

Gabriel Eduard Vîlcu - List of Publications

A. RESEARCH ARTICLES

1. [Optimal inequalities for Riemannian maps and Riemannian submersions involving Casorati curvatures](#) (joint paper with J.W. Lee, C.W. Lee and B. Şahin), *Annali di Matematica Pura ed Applicata*, 2020. DOI: <https://doi.org/10.1007/s10231-020-01037-7>.
2. [Classification of Casorati ideal Legendrian submanifolds in Sasakian space forms](#) (joint paper with J.W. Lee and C.W. Lee), *Journal of Geometry and Physics*, Volume 155, September 2020, Article 103768.
3. [A note on geodesic vector fields](#) (joint paper with S. Deshmukh, J. Mikes and N.B. Turki), *Mathematics*, 2020, 8(10), 1663.
4. [A generalized Wintgen inequality for quaternionic CR-submanifolds](#) (joint paper with H. Alodan, B.-Y. Chen and S. Deshmukh), *Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemática*, Volume 114, Issue 3, July 2020, Article number: 129, Pages 1-14.
5. [Hypersurfaces of a Sasakian manifold](#) (joint paper with H. Alodan, S. Deshmukh and N.B. Turki), *Mathematics*, 2020, 8(6), 877.
6. [Horizontally Conformal Submersions from CR-Submanifolds of Locally Conformal Kähler Manifolds](#), *Mediterranean Journal of Mathematics*, Volume 17, February 2020, Article number: 26, Pages 1-13.
7. [Transverse Kähler-Ricci flow and deformations of the metric on the Sasaki space \$ST^{1,1}\$](#) (joint paper with V. Slesar and M. Visinescu), *Romanian Reports in Physics*, Volume 72, Issue 2, 108 (2020).
8. [On some geometric properties of quasi-product production models](#) (joint paper with H. Alodan, B.-Y. Chen and S. Deshmukh), *Journal of Mathematical Analysis and Applications*, Volume 474, Issue 1, 1 June 2019, Pages 693-711.
9. [Classification of Casorati ideal Lagrangian submanifolds in complex space forms](#) (joint paper with M. Aquib, J.W. Lee and D.W. Yoon), *Differential Geometry and its Applications*, Volume 63, April 2019, 30-49.
10. [The First Fundamental Equation and Generalized Wintgen-Type Inequalities for Submanifolds in Generalized Space Forms](#) (joint paper with M. Aquib, M.N. Boyom and M.H. Shahid), *Mathematics*, 2019, 7(12), 1151.

11. [On Casorati Curvatures of Submanifolds in Pointwise Kenmotsu Space Forms](#) (joint paper with M.A. Lone and M.H. Shahid), *Mathematical Physics, Analysis and Geometry*, Volume 22, Issue 1, March 2019, Article ID 2, 14 pages.
12. [On Ouasi-Homogeneous Production Functions](#) (joint paper with A.D. Vilcu), *Symmetry*, Volume 11, Issue 8, 976, 2019, 11 pages.
13. [An optimal inequality for Lagrangian submanifolds in complex space forms involving Casorati curvature](#), *Journal of Mathematical Analysis and Applications*, 465 (2018), no. 2, 1209–1222.
14. [An algorithm to estimate the vertices of a tetrahedron from uniform random points inside](#) (joint paper with A.D. Vilcu), *Annali di Matematica Pura ed Applicata*, Volume 197, Issue 2, 2018, 487–500.
15. [On a generalization of a class of production functions](#), *Applied Economics Letters*, Volume 25, Issue 2, 2018, 106–110.
16. [Curvature invariants of statistical submanifolds in Kenmotsu statistical manifolds of constant \$\phi\$ -sectional curvature](#) (joint paper with S. Decu, S. Haesen and L. Verstraelen), *Entropy*, 2018, 20(7), 529.
17. [Hidden symmetries in Sasaki–Einstein geometries](#) (joint paper with V. Slesar and M. Visinescu), *Physics of Atomic Nuclei*, Volume 80, Issue 4, July 2017, 801–807.
18. [Optimal inequalities for the normalized \$\delta\$ -Casorati curvatures of submanifolds in Kenmotsu space forms](#) (joint paper with C.W. Lee and J.W. Lee), *Advances in Geometry*, Volume 17, No. 3, July 2017, 355-362.
19. [A survey on the geometry of production models in economics](#) (joint paper with A.D. Vilcu), *Arab Journal of Mathematical Sciences*, Volume 23, No. 1 (2017), 18-31.
20. [On generic submanifolds of manifolds endowed with metric mixed 3-structures](#), *Communications in Contemporary Mathematics*, Volume 18, No. 6, 1550081 (2016) [21 pages].
21. [Toric data and Killing forms on homogeneous Sasaki-Einstein manifold \$ST^{1,1}\$](#) (joint paper with V. Slesar and M. Visinescu), *Romanian Journal of Physics*, Volume 61, Nos. 1-2, January 2016, 260–275.
22. [Some characterizations of the quasi-sum production models with proportional marginal rate of substitution](#) (joint paper with A.D. Vilcu), *Comptes Rendus Mathematique*, Volume 353, Issue 12, December 2015, 1129–1133.

