oct. 6, 1999, analysis seminar, UC Irvine
Apr. 10, 1999, Southern California Analysis and PDE meeting, Santa Barbara
Oct. 10, 1999, special session "The diverse mathematical legacy of Jean Leray" on the AMS meeting, Austin, TX

Mar. 12, 2000, AMS sectional meeting, UC Santa Barbara

Apr. 2, 2000, "Irvine days in Applied and Computational Mathematics," UC Irvine

May 15, 2000, applied mathematics seminar, California Institute of Technology

May 20, 2000, special session, AIMS meeting, Kennesaw State University

Sep. 15, 2000, Conference in honor of C. Foias and R. Temam, Indiana University

Oct. 21, 2000, special session on the AMS sectional meeting, San Francisco State University

Oct. 24, 2000, Analysis Seminar, UC Irvine

Nov. 3, 2000, Analysis Seminar, UC Davis

Apr. 2, 2001, Applied Mathematics Seminar, Texas A&M Univ.

Apr. 27, 2001, Analysis Seminar,UC Santa Barbara

Nov. 10, 2001, AMS sectional meeting at UC Irvine, special session "Harmonic Analysis and PDE"

Nov. 11, 2001, AMS sectional meeting at UC Irvine, special session "Partial Differential Equations and Applications"

May 26, 2002, special session "Invariant Manifolds and Applications" on International Conference on Dynamical Systems and Differential Equations in Wilmington, NC.

Nov. 3, 2002, SCAPDE conference.

Feb. 26, 2003, Colloquium, UC Riverside

Mar. 13, 2003, Colloquium, University of Nevada, Reno

Apr. 5, 2003, AMS sectional meeting at Indiana University

Jun. 19, 2003, Colloquium, University of Ljubljana

Oct. 17, 2003, Colloquium, Oklahoma State University

Apr. 4, 2004, AMS sectional meeting at USC

May 20, 2004, workshop Analytical and Computational Challenges of Incompressible Flows at High Reynolds Number, CSCAMM, Univ. of Maryland

Jun. 19, 2004, special session, AIMS meeting, Pomona

Apr. 25, 2005, SIAM Chapter Colloquium, USC

Oct. 12, 2005, MSRI, Fluid Dynamics Workshop

Apr. 1, 2006, AMS sectional meeting, Miami, FL

Nov. 17, 2005, Colloquium, UC Irvine

Oct. 10, 2006, PDE seminar, Univ. of Notre Dame

Oct. 11, 2006, PDE seminar, Indiana University

Nov. 3, 2006, AMS sectional meeting, Univ. of Arkansas, Fayetteville

Jan. 11, 2007, PDE seminar, UC San Diego

Mar. 14, 2007, PDE seminar, University of Virginia

Mar. 17, 2007, special session, AMS sectional meeting, Miami University

May 21, 2007, invited speaker, workshop Partial differential equations and fluid mechanics, University of Warwick

Oct. 6, 2007, AMS sectional meeting, DePaul University, Chicago, IL

Nov. 19, 2007, 2007 Nonlinear dynamics and PDE mini-conference, Tempe, AZ

Dec. 10, 2007, Recent Advances in Navier-Stokes and Geophysical Fluid Dynamics, SIAM Conference on Analysis of Partial Differential Equations, Mesa, AZ

Apr. 5, 2008, special session on Recent Advances in Classical and Geophysical Fluid Dynamics, AMS sectional meeting, Bloomington IN

Apr. 10, 2008, Colloquium, University of Virginia

Apr. 11, 2008, graduate student seminar, Pennsylvania State University

Apr. 11, 2008, Applied Mathematics Colloquium, Pennsylvania State University

May 21, 2008, special session at the 7th AIMS conference in on Dynamical Systems and Differential Equations, Arlington, TX

Mar 7, 2009, 2nd conference on Mathematics of Fluids, UC Santa Barbara

Mar 25, 2009, special session at the IMACS world congress, Athens, GA

Mar 30, 2009, PDE seminar, Univ. of Illinois, Chicago

Oct 16, 2009, special session at an AMS sectional meeting at Baylor Univ.

