

CURRICULUM
dell'attività scientifica e didattica
di
Domenico Perrone

- Laureato in Matematica con 110 e lode presso l’Università degli Studi di Lecce il 6 marzo 1974.
- Borsista CNR presso la Scuola Normale Superiore di Pisa dal 1 giugno 1974 al 31 ottobre 1975.
- Titolare di contratto presso la cattedra di Geometria della Facoltá di Scienze della Universitá di Lecce dal 1 novembre 1975 al 31 dicembre 1977 (con interruzione per adempie agli obblighi militari di leva dal 18-11-75 al 22-12-76).
- Professore incaricato presso la Facoltá di Scienze dell’Università di Lecce dal 1 novembre 1977 all’11 gennaio 1983.
- Professore Associato di Geometria presso la Facoltá di Scienze dell’Università di Lecce dal 12 gennaio 1983 al 4 marzo 1987.
- Professore Straordinario di Geometria presso la Facoltá di Scienze della Universitá di Lecce dal 5 marzo 1987 al 4 marzo 1990.
- Professore Ordinario (SSD Mat/03-Geometria) dal 5 marzo 1990 al 31 ottobre 2019 presso Universitá di Lecce - Universitá del Salento.
- Collocato a riposo, per raggiunto limite di etá, a decorrere dall’1 novembre 2019.

- Ha svolto presso la Facoltá di Scienze dell’Università di Lecce - Universitá del Salento i seguenti insegnamenti: Geometria I, Geometria II, Geometria III, Geometria V, Geometria VII, Istituzioni di Geometria Superiore e Geometria Differenziale. Inoltre, ha svolto per vari anni l’insegnamento di Geometria presso la Facoltá di Ingegneria dell’Università di Lecce.
- Ha ricoperto le cariche di Presidente del Corso di Laurea in Matematica (2-3 tornate?), Direttore del Dipartimento di Matematica (biennio nov. 93-ottobre 95) e componente del Senato Accademico dell’Università di Lecce.
- Coordinatore del Dottorato di Ricerca in Matematica del Dipartimento di Matematica dell’Università di Lecce (2001-2007).

- Membro del gruppo nazionale G.N.S.A.G.A. del C.N.R.-INDAM.
- Partecipante al progetto inter-gruppo “Equazioni non lineari subellittiche di origine variazionale nella geometria di contatto” luglio2004-giugno2005.
- Responsabile dell’Unitá locale di Lecce del progetto nazionale di ricerca “Geometria reale e complessa” (1994-95-96).
- Membro dell’Unitá locale di Roma (Università la Sapienza di Roma) del progetto nazionale di ricerca “Proprietá geometriche delle varietá reali e complesse” (cofin.1998, cofin.2000, cofin.2002).
- Responsabile dell’Unitá locale di Lecce del progetto nazionale di ricerca “metriche riemanniane e varietá differenziabili” (PRIN-2005).
- Responsabile dell’Unitá locale di Lecce del progetto nazionale di ricerca “Geometria Differenziale e Analisi Globale” (PRIN-2007).
- Editor in Chief della rivista scientifica “Note di Matematica” dal gennaio 2009.

- Membro dell'Editorial Board delle riviste scientifiche:
 -Lect. Notes of Seminario Interdisciplinare di Matematica (S.I.M.)(Potenza) dal 2007.
 -Note di Matematica dal 1994.
- Area di ricerca: Geometria Differenziale.

Publications

Papers:

