Tristan RIVIÈRE

Birth date : november 26th, 1967.
4 children.
French and Swiss citizenship.
Address : D-Math, ETH-Zentrum,
CH-8092 Zürich.
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Positions :

2009-2019. : Director of the *Forschungsinstitut für Mathematik* - ETHZ

2003-. : Full professor at the ETH-Zürich.

2001-2003 : Assistant professor at the ETH-Zürich.

1992-2001 : Chargé de recherches CNRS-France.

Visiting position abroad :

2024 (Fall) : Eisenbud Professor - Simons Laufer Mathematical Sciences Institute

1999-2000 : Associate professor at the CIMS, New-York University.

Education

1997 : *Habilitation à diriger des recherches*, Paris-Orsay.

1993 : PhD Thesis, Paris VI University .

1990 : Graduated from the Ecole Polytechnique France.

Distinctions :

2016 : Nominated Member of the PDE Panel *ICM Rio 2018*.

2003 : Gold Medal *"Guido Stampacchia"* of the Italian Mathematics Society.

1996 : Bronze Medal of the CNRS France.

Selected Addresses

1999 : Bourbaki Seminar - Paris.

2002 : International Congress of Mathematicians, invited speaker - Beijing.

2010 : Plenary speaker at the DMV, Jahrestagung - München.

2010 : Plenary speaker at the "Rivière-Fabes Symposium" - Minneapolis.

2014 : Bourbaki Seminar - Paris.

2015 : Abel Prize Lecture in honor of Louis Nirenberg - Oslo.

2016 : Invited speaker at the 7th European Congress of Mathematics.

2017 : Heinz Hopf Symposium in Honor of Rick Schoen - Zürich

2019 : Bourbaki Seminar - Paris.

2023 : Abel Symposium - Bårdshaug- Herregård Norway.

Teaching (in french, german and english) :

Bachelor, Master and Graduate courses at

- *École Normale Supérieure de Cachan*
- *New-York University*
- *ETH Zürich.*

Post-Doc supervisions :

- Camillo De Lellis (2003-2004)
- László Székelyhidi (2004-2005)
- Yann Bernard (2006-2009)
- Spyros Alexakis (2009-2010)
- Miaomiao Zhu (2009-2010)
- Armin Schikorra (2010-2011)
- Andrea Mondino (2013-2015)
- Swarnendu Sil (2018-2020)

PhD students :

- Reza Pakzad (1997-2000).
- Myriam Lecumberry (2000-2003).
- David Pumberger (2003-2007).
- Thiemo Kessel (2004-2008).
- Michael Blaser (2006-2011)
- Laura Keller (2007-2011)
- Costante Bellettini (2006-2011)
- Mircea Petrache (2009-2013)
- Alexandru Paunoiu (2014-2020)
- Francesco Palmurella[1] (2015- 2020)
- Alexis Michelat (2015- 2019)
- Alessandro Pigati (2016-2020)
- Riccardo Caniato (2019 - 2023)
- Filippo Gaia (2020- 2024)
- Gerard Orriols (2020 - 2024)
- Matilde Gianocca (2021- ?)
- Tian Lan (2023 - ?)
- Mario Gauvrit[2] (2023- ?)
- Dominik Schlagenhauf[3] (2023- ?)

Member of editorial boards :

Annales de l'Institut Henri Poincaré - Analyse non-linéaire
Advances in Calculus of Variations until 2023.
Advances in Mathematics until 2023.
Analysis and PDE until 2021.
Calculus of Variations and PDE (**Managing Editor** until 2021)
Communications in Partial Differential Equations.
Journal of the European Math Society.
Journal of the Institute of Mathematics of Jussieu until 2021.
Annals of Global Analysis and Geometry until 2016.

