

## CURRICULUM VITAE

**Prof. Dr. CONSTANTIN UDRIȘTE**

**Date of Birth:** 22 January, 1940

**Place of Birth:** Turceni, Gorj, Romania

**Sex:** male

**Citizenship:** Romanian

**Married on:** 21 August 1965, **to:** Aneta

**Number of Children:** 2 Sons

**Details of Education:**

Diploma of maturity, 1957

Praiseworthy Diploma Paper, University of Timisoara, Romania, 1958-1963

Doctor in Mathematics, Babes-Bolyai Univ. Cluj-Napoca, Romania, 1971

**Title of PhD Thesis:** Almost coquaternion structures

**Supervisor:** Prof.Dr.Docent Gh.Th.Gheorghiu

**Present Occupation:** Full Professor, Dean of Faculty of Applied Sciences,  
University POLITEHNICA of Bucharest

**Professional Employment:**

Teacher, High school, Bucharest,	1963-1964
Assistant, Poly.Inst.Bucharest,	1964-1970
Lecturer, Poly.Inst.Bucharest,	1970-1976
Professor, Poly.Inst.Bucharest,	1976-1990
Full Professor, Univ. POLITEHNICA of Bucharest,	1990-
Chair, Mathematics I,	1990-
Director, Department of Mathematics,	1999-
Dean of Faculty of Applied Sciences,	2005-

**Supervisor for Doctorate:**

Differential Geometry 1992 -, Applied Mathematics 1995-

**Number of PhD Students:** 30 in due time and 12 Doctors in Mathematics.

**Successful PhD Students:** 1) Iulia Elena Hirica - The geometry of pairs of connections (1999)

2) Cristian Dumitrescu - Geometrical and topological structure of magnetic fields generated around rectilinear wires (1999)

3) Nicoleta Bila - Symmetry groups and conservation laws of certain PDEs (1999)

4) Magdalena Daniela Toda – finished at University of Kansas (under the guidance of Prof. Dr. Josef Dorfmeister)

5) Mircea Neagu - The Riemann-Lagrange geometry of first-order jet spaces (2001)

6) Ana Maria Teleman - Variational problems of Yang-Mills-Witten type (2002)

7) Bala Dumitru – Metode geometrice in studiul miscarilor sistemelor vibrante si vibropercutante (2004)

8) Dragoș Cioroboiu – Geometry of submanifolds in Sasaki manifolds - 2004

9) Teodor Vasile Oprea – Optimizations on Riemannian submanifolds -2006

10) Iulian Duca – Periodical solutions of multi-time Euler-Lagrange and Hamilton dynamical systems - 2006

11) Gabriel Bercu – Newton method on differentiable manifold -2006

12) Nicola Ileana Rodica, Geometrical methods for analysis of complex biological processes-2006



**Served Faculties:** Electronics, Transports, Tools and Machines, Department of Engineering, Department of Mathematics, Applied Sciences.

**Taught Courses:** Analytical and Differential Geometry, Algebra, Geometry and Diff. Eq., Mathematical Analysis, Special Mathematics, Operational Researches, Numerical Methods, Differential Geometry and Analysis on Manifolds, Geometric Dynamics, Convex Functions and Optimization Methods on Riemannian Manifolds.

**This academic year I have taught:** *undergraduate*- Algebra, Analytical and Diff. Geometry, Diff. Geometry and Diff. Equations, at Transport Faculty (in Romanian) and at Department of Engineering (in English), and *graduate* - Geometric Dynamics, Riemannian Convexity at Department of Mathematics.

**Activity-Related Sites:**

[www.mathem.pub.ro](http://www.mathem.pub.ro); <http://www.zblmath.fiz-karlsruhe.de/MATH>,  
<http://www.ams.org/mathscinet/search>, <http://portal.acm.org/>,  
[www.optimization-online.org/](http://www.optimization-online.org/), [www.sztaki.hu/~snemeth/thesis.htm](http://www.sztaki.hu/~snemeth/thesis.htm),  
[www.ime.usp.br/~piccione/](http://www.ime.usp.br/~piccione/), [www.mat.ub.es/EMIS/journals/BJGA/5.1](http://www.mat.ub.es/EMIS/journals/BJGA/5.1);  
[www.wkap.nl/prod/b/](http://www.wkap.nl/prod/b/), [www.math.rug.nl/revwg/html](http://www.math.rug.nl/revwg/html),  
[www.yurinsha.com/319/p3.htm](http://www.yurinsha.com/319/p3.htm), [www.amases.it/Archivio\\_Notizie\\_dai\\_Soci\\_uk](http://www.amases.it/Archivio_Notizie_dai_Soci_uk),  
[www.tex.tuiasi.ro/biblioteca/](http://www.tex.tuiasi.ro/biblioteca/), etc

**Invited Speaker and Selected Addresses:**

International Congress of Mathematicians, Varsovia, Poland, 1986.

International Congress of Mathematicians, Kyoto, Japonia, 1990.

1990 Summer Research Institute, Differential Geometry, University of California, Los Angeles, July 8-28.

Conference on Finsler Geometry and Its Applications to Physics and Control Theory, Debrecen, Hungary, 1991.

Organizer, 22-nd Conference on Differential Geometry and Topology, Applications in Physics and Technics, Poly.Inst.Bucharest, 1991.