23. [Toric data, Killing forms and complete integrability of geodesics in Sasaki–Einstein spaces \$Y^{p,q}\$](#) (joint paper with V. Slesar and M. Visinescu), *Annals of Physics*, Volume 361 (2015), 548–562.
24. [A new proof for some optimal inequalities involving generalized normalized \$\delta\$ -Casorati curvatures](#) (joint paper with C.W. Lee and J.W. Lee), *Journal of Inequalities and Applications* 2015, 2015:310.
25. [Symplectic potential, complex coordinates and special Killing forms on toric Sasaki–Einstein spaces](#) (joint paper with V. Slesar and M. Visinescu), *Proceedings of the Romanian Academy – Series A*, Volume 16, Number 4, November 2015, 505–512.
26. [Optimal inequalities for the Casorati curvatures of submanifolds of generalized space forms endowed with semi-symmetric metric connections](#) (joint paper with C.W. Lee, J.W. Lee and D.W. Yoon), *Bulletin of the Korean Mathematical Society*, Volume 52, No. 5, September 2015, 1631-1647.
27. [Statistical manifolds with almost quaternionic structures and quaternionic Kähler-like statistical submersions](#) (joint paper with A.D. Vilcu), *Entropy*, Volume 17, Number 9, September 2015, 6213-6228.
28. [Inequalities for generalized normalized \$\delta\$ -Casorati Curvatures of slant submanifolds in quaternionic space forms](#) (joint paper with J. Lee), *Taiwanese Journal of Mathematics*, Volume 19, Number 3, June 2015, 691-702.
29. [Hidden symmetries on toric Sasaki–Einstein spaces](#) (joint paper with V. Slesar and M. Visinescu), *EPL (Europhysics Letters)*, Volume 110, Number 3, May 2015, 31001 (6 pp).
30. [Special Killing forms on toric Sasaki–Einstein manifolds](#) (joint paper with V. Slesar and M. Visinescu), *Physica Scripta*, Volume 89, Number 12, December 2014, 125205 (7 pp).
31. [Killing forms and toric Sasaki–Einstein spaces](#) (joint paper with V. Slesar and M. Visinescu), *Journal of Physics: Conference Series*, Volume 563 (2014), 012033.
32. [Inequalities for the Casorati curvatures of slant submanifolds in quaternionic space forms](#) (joint paper with V. Slesar and B. Şahin), *Journal of Inequalities and Applications* 2014, 2014:123 .
33. [Geometric classifications of homogeneous production functions](#) (joint paper with B.Y. Chen), *Applied Mathematics and Computation*, Volume 225, December 2013, 345–351.

34. [Transverse Killing and twistor spinors associated to the basic Dirac operators](#) (joint paper with A.M. Ionescu, V. Slesar and M. Vişinescu), *Reviews in Mathematical Physics*, Volume 25, Issue 08, September 2013, Article ID 1330011, 21 pages.
35. [On Homogeneous Production Functions with Proportional Marginal Rate of Substitution](#) (joint paper with A.D. Vilcu), *Mathematical Problems in Engineering*, Volume 2013 (2013), Article ID 732643, 5 pages.
36. [On Chen invariants and inequalities in quaternionic geometry](#), *Journal of Inequalities and Applications* 2013, 2013:66.
37. [Mixed paraquaternionic 3-submersions](#), *Indagationes Mathematicae*, Vol. 24 (2013), No. 2, 474–488.
38. [Canonical foliations on paraquaternionic CR submanifolds](#), *Journal of Mathematical Analysis and Applications*, Vol. 399 (2013), No. 2, 551–558.
39. [Slant submanifolds of quaternionic space forms](#), *Publicationes Mathematicae Debrecen*, Vol. 81 (2012), No. 3-4(10), 397-413.
40. [Hidden Symmetries of Euclideanised Kerr-NUT-\(A\)dS Metrics in Certain Scaling Limits](#) (joint paper with M. Vişinescu), *Symmetry, Integrability and Geometry – Methods and Applications*, 8 (2012), 058, 15 pages.
41. [Curvature properties of pseudo-sphere bundles over paraquaternionic manifolds](#) (joint paper with R.C. Voicu), *International Journal of Geometric Methods in Modern Physics*, Volume 9, Number 3/2012, 1250024 (23 pages).
42. [Ruled CR-submanifolds of locally conformal Kähler manifolds](#), *Journal of Geometry and Physics*, Volume 62, Number 6/2012, 1366-1372.
43. [Submanifolds in manifolds with metric mixed 3-structures](#) (joint paper with S. Ianuş and L. Ornea), *Mediterranean Journal of Mathematics*, Volume 9, Number 1/2012, 105-128.
44. [Conformal Killing-Yano tensors on higher dimensional spacetimes endowed with special structures](#) (joint paper with M. Visinescu, S. Ianuş and A. Visinescu), *Proceedings of the Twelfth Marcel Grossmann Meeting on General Relativity. Recent Developments in Theoretical and Experimental General Relativity, Astrophysics, and Relativistic Field Theories*, Volume Editors: T. Damour, R. Jantzen and R. Ruffin, World Scientific (2011), 1970-1972.
45. [Harmonic maps and Riemannian submersions between manifolds endowed with special structures](#) (joint paper with S. Ianuş and R.C. Voicu), *Banach Center Publications*, 93 (2011), 277-288.