[1] *Joint supervision with F. Da Lio*
[2] *Joint supervision with P.Laurain*
[3] *Joint supervision with F. Da Lio*

Organisation of conferences and thematic programs (a selection) :

"Calculus of Variation", Oberwolfach (2002).
"Ginzburg-Landau Vortices", DMV Seminar Oberwolfach (2002).
"Calculus of Variations", Oberwolfach (2004).
"Calculus of Variations", Oberwolfach (2006).
"Geometry and PDE", Luminy (2007).
"Recent Advances in Non local and non-linear Analysis", Zürich (2014).
"Symposium : 50 years of Mathematics at FIM" Zürich (2015).
"Geometric Non-linear Analysis, in honor of M.Struwe" Zürich (2015).
"Symposium : Abel in Zürich" (2016).
"Analysis in the Large - in honour of H.Hofer" Zürich (2016).
"Advances in Geometric Analysis" Zürich (2017).
"Nevanlinna Colloquium" Zürich (2017).
"Int. Conf. on Differential Geometry" in honor of G.Tian Sydney (2018).
"G.A. and G.R." in honor of G. Huisken Zürich (2019)
"Geometric Analysis and Calibrated Geometries" Zürich (2022)
"CHANGE - CHalenges in ANalysis and GEometry" Zürich (2023)
"Special Geometric Structures and Analysis" SLMath Berkeley (2024)

Member of professor hiring committees :

École Polytechnique (France)

École polytechnique Fédérale de Lausanne (Switzerland)

ETH Zürich (Switzerland),

University of Zürich (Switzerland)

University of Basel (Switzerland)

University of Paris 7 - Diderot (France)

Participation to various committees :

Member of the evaluation committees of the Laboratoire AGM - Cergy Pontoise, the Laboratoire Jean-Alexandre Dieudonné - Nice, the Laboratoire Jacques Louis Lions - Paris

Member of the jury Institut Universitaire de France

Member of the committee Gold Medal Stampacchia - Unione Matematica Italiana (2006, 2009, 2012, 2015, 2018)

Member of the scientific committee of MFO Oberwolfach - (2013 - 2021)

Nominated member of the PDE Panel - Invited talks - ICM Rio 2018

Member of the Oberwolfach Prize committee (2013-2021)

Member of the Scientific Committee Fondation Sciences Mathématiques de Paris (2020 - Present)

Member of the MathInGreaterParis Cofund Scientific Committee

Member of the Advisory board of the Max Planck Institute for Mathematics in Leipzig (2020 - present)

Member of the Advisory Board of the Mathematics Department of Tor Vergata (Rome II)

Referee for several Fields Medal Committees

Member of the Fermat Prize Committee (Representing the EMS)

Chair of the Heinz Hopf Prize Commitee

Research area :

Analysis of Partial Differential Equations arising in physics and geometry, calculus of variations, geometric analysis, application of geometric measure theory to PDE, the geometry of structures of singularities, shock and defects for weak solutions to elliptic, parabolic and hyperbolic PDE's.

PUBLICATIONS

1. (with I.Shafrir) *Asymptotic analysis of minimizing harmonic maps of region bounded by two cylinders*, **C.R.Acad.Sc. Paris**, 313, (1991), pp 503-508.

2. *Applications harmoniques de B^3 dans S^2 ayant une ligne de singularités*, **C.R.Acad.Sc. Paris**, 313, (1991), pp 583-587.

3. *Applications harmoniques de B^3 dans S^2 partout discontinues*, **C.R.Acad.Sc. Paris**, 314, (1992), pp 719-723.

4. *Applications harmoniques partout discontinues*, **Séminaires EDP, Ecole Polytechnique**, XIX, (1992).

5. *Harmonic maps from B^3 into S^2 having a line of singularities*, published in " Applications harmoniques entre variétés": **Thèse de l'université Paris 6**, (1993).

6. *Infinités des applications harmoniques à valeur dans une sphère pour une condition au bord donnée*, published in " Applications harmoniques entre variétés": **Thèse de l'université Paris 6**, (1993).