- 1.** *Disequazioni variazionali su varietà Riemanniane di dimensione finita*, Rend. Accad. Sc. Fis. Mat. Napoli, XLII (1975), 530-543.
- 2.** *Una applicazione delle disequazioni variazionali in geometria differenziale globale di varietà Riemanniane*, Rend. Accad. Sc. Fis. Mat. Napoli, XLIV (1977), 491-495.
- 3.** *Distanze invarianti*, Quaderni Istituto di Matematica Università di Lecce, Q.8-1978.
- 4.** *Rigidità di varietà hermitiane compatte*, Quaderni Istituto di Matematica Università di Lecce, Q.15-1978.
- 5.** *Spettro e curvatura di Lipschitz-Killing in dimensione 4*, Rend. Sem. Mat. Univ. Politecn. Torino, 37 (1979), 71-79.
- 6.** *Spettro e curvatura di Lipschitz-Killing in dimensione 6*, Rend. Sem. Mat. Univ. Politecn. Torino, 38 (1980), 59-65.
- 7.** *Varietà conformemente piatte e geometria spettrale*, Riv. Mat. Univ. Parma,(4) 8 (1982), 317-330.
- 8.** *Remarks on intrinsic distances associated with flat affine structures*, Istituto Lombardo (Rend. Sc) A 115 (1981),279-292.
- 9.** *On the spectrum of Kaehler manifolds*, Simon Stevin, 57 (1983), 203-214.
- 10.** *On the volume functions of small geodesic balls*, Rend. di Mat. (4) 3 (1983), 707-723.
- 11.** *Osservazioni sulla caratteristica di Eulero-Poincare di varietà Riemanniane conformemente piatte di dimensione 6*, Note di Matematica, III (1983), 173-181.
- 12.** *On the minimal eigenvalue of the Laplacian operator for p-forms in conformally flat Riemannian manifolds* , Proc. A.M.S. 86, 1 (1982), 103-108.
- 13.** *Eigenvalues on Kaehler manifolds with positive-definite Ricci tensor*, Geometriae Dedicata 15 (1984), 424-434.
- 14.** *On 2p-dimensional Riemannian manifolds with positive scalar curvature*, Rend. Acc. Naz. Lincei LXXVII (1984) f.3-4, 92-98.
- 15.** *Cohomological Einstein Kaehler manifolds characterized by the spectrum*, Mathematische Zeitschrift 185 (1984), 179-183.
- 16.** *Cohomological Einstein Kaehler submanifolds of CP^n and spectral geometry*, Sc. Ann. Univ."Al.I.Cuza" Iasi XXXI (1985) f.2, 161-163.

- 17.** *A characterization of cohomological Einstein Kaehler manifolds and applications*, Geometriae Dedicata 22 (1987), 255-260.
- 18.** *The signature of Kaehler surfaces immersed into CP^n* , Tokyo J. Math. 11 (1988), n. 1, 131-136.
- 19.** *On the spectral rigidity of CP^n* , Proc. A.M.S. 104, 3 (1988), 871-875.
- 20.** *Intrinsic characterizations of complex quadrics by the spectrum of the Laplacian on 2-forms*, Simon Stevin 63, 3-4 (1989), 339-356.
- 21.** (with S.I. Goldberg and G. Toth), *Contact three-manifolds with positive generalized Tanaka-Webster scalar curvature*, Math. Rep. Acad. Sci. Canada 10, 6, (1988), 255-260.
- 22.** (with S.I. Goldberg and G. Toth), *Curvature of contact Riemannian three-manifolds with critical metrics*, Proc. III Int. Symp. on Diff. Geometry Peniscola, 1988, Lect.Notes in Math. Springer-Verlag, 1410, 212-222.
- 23.** (with S.I. Goldberg and G. Toth), *Curvature and torsion of contact Riemannian three-manifolds*, Differential Geometry, A Symposium in honour of M.do Carmo, Rio de Janeiro 1988, Longman Scientific & Technical, 1991, 199-210
- 24.** *A remark on homogeneous contact five-manifolds*, Boll. UMI (7)3-A (1989) 4, 231-235.
- 25.** *5-dimensional contact manifolds with second Betti number $b_2 = 0$* , Tohoku Math. J. 41 (1989), n.1, 163-170.
- 26.** *Torsion and critical metrics on contact three-manifolds*, Kodai Math.J., 13 (1990), 88-100.
- 27.** (with L. Vanhecke), *Five-dimensional homogeneous contact manifolds and related problems*, Tohoku Math.J. vol. 43, (1991), 243-248.
- 28.** (with D.E. Blair), *A Variational Characterization of Contact Metric Manifolds with Vanishing Torsion*, Canad. Math. Bull. vol. 35, (4), 1992, 455-462.
- 29.** (with S.I. Goldberg), *Contact 3-manifolds with positive scalar curvature*, Contemporary Mathematics vol. 127, 1992, 59-68.
- 30.** *Contact Riemannian manifolds satysfing $R(X, \xi)R = 0$* , Yokohama Math. Journal vol. 39, 1992, 141-149.
- 31.** *Torsion tensor and critical metrics on contact $(2n+1)$ -manifolds*, Mh. Math. 114, 1992, 245-259.
- 32.** *Tangent sphere bundles satisfying $\nabla_\xi\tau = 0$* , Journal of Geometry, vol.49, 1994, 178-188.
- 33.** *Spectral Rigidity of the Hopf surfaces*, C.R. Math. Rep. Acad. Sci. Canada, vol.XV, n.4 August 1993, 131-136.
- 34.** (with D.E. Blair), *Second variation of the "total scalar curvature" on contact manifolds*, Canad. Math. Bull. vol.38 (1), 1995, 16-22.
- 35.** *Ricci tensor and spectral rigidity of contact Riemannian 3-manifolds*, Bull. Inst. Math. Acad. Sinica vol.24 (2), 1996, 127-138.