46. [Para-hyperhermitian structures on tangent bundles](#), *Proceedings of the Estonian Academy of Sciences*, Volume 60, Number 3 / September, 2011, 165-173.
47. [On some geometric properties of the generalized CES production functions](#) (joint paper with A.D. Vilcu), *Applied Mathematics and Computation*, Volume 218, Number 1 / September, 2011, 124-129.
48. [Riemannian submersions from almost contact metric manifolds](#) (joint paper with S. Ianuș, A.M. Ionescu and R. Mocanu), *Abhandlungen aus dem Mathematischen Seminar der Universität Hamburg*, Volume 81, Number 1 / April, 2011, 101-114.
49. [A geometric perspective on the generalized Cobb–Douglas production functions](#), *Applied Mathematics Letters*, Volume 24, Number 5 / May, 2011, 777-783.
50. [Hidden symmetries and Killing tensors on curved spaces](#) (joint paper with S. Ianuș and M. Visinescu), *Physics of Atomic Nuclei*, Volume 73, Number 11 / November, 2010, 1925-1930.
51. [Paraquaternionic CR-submanifolds of paraquaternionic Kähler manifolds and semi-Riemannian submersions](#) (joint paper with S. Ianuș and S. Marchiafava), *Central European Journal of Mathematics*, Volume 8, Number 4 / August, 2010, 735-753.
52. [3-submersions from OR-hypersurfaces of quaternionic Kähler manifolds](#), *Annales Polonici Mathematici*, Volume 98, Number 3, 2010, 301-309.
53. [Semi-Riemannian hypersurfaces in manifolds with metric mixed 3-structures](#) (joint paper with S. Ianuș), *Acta Mathematica Hungarica*, Volume 127, Numbers 1-2 / April, 2010, 154-177.
54. [B.Y. Chen Inequalities for Slant Submanifolds in Quaternionic Space Forms](#), *Turkish Journal of Mathematics*, Volume 34, Issue 1, 2010, 115-128.
55. [Riemannian foliations on quaternion CR-submanifolds of an almost quaternion Kähler product manifold](#), *Proceedings of the Indian Academy of Sciences – Mathematical Sciences*, vol. 119, No. 5, 2009, 611-618.
56. [A new class of semi-Riemannian submersion](#), *Romanian Journal of Physics*, Vol. 54, Nr. 9–10 (2009), 815–821.
57. [Conformal Killing-Yano tensors on manifolds with mixed 3-structures](#) (joint paper with S. Ianuș and M. Vișinescu), *Symmetry, Integrability and Geometry – Methods and Applications*, 5 (2009), 022, 12 pages.