7. *Flot des applications harmoniques en dimension deux*, published in " Applications harmoniques entre variétés": **Thèse de l'université Paris 6**, (1993).

8. *Harmonic maps with values into Torii of revolution*, published in " Applications harmoniques entre variétés": **Thèse de l'université Paris 6**, (1993).

9. *Everywhere discontinuous Harmonic Maps into Spheres*, **Acta Matematica**, 175, (1995),197-226.

10. (with H.Brezis and F.Merle) *Effets de quantification pour $-\Delta u = u\,(1-|u|^2)$ sur $\mathbb{R}^2$*, **C.R.Acad.Sc. Paris**, 317, (1993), pp 57-60.

11. (with H.Brezis and F.Merle) *Quantization effects for $-\Delta u = u\,(1-|u|^2)$ in $\mathbb{R}^2$*, **Arch. Rat. Mech. and Anal.**, 126, (1994),pp 123-145.

12. (with F.Bethuel) *Vortices for a variational problem related to Superconductivity*, **Annales de l'I.H.P.**, Analyse non linéaire, 12 (1995), 243-303.

13. (with D.Ye) *Une résolution de l'équation à forme volume prescrite*, **C.R.Acad.Sc. Paris**, 319, (1994), 25-28.

14. (with D.Ye) *Resolutions of the prescribed volume form equation*, **Non linear Diff. Equations and Applications**, 3, (1996), 323-369.

15. (with F.Bethuel) *Fonctionnelle de Ginzburg-Landau pour la supraconductivité*, Exposé au **seminaire EDP de l'Ecole Polytechnique**, (mars 94).

16. *Lignes de tourbillons dans le modèle abélien de Higgs*, **C.R.Acad.Sc. Paris**, 321, (1995), 73-76.

17. *Line vortices in the $U(1)$-Higgs Model*, **ESAIM Controle Optimal Calc .Var.**, vol 1, 1996, 77-167.

18. *Minimizing Fibrations and p-Harmonic maps in Homotopy Classes from S^3 into S^2*, **Comm. Anal. Geom.**, 6, (1998), 427-483.

19. *Asymptotic analysis for the Ginzburg-Landau Equations* Mini-course ETH Zürich 1997, **Bolletino UMI**, 2-B, (1999) 8, 537-575.

20. (with F.H. Lin) *Complex Ginzburg-Landau Equations in high dimensions and codimension 2 Minimal surfaces*, **J. European Math. Soc.**, 1, (1999) 3, 237-311.

21. (with F. Pacard) *On the set of Minimizers of the Ginzburg-Landau Functional in dimension 2* in *Harmonic Morphisms, Harmonic Maps and related Topics (Brest 97)* **Pitman Research notes in Math. Series**, CRC Press.

22. *On the use of differential forms for the Skyrme Problem*, **Letters in Math. Phy.**, 45, 3, 229-238 (1998).

23. (with F. Pacard) Linear and Non-linear Aspects of Vortices, Progress in P.D.E. **Birkhäuser** (2000).

24. *Towards Jaffe and Taubes Conjectures in the strongly repulsive limit*, **Manuscripta Mathematica**, 108, (2002).

25. *On Dense subsets of* $H^{\frac{1}{2}}(S^2, S^1)$, **Glob. Anal. and Geom.** , 18, 5, (2000), 517-528.

26. *Ginzburg Landau Vortices - The static Model*, **Bourbaki Seminar** exposé no 868, (1999).

27. (with F.H. Lin) *A Quantization property for static Ginzburg-Landau Vortices*, **Comm. Pure App. Math.**, 54, (2001), 206-228.

28. (with F.H. Lin) *Energy Quantization for Harmonic Maps*, **Duke J. Math.**, 111, (2002) 217-273.

29. (with S. Serfaty) *Limiting domain wall Energy for a Problem related to Micromagnetism*, **Comm. Pure App. Math.**, 54, (2001), 294-338.