- 36.** *On the spectral rigidity of Hopf manifolds*, Results in Math. vol.29, 1996, 311-316.
- 37.** *n-dimensional totally real minimal submanifolds of CP^n* , Arch. Math. vol.68, 1997, 347-352.
- 38.** (with D. E. Blair), *Conformally Anosov flows in contact metric geometry*, Balkan J. of Geometry and its Applications 3 (2), 1998, 33-46.
- 39.** (with E. Boeckx and L. Vanhecke), *Unit tangent sphere bundles and two-point homogeneous spaces*, Periodica Mathematica Hungarica 36 (2-3), 1998, 79-95.
- 40.** *Homogeneous contact Riemannian three-manifolds*, Illinois J. Math. 42 (2), 1998, 243-256.
- 41.** (with G. Calvaruso and L. Vanhecke), *Homogeneity on three-dimensional contact metric manifolds*, Israel J. Math. 114, 1999, 301-321.
- 42.** *Special directions on contact metric three-manifolds*, J. geom. 69 (2000) 180-191.
- 43.** (with G. Calvaruso), *Torsion and Homogeneity on contact metric three-manifolds*, Annali di Matematica pura e applicata (IV), vol. CLXXVII (2000), 271-285.
- 44.** (with G. Calvaruso and R.A. Marinosci), *Three-dimensional curvature homogeneous hypersurfaces*, Archivum Mathematicum (BRNO) Tomus 36 (2000), 269-278.
- 45.** (with G. Calvaruso), *Spectral geometry of the Jacobi operator of totally real submanifolds*, Bull. Math. Soc. Sc. Math. Roumanie, Tome 43 (93), 3-4, 2000, 187-201.
- 46.** (with G. Calvaruso), *On spectral geometry of minimal parallel submanifolds*, Rend. Circolo Matematico di Palermo, serie II, Tomo L (2001), 103-106.
- 47.** (with G. Calvaruso), *Semi-symmetric contact metric three-manifolds*, Yokohama Mathematical Journal, vol.49, 2002, 35-47.
- 48.** *Weakly ϕ -symmetric contact metric spaces*, Balkan Journal Geometry and its Applications, 7 (2), 2002, 67-77.
- 49.** *Contact Riemannian manifolds with ξ -parallel torsion*, in Selected Topics in Cauchy-Riemann geometry, Dip. Mat. Seconda Univ. Napoli, Caserta, qm vol.9, 2001, 307-336.
- 50.** *Hypercontact metric three-manifolds*, C.R. Math. Rep. Acad. Sc. Canada, 24 (3), 2002, 97-101.
- 51.** *Harmonic characteristic vector fields on contact metric three-manifolds*, Bull. Austral. Math. Soc. 67 (2003), 305-315.
- 52.** *Contact metric-manifolds whose characteristic vector field is a harmonic vector field*, Diff. Geom. Appl. 20 (2004), 367-378.
- 53.** *Geometry of contact Riemannian manifolds whose Reeb vector field is harmonic* Lect. Notes S.I.M. , Dip. Mat. Univ. Basilicata, Potenza, vol. IV (2005), 153-167.
- 54.** *The rough Laplacian and harmonicity of Hopf vector fields*, Annals of Global Analysis and Geometry 28 (2005), 91-106.
- 55.** *Torsion and conformally Anosov flows in contact Riemannian geometry*, J. of geometry 83 (2005), 164-174.