Oct 17, 2009, special session at an AMS sectional meeting at Baylor Univ.

Nov 8, 2009, special session "Fluid dynamics" at an AMS sectional meeting in UC, Riverside

Dec 9, 2009, special session "PDE and fluid dynamics" at a SIAM conference on Analysis of PDEs in Miami, FL

Feb 24, 2010, plenary talk at the conference Analysis and Computation of Incompressible Fluid Flow, IMA, Univ. of Minnesota

Jun 8, 2010, Analytical and Numerical Problems in Fluid Dynamics with Applications, Catania, Italy, Jun. 7–11, 2010

Jun 24, 2010, special session on the "International Congress in Mathematical Fluid Dynamics and its Applications," Rennes, France

Jul 5, 2010, Partial Differential Equations and Fluid Mechanics 2010, Univ. of Warwick, UK

Sep 23, 2010, Workshop on dissipative PDEs in bounded and unbounded domains and related attractors

Sep 28, 2010, Complex analysis seminar, University of Ljubljana

Nov 4, 2010, Colloquium, Texas Tech University

Nov 6, 2010, special session "Interdisciplinary session on deterministic and stochastic Partial Differential Equations" at an AMS sectional meeting in Notre Dame, IN.

Mar 21–24, 2011, Universidad de Chile (mini-tutorial)

May 1, 2011, special session "PDEs modeling fluids" on the AMS meeting, Las Vegas, NV

May 1, 2011, special session "Recent developments in stochastic PDEs" on the AMS meeting, Las Vegas, NV

May 10, 2011, PDE seminar at the Mathematical Institute of Czech Academy of Sciences

Jun. 14, 2011, International conference on PDEs modeling fluids and complex fluids (in honor of Peter Constantin's 60th birthday)

Jun 20, 2011, Analysis seminar, Peking University

Oct 14, 2011, conference Incompressible fluids, turbulence, and mixing, Carnegie Mellon University

Oct 29, 2011, conference Mathematics of fluids, UC Riverside

Nov 15, 2011, minisymposium "Fluid structure and flow-structure interactions" at the SIAM conference on Analysis of PDEs, San Diego, CA

Nov 16, 2011, minisymposium "Analysis of PDEs arising in fluid dynamics" at the SIAM conference on Analysis of PDEs, San Diego, CA

Jan 26, 2012, PDE seminar, UC Irvine

Feb 3, 2012, Analysis seminar, UCLA

Feb 8, 2012, Mathematical physics seminar, Caltech

Feb 15, 2012, CAMP/Nonlinear PDEs seminar, University of Chicago

Feb 29, 2012, PDE seminar, Stanford University

Apr 27, 2012, PDE seminar, University of Houston

Apr 10, 2013, Navier-Stokes equations in Venice, Venice, Italy

Aug 18, 2013, Workshop "Recent Advances in PDEs and Fluids, Stanford University

Jun 26, 2013, Mathematics Research Communities, Snowbird, UT

Oct 19, 2013, AMS sectional meeting (special session), Washington University

Oct 26, 2013, 13th Red-Raider Mini-Symposium, Aspects of Fluid Dynamics

Nov 2, 2013, AMS sectional meeting (special session), UC Riverside

Jan 17, 2014, AMS annual national meeting (special session), Baltimore, MD

Feb 4, 2014, Analysis seminar, Courant Institute

Feb 6, 2014, Analysis of Fluids seminar, Princeton University

Mar 4, 2014, Nonlinear PDE seminar, University of California, Irvine

May 30, 2014, IC Workshop on fluids and PDE, IMPA, Rio de Janeiro, 2014

Oct 2, 2014, Workshop I: Mathematical Analysis of turbulence, IPAM, UCLA

Oct 17, 2014, Joint Caltech-UCLA Analysis seminar

Oct 26, 2014, AMS sectional meeting (special session), San Francisco State University