30. *High-dimensional Helicities and rigidity of linked Foliations*, **Asian J. Math.**, 6, (2002), 505-533.

31. (with F.H. Lin) *Quantization property for moving Line vortices*, **Comm. Pure App. Math.**, (2001).

32. (with R. Hardt) *Connecting Topological Hopf Singularities*, **Ann. Sc. Norm. Sup. Pisa** V, 2,(2003) 287-344.

33. (with M.R. Pakzad) *Weak density of smooth maps for the Dirichlet Energy between manifolds*, **Geom. Funct. Anal.**, 13, (2003), 223-257.

34. *Interpolation Spaces and Energy Quantization for Yang-Mills Fields*, **Comm. Anal. Geom.**, 10, (2002), 683-708.

35. (with R.Hardt) *Ensembles singuliers topologiques dans les espaces fonctionnels entre variétés*, **Séminaire EDP, École Polytechnique**, (december 2000).

36. (with S.Serfaty) *Compactness, kinetic formulation and entropies for a problem related to Micromagnetics*, **Comm. Partial Differential Equations**, 28, (2003), 249-269.

37. (with Y.Meyer) *A Partial Regularity for a class of stationary Yang-Mills Fields.*, **Rev. Mat. Iberoamericana**, 19, (2003), 195-219.

38. (with A.Aftalion) *Vortex energy and vortex bending for a rotating Bose-Einstein condensate*, **Physical Review** A, 64, 043611 (2001), 1-7.

39. (with M.Lecumberry) *Regularity property for Micromagnetic configurations having zero jump energy*, **Calc. Var. and P.D.E.**, 15, (2002), 389-402.

40. (with G.Tian) *The singular set of $J-$holomorphic maps into algebraic varieties* **J. für Reine. Angew. Math.** 570, (2004), 47-87.

41. (with F. Alouges and S. Serfaty) "Néel and cross-tie wall energies for planar magnetic configurations" A tribute to J.L.Lions, **ESAIM Controle Opt.Calculus Variations**, 8, (2002), 31-68.

42. (with L.Ambrosio and M.Lecumberry) "A viscosity property of minimizing micromagnetic configurations", **Comm. Pure and App. Math.**, 56, (2003), 681-688.

43. (with L.Ambrosio, B. Kirchheim and M.Lecumberry) "Rectifiability of defect measures arising in micromagnetic domains", Volume dedicated to the 80th birthday of O. Ladyzhenskaya, 29-60, **Int. Math. Ser.** (N.Y.), 2, Kluwer/Plenum

44. "Parois et vortex en micromagnétime", **Journées équations aux dérivées partielles**, (Forges-les-eaux, 2002), Exp. No. XIV, Univ. Nantes, Nantes 2002.

45. (with M.Lecumberry) "The rectifiability of shock waves for the solutions of genuinely non-linear scalar conservation laws in 1+1 D" **PhD Thesis of M. Lecumberry**, Nantes (2002).

46 "Bubbling, quantization and regularity issues in geometric non-linear analysis" **ICM Beijing** (2002).

47 (with C.Delellis) "The Rectifiability of Entropy Measures in one Space dimension." **Journal de Math. Pures et App.**, 82, (2003), 1343-1367.

48 "Some problems from the non-linear analysis of high dimensional Gauge Theory" Variational Analysis and applications, Volume in memory of G.Stampacchia, Erice-Sicily, (2003).

49 "A lower-epiperimetric inequality for area minimizing surfaces" **Comm. Pure App. Math.** 57,(2004), no 3, 273-285.

50 "Approximating $J-$holomorphic curves by holomorphic ones" **Calc. Var. P.D.E.**, 21, (2004), no 3, 273-285.

51 (with P.Strzelecki) "A sharp nonlinear Gagliardo-Nirenberg-type estimate and applications to the regularity of elliptic systems." **Comm. P.D.E.** 30 (2005), no. 4-6, 589–604.