- 56.** *Taut contact circles on H-contact 3-manifolds*, Int. Math. Forum, 1 (2006), no. 26, 1285-1296.
- 57.** (with S. Dragomir), *On the geometry of tangent hyperquadric bundles: CR and pseudo harmonic vector fields*, Annals of Global Analysis and Geometry 30 (2006), 211-238.
- 58.** (with L. Vergori), *Stability of contact metric manifolds and unit vector fields of minimum energy*, Bull. Austr. Math. Soc. 76 (2006), 269-283.
- 59.** (with G. Calvaruso), *H-contact unit-tangent sphere bundles*, Rocky Mountain Journal of Mathematics, 37 (5), 2007, 1435-1457.
- 60.** *Corrected energy of the Reeb distribution of a 3-Sasakian manifold*, Osaka J. Math. 45 (2008) 615-627.
- 61.** *On the volume of unit vector fields on Riemannian three-manifolds*, C. R. Math. Rep. Acad. Sci. Canada vol. 30 no.1, 2008, 11-21.
- 62.** (with M.T.K. Abbassi and G. Calvaruso), *Harmonicity of unit vector fields with respect to Riemannian g-natural metrics*, Differential Geom. Appl. 27 (2009), 157-169.
- 63.** *Stability of the Reeb vector field of H-contact manifolds*, Mathematische Zeitschrift 263 (2009), 125-147.
- 64.** (with M.T.K. Abbassi and G. Calvaruso), *Some examples of harmonic maps for g-natural metrics*, Annales Mathmatiques Blaise Pascal 16 (2009), 189-204 .
- 65.** *Unit vector fields on real space forms which are harmonic maps*, Pacific Journal of Mathematics vol. 239 (1), (2009) pp. 89-104.
- 66.** (with M.T.K. Abbassi and G. Calvaruso), *Harmonic sections of tangent bundles equipped with Riemannian g-natural metrics*, Quart. J. Math. 62 (2011), 259-288.
- 67.** (with M.T.K. Abbassi and G. Calvaruso), *Harmonic maps defined by the geodesic flow*, Houston J. of Math. vol. 36 (1), (2010) pp.69-90.
- 68.** (with G. Calvaruso), *Homogeneous and H-contact unit tangent sphere bundles*, Journ. Austral. Math. Soc. 88 (2010), 323-337.
- 69.** *Minimality, harmonicity and CR geometry for Reeb vector fields*, International Journal of Mathematics vol. 21(9) 2010 , 1189-1218.
- 70.** (with G. Calvaruso), *contact pseudo-metric manifolds*, Differential Geom. Appl. 28(2010), 615-634.
- 71.** (with G. Calvaruso), *Harmonic morphisms and Riemannian geometry of Tangent bundles*, Annals of Global Analysis and Geometry 39(2) 2011, 187-213.
- 72.** *Instability of the geodesic flow for the energy functional*, Pacific Journal of Mathematics 249 (2) 2011, 431-446.
- 73.** *Classification of homogeneous almost cosymplectic three-manifolds*, Differential Geom. Appl. 30 (2012), 49-58.
- 74.** (with G. Calvaruso) *Geometry of Kaluza-Klein metrics on the sphere S^3* , Annali di Mat. Pura e Appl. vol. 192, Issue 5 , 2013, 879-900. DOI 10.1007/s10231-012-0250-5