Nov 17, 2014, Analysis seminar, University of Trieste

Feb 28, 2015, Oklahoma State PDE Workshop, Oklahoma State University

Apr 19, 2015, AMS Sectional Meeting, Las Vegas, NV

Aug 13, 2015, Mathematical Aspects of Hydrodynamics, Oberwolfach

Sep 14, 2015, CAMS Colloquium, USC

Dec 7, 2015, Mini-Symposium "Fluid models, turbulence, and data assimilation," Scottsdale, AZ

Dec 7, 2015, Mini-Symposium "Deterministic and stochastic aspects of fluid dynamics," Scottsdale, AZ

Dec 16, 2016, Workshop on "Euler and Navier-Stokes equations and connected topics," Vienna, Austria

Mar 3, 2016, PDE seminar, UC Davis

Apr 12, 2016, Nonlinear PDE seminar, Texas A&M University

Jun 7, 2016, Workshop "Recent progress in hydrodynamics," Banff

Jul 11–15, 2016, International Summer School on Evolution Equations EVEQ, Prague (3 lectures)

Sep 9, 2016, PDE seminar, Vanderbilt University

Sep 30, 2016, Warwick Symposium: PDEs in Fluid Mechanics, Warwick, UK

Oct 21, 2016, Mathematics Colloquium, Oklahoma State University

Nov 21–25, 2016, Oberwolfach seminar: Mathematical Theory of Evolutionary Fluid-Flow Structure Interactions (4 lectures)

Apr 3, 2017, CAM Colloquium, Pennsylvania State University

May 11, 2017, Oberwolfach workshop "Geophysical Fluid Dynamics"

Oct 3, 2017, Analysis and Control of Fluid-Structure Interaction Systems, Bordeaux, (plenary speaker)

Nov 4, 2017, AMS sectional meeting (special session), UC Riverside

Nov 21, 2017, PDE Seminar, University of Southern California, San Diego,

Jan 10, 2018, special session "Mathematical Fluid Mechanics: Analysis and Applications," AMS national meeting, San Diego, CA

Jan 11, 2018, special session "Mathematical analysis and nonlinear partial differential equations," AMS national meeting, San Diego, CA

Mar 25, 2018, Shanks colloquium, Vanderbilt University

Nov 30, 2018, Caltech-UCLA Joint Analysis Seminar, UCLA

Jan 23, 2019, Applied Math Seminar, Stanford University

Mar 22, 2019, AMS sectional meeting (special session), University of Hawaii

Nov 9, 2019, AMS sectional meeting (special session), UC Riverside

Dec 12, 2019, SIAM minisymposium "Recent Progress in Fluid Mechanics: Classical Flows, Geophysical Models and Complex Fluids," La Quinta, CA

Dec 15, 2019, SIAM minisymposium "Recent Progress in Incompressible Fluid Dynamics," La Quinta, CA

Feb 28, 2020, Colloquium, Indiana University

Feb 9, 2021, MSRI, introductory presentation for the MSRI program "Mathematical problems in fluid dynamics" (virtual)

Mar 23, 2021, Analysis seminar, Arizona State University (virtual)

Mar 26, 2021, Analysis seminar, Vanderbilt University (virtual)

May 4, 2021, Water waves and other interface problems, MSRI (virtual)

Nov 15, 16, 17, 2021, Three graduate lectures, Duke University (in person)

Dec 7, 2021, One World PDE seminar (virtual)

Dec 10, 2021, Colloquium, University of Maryland, Baltimore County (virtual)

Jan 5, 2022, University of California, Riverside (virtual)

Feb 14, 2022, workshop Turbulence: where do we stand and where are we heading, Cambridge, UK (virtual)

Mar 3, 2022, Academy of Mathematics and Systems, Science Chinese Academy of Sciences, PDE seminar (virtual)