52 "Conservation laws for solutions to Schrödinger systems with antisymmetric potentials" . GDR CNRS EDP Evian (2006)

53 "Sobolev critical exponents of rational homotopy groups." **Quarterly J. of Pure and App. Math.**, issue in honor of L.Simon, 3 (2007), no 2, 615-630.

54 Conservation laws for conformally invariant variational problems . **Invent. Math.**, 168 (2007), 1-22.

55 (with M. Struwe) "Partial regularity for harmonic maps, and related problems" **Comm. Pure and App. Math.** 61 (2008), no. 4, 451-463.

56 (with T. Lamm) "Conservation laws for fourth order systems in four dimensions." **Comm. P.D.E.** 33 (2008), no. 2, 245-262.

57 (with R.Hardt) "Connecting rational homotopy type singularities of maps between manifolds" **Acta Math.**, 200 (2008), 15-83.

58 (with D. Pumberger) "Uniqueness of tangent cones for semi-calibrated integral 2-cycles", to appear in **Duke Math. J.** (2009).

59 (with T. Kessel) "Sobolev bundles and weak curvatures", **Bull. U.M.I.**, 9-I (2008), 881-901 *volume dedicated to the memory of G. Stampacchia* .

60 "The role of integrability by compensation in Conformal Geometric Analysis" to appear in *Analytic aspects of problems from Riemannian Geometry* **SMF** , *séminaires et Congrès*, 19, (2008).

61 "Analysis Aspects of Willmore Surfaces" **Inventiones Math.**, 174 (2008), no. 1, 1-45.

62 (with Y. Bernard) "Local Palais-Smale sequences for the Willmore Functional" **Comm. Analysis and Geom.** 19 (2011), no 3, 563-599.

63 "Error Analysis for the Willmore-Helfrich Functional", **Oberwolfach Reports** Mathematics of Biological Membranes (2008) 2305-2309.

64 (with G. Tian) "The singular set of 1-1 Integral currents" **Annals of Math**, 169 (2009), no. 3, 741-794.

65 (with C. Bellettini) "The regularity of Special Legendrian Integral Cycles.", **Ann. Sc. Norm. Sup. Pisa** (5) 11 (2012), no 1, 61-142.

66 (with F. Da Lio) "3-commutator estimates and the regularity of 1/2-harmonic maps in the critical dimension", **Analysis and PDE** 4 (2011), no. 1, 149–190.

67 (with M.Blaser) "Minimality properties for entropy solutions to hyperbolic scalar conservation laws" **Comm. P.D.E.** 35 (2010), no. 10, 1763-1801.

68 Sub-criticality of Schrödinger systems with antisymmetric potentials. **J. Math. Pures Appl.** (9) 95 (2011), no. 3, 260-276

69 (with F. Da Lio) : "The regularity of solutions to critical non-local Schrödinger systems on the line with antisymmetric potential and applications" **Advances in Math.** 227 (2011) 1300-1348.

70 (with M. Petrache) : "Weak closure of singular abelian L^p-bundles in 3-dimensions", **Geom. Funct. Anal.** 21 (2011), no. 6, 1419-1442.

71 "Variational Principles for immersed Surfaces with L2-bounded Second Fundamental Form." **J. Reine Angew. Math.** 695 (2014), 41-98.

72 "Lipschitz conformal Immersions from degenerating Surfaces with L2-bounded Second Fundamental Form". **Adv. Calc. Var.**, 6 (2013), no1, 1-31.

73 (with Y. Bernard) : "Singularity removability at branch points for Willmore surfaces". **Pacific J. Math.** 265 (2013), no. 2, 257-311.

74 "The role of conservation laws in the analysis of conformally invariant problems." Topics in modern regularity theory, 117-167, **CRM Series**, 13, Ed. Norm., Pisa, 2012.