58. [Paraquaternionic manifolds and mixed 3-structures](#) (joint paper with S. Ianuș), *Differential Geometry: Proceedings of the VIII International Colloquium (July 7-11, 2008, Santiago de Compostela, Spain)*, Eds. Jesús A Alvarez López & Eduardo García-Río, World Scientific Publishing Company 2009, 276-285.
59. [Some constructions of almost para-hyperhermitian structures on manifolds and tangent bundles](#) (joint paper with S. Ianuș), *International Journal of Geometric Methods in Modern Physics*, vol. 5, Nr. 6, 2008, 893-903.
60. [Riemannian submersions from quaternionic manifolds](#) (joint paper with S. Ianuș and R. Mazzocco), *Acta Applicandae Mathematicae*, vol. 104, Nr. 1/2008, pg. 83-89.
61. [Foliations on quaternion CR-submanifolds](#) (joint paper with S. Ianuș and A.M. Ionescu), *Houston Journal of Mathematics*, vol. 33, Nr. 3, 2008, pg. 739-751.
62. [Harmonic maps from quaternionic Kähler manifolds](#) (joint paper with S. Ianuș and R. Mazzocco), *Journal of Nonlinear Mathematical Physics*, vol. 15, issue 1, 2008, pg. 1-8.
63. [Normal semi-invariant submanifolds of paraquaternionic space forms and mixed 3-structures](#), *Proceedings of The International Conference „Differential Geometry and Dynamical Systems”, Bucharest, October 5-7, 2007, BSG Proceedings 15 (2008)*, Geometry Balkan Press, pp. 221-229.
64. [On the existence of harmonic metrics on manifolds endowed with quaternionic structures](#) (joint paper with A.D. Vilcu), *Proceedings of the 4-th National Conference on Applied Physics, Galati, September 25-26, 2008, The Annals of The “Dunarea de Jos” University of Galati, Mathematics, Physics, Chemistry, Informatics, Fascicle II, N.S., Year II (XXXI), 2008*, 94-100.
65. [Hypersurfaces of paraquaternionic space forms](#) (joint paper with S. Ianuș), *Proceedings of the 3rd Baltic-Nordic Workshop, Algebra, Geometry, and Mathematical Physics, Göteborg, October 11–13, 2007, Journal of Generalized Lie Theory and Applications*, vol. 2, No. 3 /2008, 175-179.
66. [Some remarks on harmonic metrics on hyper-Kähler manifolds](#) (joint paper with A.D. Vilcu), *JP Journal of Geometry and Topology*, vol. 7, Issue 3, 2007, pg. 397-403.
67. [A note on paraquaternionic manifolds](#) (joint paper with A.M. Ionescu), *Missouri Journal of Mathematical Sciences*, vol. 19, Issue #3 – Fall 2007, pg. 213-218.
68. [Submanifolds of an almost paraquaternionic Kähler product manifold](#), *International Mathematical Forum*, vol. 2, Nr. 15/2007, pg. 735-746.

69. [Semi-Riemannian submersions from normal semi-invariant submanifolds](#), *Bul. Inst. Polit. Iași, Secția Matematică, Mecanică Teoretică, Fizică, Tomul LIII (LVII), Fasc. 5 (2007)*, pg. 413-421.
70. [A Schur-type theorem on an indefinite quaternionic Kähler manifold](#), *International Journal of Contemporary Mathematical Sciences*, vol. 2, Nr. 11/2007, pg. 529-536.
71. [Curvature identities on almost \$C -\$ manifolds](#) (joint paper with A.M. Ionescu), *Proceedings of The International Conference Riemannian Geometry and Applications: Dedicated to the memory of Radu Rosca*, Brașov, June 21-26, 2007, *Bulletin of The Transilvania University of Brasov*, vol. 14 (49)/2007 – Series B, 127-132.
72. [Real lightlike hypersurfaces of paraquaternionic Kähler manifolds](#) (joint paper with S. Ianuș and R. Mazzocco), *Mediterranean Journal of Mathematics*, vol. 3, Nr. 3-4/2006, pg. 581-592.
73. [Product of paraquaternionic Kähler manifolds](#), *Bull. Math. Soc. Sci. Math. Roumanie* 48(96), No. 3 (2005), 345-355.
74. [Some submersions of extrinsic hyperspheres of a Bochner-Kähler manifold](#), *Rendiconti del Circolo Matematico di Palermo*, vol. LIV (2005), pg. 343-351.

B. RESEARCH MONOGRAPHS/CHAPTERS

1. *Curvature inequalities for slant submanifolds in pointwise Kenmotsu space forms*, in: [Contact geometry of slant submanifolds](#). Editors: B.-Y. Chen, M.H. Shahid, F.R. Al-Solamy, Springer, 2021, 21pp., in press. (ISBN 978-981-16-0017-3)
2. *Paraquaternionic CR-submanifolds*, in: [Geometry of Cauchy-Riemann Submanifolds](#). Editors: Sorin Dragomir, Mohammad Hasan Shahid, Falleh R. Al-Solamy, Springer, 2016, Chapter 13, 361-390. (ISBN 978-981-10-0916-7)
3. [Contributions to the study of quaternionic manifolds](#), *Differential Geometry – Dynamical Systems Monographs* 9, **Geometry Balkan Press, 2007.**

C. EDITED BOOKS

1. [Differential Geometry, Algebra, and Analysis](#), (joint with M.H. Shahid, M. Ashraf, F. Al-Solamy and Y. Kimura), *Springer Proceedings in Mathematics & Statistics book series (PROMS, volume 327)*, 2020. (ISBN 978-981-15-5455-1)