Apr 12, 2022, Analysis of Fluid and Elastic Bodies Interactions, University of Regensburg (in person)

May 9, 2022, Conference Nonlinear PDEs in Fluid Dynamics (virtual)

May 14, 2022, Conference at the Isaac Newton Institute for Mathematical Sciences (virtual)

Sep 5, 2022, Conference at Brijuni, Croatia (plenary)

Oct 1, 2022, SIAM minisymposium

Nov 16, 2022, Workshop "Mathematical Advances in Geophysical Fluid Dynamics," at Oberwolfach

Dec 1, 2022, PDE seminar, Florida State University

Dec 2, 2022, Mathematics Colloquium, Florida State University

Jul 7, 2023, Analysis seminar, University of Zagreb

Nov 28, 2023, Applied math seminar, UC Berkeley

Dec 4, 2023, workshop "Recent progress in deterministic and stochastic fluid-structure interaction"

Jan 5, 2024, minisymposium "Recent Developments in the Analysis and Control of Partial Differential Equations arising in fluid and fluid-structure interactive yynamics," JMM

Feb 7, 2024, Analysis seminar, Caltech

Mar 1, 2024, Oberwoflach workshop "Hyperbolic Balance Laws: Interplay between Scales and Randomness,"

Mar 23, 2024, special session "PDEs in Incompressible Fluid Mechanics," AMS 2024 Spring Southeastern Sectional Meeting

Mar 23, 2024, special session "Fluids: Analysis, Applications, and Beyond," AMS 2024 Spring Southeastern Sectional Meeting

Apr 6, 2024, special session "Recent Advances in Harmonic Analysis and Their Applications to Partial Differential Equations," 2024 Spring Eastern Sectional Meeting Howard University, Washington, DC

Apr 9, 2024, PDE, Complex Analysis and Differential Geometry Seminar, University of Notre Dame

May 19, 2024, Second Joint Alabama-Florida Conference on Differential Equations, Dynamical Systems and Applications Florida State University, Tallahassee, FL

Jun 11, 2024, Minisymposium "Fluid-structure interactions," at Equadiff 2024

Sep 19, 2024, Fluids seminar, Princeton University,

Sep 23, 2024, Analysis seminar, Temple Uniersity,

Oct 18, 2024, Analysis/PDE seminar, CUNY

Oct 19, 2024, special session "Regularity of Nonlinear Equations and Free Boundary Problems," Fall 2024 AMS Eastern Sectional Meeting in Albany

Feb 16, 2025, PDE seminar, Unibversity of Notre Dame

Conferences co-organized (organizing committee):

"Southwestern Workshop on Dynamical Systems, USC," Nov. 17–19, 2000

"Mathematics of Fluids," Los Angeles, CA, Mar. 29–30, 2008

"International Conference on Partial Differential Equations Modeling Fluids and Complex Fluids" in Xian, China, Jun. 13–17, 2010

SIAM conference on "Analysis of Partial Differential Equations", San Diego, CA, Nov. 14–17, 2011

Mathematics Research Communities, Regularity Problems for Nonlinear Partial Differential Equations Modeling Fluids and Complex Fluids, June 25–July 1, 2013

11 special sessions at AMS meetings (USC, San Francisco State, UCLA, UNLV, Univ. of Illinois, San Francisco State (virtual), Fresno, University of South Alabama, San Francisco State University, Palermo, Auckland), 2 special sessions at AIMS meetings, 2 SIAM mini-symposia

Oberwolfach workshop "Mathematical Theory of Evolutionary Fluid-Flow Structure Interactions", Nov. 2016

Summer School on Recent Advances in Mathematical Fluid Dynamics, May 20–24, 2019

MSRI semester program "Mathematical problems in fluid dynamics," January 2021–May 2021

Euler and Navier-Stokes equations seminar at the MSRI semester program, January 2021–May 2021