75 (with Y. Bernard) : "An Energy Gap Phenomenon for Willmore Spheres", preprint (2011).

76 (with P. Laurain) : "Angular Energy Quantization for Linear Elliptic Systems with Antisymmetric Potentials and Applications" **Analysis & P.D.E.** 7 (2014), no. 1, 1-41.(2013).

77 (with A. Mondino) : "Immersed Spheres of Finite Total Curvature into Manifolds", **Adv. Calc. Var.** 7 (2014), no. 4, 493-538.

78 (with P. Laurain) : "Energy Quantization for Biharmonic Maps" **Adv. Calc. Var.** 6 (2013), no. 2, 191-216.

79 "Sequences of Smooth Global Isothermic Immersions" **Comm. P.D.E.**, 38 (2012), no 2, 276-303.

80 (with A. Mondino) : "Willmore Spheres in Compact Riemannian Manifolds", **Advances in Math.** 232 (2013), no 1, 608-676.

81 (with M. Petrache) : "Global Gauges and Global Extensions in optimal Sobolev Spaces" **Analysis & PDE** 7 (2014), no. 8, 1851-1899.

82 (with R. Hardt) : "Sequential Weak Approximation for Maps of Finite Hessian Energy" **Calc. Var. Partial Differential Equations** 54 (2015), no. 3, 2713-2749.

83 (with L. Keller and A. Mondino) : "Embedded surfaces of arbitrary genus minimizing the Willmore energy under isoperimetric constraint" **Arch. Ration. Mech. Anal.** 212 (2014), no. 2, 645-682.

84 (with M. Petrache) : The resolution of the Yang-Mills Plateau Problem in Super-critical Dimensions **Advances in Math.** 316 (2017), 469-540.

85 (with A. Mondino) : "A frame energy for immersed tori and applications to regular homotopy classes" **J. Differential Geom.** 104 (2016), no. 1, 143-186 .

86 (with P. Laurain) : "Optimal estimate for the gradient of Green functions on degenerating surfaces and applications" **Comm. Anal. Geom.** 26 (2018), no. 4, 887-913.

87 "Critical weak immersed Surfaces within Sub-manifolds of the Teichmüller Space" **Advances in Math.** 283 (2015), 232-274.

88 "La conjecture de Willmore", **Séminaire Bourbaki, Astérisque** No. 367-368 (2015), Exp. No. 1080, viii, 179-217.

89 (with Y. Bernard) : "Energy Quantization for Willmore Surfaces and Applications" **Ann. of Math.** (2) 180 (2014), no. 1, 87-136.

90 "Weak immersions of surfaces with L^2-bounded second fundamental form." Geometric analysis, 303-384, IAS/Park City Math. Ser., 22, **Amer. Math. Soc.**, Providence, RI, 2016.

91 "Tori in S^3 minimizing locally the conformal volume" **J. Geom. Anal.** 26 (2016), no. 3, 2322-2382.

92 (with F. Da Lio and L. Martinazzi) : "Blow-up analysis of a non-local Liouville-type Equation" **Analysis & PDE** 8 (2015), no. 7, 1757-1805.

93 "Exploring the unknown : the work of Louis Nirenberg in Partial Differential Equations" **Notices Amer. Math. Soc.** 63 (2016), no. 2, 120-125.

94 (with Y. Bernard) : "Ends of Immersed Minimal and Willmore Surfaces in Asymptotically Flat Spaces" to appear in **Comm. Analysis Geom.** (2017)

95 "A Viscosity Method in the Min-Max Theory of Minimal Surfaces" **Publ. Math. Inst. Hautes Études Sci.** 126 (2017), 177-246. .

96 (with A. Michelat) "A Viscosity Method for the Min-Max Construction of Closed Geodesics" **ESAIM Control Optim. Calc. Var.** 22 (2016), no. 4, 1282-1324.