- 75.** *Almost contact metric manifolds whose Reeb vector field is a harmonic section*, Acta Math. Hungar. 138 (1-2), (2013), 102–126.
- 76.** (with S. Dragomir) *Levi harmonic maps of contact Riemannian manifolds*, Journal of Geometric Analysis, vol. 24, Issue 3 (2014), 1233-1275; DOI: 10.1007/s12220-012-9371-8.
- 77.** *Minimal Reeb vector fields on almost cosymplectic manifolds*, Kodai Math. J. 36 (2013), 258-274.
- 78.** *Geodesic Ricci solitons on unit tangent sphere bundles*, Ann. Global Anal. Geom. 44, Issue 2, (2013), 91-103. <http://dx.doi.org/10.1007/s10455-012-9357-6>.
- 79.** (with G. Calvaruso) *Metrics of Kaluza-Klein type on the anti de Sitter space H_1^3* , Math. Nachr. 287, No. 89, 885902 (2014) /DOI 10.1002/mana.201200105.
- 80.** (with G. Calvaruso), *H -contact semi-Riemannian manifolds*, Journal Geometry and Physics, 71 (2013) 11-21.
- 81.** *Curvature of K -contact semi-Riemannian manifolds*, Canad. Math. Bull. Vol. 57 (2), 2014, pp. 401412 <http://dx.doi.org/10.4153/CMB-2013-016-7>.
- 82.** (with G. Calvaruso), *Erratum to: “Contact pseudo-metric manifolds”*, Differential Geom. Appl. 28 (2010), 615–634. Differential Geom. Appl. 31 (2013) 836–837;
- 83.** *Minimal unit vector fields with respect to Riemannian natural metrics*, Differential Geom. Appl. 31 (2013) 820-835.
- 84.** *Contact pseudo-metric manifolds of constant curvature and CR geometry*, Results Math. Vol.66 (1), (2014), Page 213-225. DOI 10.1007/s00025-014-0373-7.
- 85.** *Unit vector fields of minimum energy on quotients of spheres and stability of the Reeb vector field*, Differential Geom. Appl. 34 (2014) 45-62.
- 86.** *Remarks on Levi harmonicity of contact semi-Riemannian manifolds*, J. Korean Math. Soc. 51 (2014), No. 5, pp. 881895 <http://dx.doi.org/10.4134/JKMS.2014.51.5.881>
- 87.** (with G. Calvaruso), *Geometry of H -paracontact metric manifolds*, Publ. Math. Debrecen, 86 (2015), 325-346.
- 88.** *A characterization of Sasakian space forms by the spectrum*, Journal of Geometry and Physics 90 (2015) 8894.
- 89.** *On the standard nondegenerate almost CR structure of tangent hyperquadric bundles*, Geom Dedicata, Dec. 2016, vol. 185, Issue 1, pp 15–33. DOI 10.1007/s10711-016-0167-z
- 90.** *Taut contact circles and bi-contact metric structures on three-manifolds*. Ann. Global Anal. Geom. 52 (2017) 213–235. DOI 10.1007/s10455-017-9555-3
- 91.** *Classification of homogeneous almost α -coKaehler three-manifolds*, Differential Geom. Appl. 59 (2018), 66–90.
- 92.** *Left invariant almost α -coKaehler structures on 3D semidirect product Lie groups*, International Journal of Geometric Methods in Modern Physics, vol. 16 (1), (2019) 1950011 (18 pages). DOI: 10.1142/S0219887819500117

- 93.** *Contact semi-Riemannian structures in CR Geometry: some aspects*, Special Issue “Applications of Differential Geometry” Axioms 2019, 8(1), 6; pp 50; doi:10.3390/axioms8010006.
- 94.** *On the Pseudohermitian Curvature of Contact Semi-Riemannian Manifolds*, Results Math. 75 (2020), no. 1, Paper No. 17, 24 pp.; <https://doi.org/10.1007/s00025-019-1137-1>
- 95.** (with G. Calvaruso e F. Esposito), *Levi flat CR structures on 3D Lie Algebras*, Annali di Matematica, Accepted 29 March 2020. Online First 27 April 2020.
<https://doi.org/10.1007/s10231-020-00979-2> .

Books:

- 1.** (with S. Dragomir), *Harmonic Vector Fields: Variational Principles and Differential Geometry*, Elsevier Science Ltd, november 2011; pages 522.
- 2.** *Un'introduzione alla geometria riemanniana*, Aracne Editrice (Roma), febbraio 2011; 433 pagine.
- 3.** *Un'introduzione alla Geometria Differenziale di curve e superfici*, ESE Salento University Publishing, Quaderni di Matematica, Q2/2017 (eISBN: 978-88-8305-132-6); 298 pagine. <http://siba-ese.unisalento.it/index.php/quadmat/current>

Editorial activity for multi-authored books and special issues of journals:

- 1.** “Giornate di studio su geometria differenziale e topologia” (Lecce, giugno 1989), Note di Matematica, suppl vol. 9, 1989.
- 2.** (with O. Kowalski, E. Musso) “Complex, contact and simmetric manifolds” in honor of L. Vanhecke, PM 234 Birkhäuser 2005.
- 3.** (with S. Dragomir, R. Marinosci) “Advances in Differential Geometry” in honor of O. Kowalski, Note di Matematica vol.28 suppl. n.1, 2008.
- 4.** (with M. T. K. Abbassi, G. Calvaruso, O. Kowalski and J. Slovák) “Proceedings of the International Conference on Differential Geometry” (Fez (Morocco), 11th-16th April 2016), Note di Matematica, vol. 37, Suppl. N.1 (2017).

Settembre 2020