97 "The regularity of conformal target harmonic maps." **Calc. Var. Partial Differential Equations** 56 (2017), no. 4

98 (with P. Laurain) "Energy quantization of Willmore surfaces at the boundary of the moduli space." **Duke Math. J.** 167 (2018), no. 11, 2073-2124.

99 (with Y. Bernard) "Uniform regularity results for critical and subcritical surface energies". **Calc. Var. Partial Differential Equations** 58 (2019), no. 1, Art. 10, 39 pp.

100 "Willmore Minmax Surfaces and the Cost of the Sphere Eversion". **J. Eur. Math. Soc.** 23 (2021), no. 2, 349-423.

101 "Lower Semi-Continuity of the Index in the Viscosity Method for Minimal Surfaces" **Int. Math. Res. Notices** 2021, no. 8, 5651-5675.

102 (with A. Pigati) "The regularity of parametrized integer stationary varifolds in two dimensions " **Comm. Pure App. Math.** 73 (2020), no. 9, 1981-2042.

103 (with A. Pigati) "A Proof of the Multiplicity One Conjecture for Min-Max Minimal Surfaces in Arbitrary Codimension" **Duke Math. J.** 169 (2020), no. 11, 2005-2044.

104 "Infinitely many minimal hypersufaces in low dimensions" **Astérisque** No. 422, Séminaire Bourbaki. Vol. 2018/2019. Exposés 1151-1165 (2020).

105 (with F. Da Lio and F. Palmurella) "A resolution of the Poisson problem for elastic plates." **Arch. Ration. Mech. Anal.** 236 (2020), no. 3, 1593-1676.

106 (with F. Da Lio) Three-commutators revisited. **Comm. P.D.E.** 45 (2020), no. 8, 931-969.

107 Exploring the unknown: the work of Louis Nirenberg in Partial Differential Equations. **EMS Surveys in Mathematical Sciences** 9 (2022), no 1, 1-29.

108 (with F. Da Lio) Critical Chirality in Elliptic Systems. **Annales Inst. Henri Poincaré - Analyse non linéaire** 38 (2021), no. 5, 1373-1405.

109 (with A.Michelat) The classification of branched Willmore spheres in the 3-sphere and the 4-sphere **Ann. Sci. Éc. Norm. Supér.** (4) 55 (2022), no. 5, 1199-1288

110 Harmonic maps from S^3 into S^2 with low Morse index **J. Differential Geom.** 125 (2023), no. 1, 173-185.

111 (with A.Paunoiu) Sobolev connections and holomorphic structures over Kähler surfaces. **J. Funct. Anal.** 280 (2021), no.12

112 (with F. Da Lio, F. and J. Wettstein) Bergman-Bourgain-Brezis-type inequality. **J. Funct. Anal.** 281 (2021), no.9

113 (with F.Da Lio and J.Wettstein) Integrability by compensation for Dirac equation. **Trans. Amer. Math. Soc.** 375 (2022), no.6, 4477-4511

114 (with F. Palmurella) The parametric approach to the Willmore flow. **Adv. Math.** 400 (2022)

115 (with A. Michelat) The classification of branched Willmore spheres in the 3-sphere and the 4-sphere. **Ann. Sci. Éc. Norm. Supér.** (4) 55 (2022), no.5, 1199-1288

116 (with A. Michelat) Pointwise expansion of degenerating immersions of finite total curvature. **J. Geom. Anal.** 33 (2023), no.1

117 (with R. Caniato) The unique tangent cone property for weakly holomorphic maps into projective algebraic varieties. **Duke Math. J.** 172 (2023), no.13, 2471-2536

118 (with F. Gaia) A variational approach to S1-harmonic maps and applications. **J. Funct. Anal.** 285 (2023), no.11

119 Almost monotonicity formula for H-minimal Legendrian surfaces in the Heisenberg group *to appear in* **Comm. Pure App. Math.** (2024)