First European Congress of Mathematicians, Paris, July 6-10, 1992.

Tempus Jep 2717, Initiation of formal training in computer aided electrical engineering in Romania universities, Università degli Studi di Napoli, Dipartimento di Ingegneria Elettrica, April-Mai, 1992.

Third International Symposium, Chaotic Dynamical Systems, Conference Center "Woudschoten" in the Netherlands, June 14-17, 1992.

Member of Organizing Committee, International Conference on Differential Geometry and Its Applications, Tensor Society (Japan) - Romanian Academy, Bucharest, August 24-29, 1992.

Organizer, International Workshop on Differential Geometry and Its Applications, Politehnica University of Bucharest, July 25-30, 1993.

International Congress of Mathematicians, Zürich, August 3-11, 1994.

3-rd International Conference on Differential Geometry and Its Applications, Athens, Greece, August 15-20, 1994.

International Workshop on Global Analysis, Differential Geometry and Lie Algebras, Aristotle University of Thessaloniki, December 14-18, 1994; December 1995; December 1996; June 1997; June 1998; June 1999; Sept. 2000; June 2001; June 2002.

IRB International Workshop, Monteroduni, Italy, August 8-12, 1995.

Second European Congress of Mathematicians, Budapest, August, 1996.

450-th Anniverssary of the Foundation of the Messanence Studium Generale, University of Messina, Oct. 12-14, 1998.

International Conference on Finsler and Lagrange Geometry and Its Applications: A Meeting of Minds, August 13-20, 1998, University of Alberta in Edmonton, Canada.

Congresso Internazionale di Geometria Differenziale in Onore di Pasquale Calapso, 12-14 Ottobre, 1998, Università di Messina, Italy.

Ninth Midwest Geometry Conference, The University of Missouri-Columbia, Nov. 5-7, 1999; The University of Kansas, Nov. 7-14, 1999.

Conference on Mathematics in Honour of Professor Radu Roşca at the Occasion of His Ninetieth Birthday, Dec 11-16, 1999, Katholieke Universiteit Brussel, Katholieke Universiteit Leuven, Belgium.

International Symposium on Mathematics and Mathematical Sciences, Jan. 22-24, 2000, Calcutta Mathematical Society, India.

London Mathematical Society, Durham Symposium, Geometric Integration, July 13-23, 2000, University of Durham.

First International Colloquium of Mathematics and Engineering and Numerical Physics, University Politehnica of Bucharest, Oct. 30-31, 2000.

Michigan State University, April 13-27, 2001; Eleven-th Midwest Geometry Conference, Wichita State University, April 27-29, 2001.

University of Messina, Mathematical Institute, May 12-19, 2002.

ICM Satellite Conference in Algebra and Related Topics, University of Hong-Kong, August 13-18, 2002.

International Congress of Mathematicians, Beijing, August 20-28, 2002.

Second International Colloquium of Mathematics and Engineering and Numerical Physics, University Politehnica of Bucharest, April 22-27, 2002.

University of Messina, Department of Mathematics, Grant-Italian Scientific Research Group INdAM-GNFM, 14 Oct.-14 Nov., 2003.

Mid-West Geometry Conference, University of Arkansas, Department of Mathematics, 24.03-09.04, 2004.

French-German-Spanish Conference on Optimization, September 20-24, 2004, Avignon, France.

2005 Annual Hawaii International Conference on Statistics, Mathematics and Related Fields, January 9-11, 2005, Honolulu, Hawaii.

University of Messina, Department of Mathematics, 3-23 April 2005, Integration Course (20 hours), Dynamical Systems and Geometric Dynamics.

International Congress of Mathematicians, Madrid, August 22-30, 2006.

6th Congress of Romanian Mathematicians, June 28 - July 4, 2007, Bucharest, Romania.

7th WSEAS International Conference on Systems Theory and Scientific Computation (ISTASC'07), Vouliagmeni Beach, Athens, Greece, August 24-26 (2007), 66-71.

European Computing Conference, Vouliagmeni Beach, Athens, Greece, September 24-26, 2007.

12<sup>th</sup> WSEAS International Conference on Applied Mathematics, Cairo, Egypt, Dec. 29-31, 2007

7th WSEAS International Conference on Circuits, Systems, Electronics, Control and Signal Processing, Cairo, Egypt, Dec. 29-31, 2007

**Organizer:** First Conference of Balkan Society of Geometers, Politehnica University of Bucharest, September 23-27, 1996; Second Conference of Balkan Society of Geometers, Aristotle University of Thessaloniki, June 24-27, 1998; Third Conference of Balkan Society of Geometers, Politehnica University of Bucharest, July 31-August 3, 2000; Fourth Conference of Balkan Society of Geometers, Aristotle University of Thessaloniki, June 26-30, 2002; First French-Romanian Colloquium of Numerical Physics, October 30-31, 2000,

University Politehnica of Bucharest, Romania; The 2-nd International Colloquium of Mathematics in Engineering and Numerical Physics, April 22-27, University Politehnica of Bucharest, Romania 2002; The 3-rd International Colloquium "Mathematics in Engineering and Numerical Physics", October 7-9, 2004, University Politehnica of Bucharest; 5-th Conference of Balkan Society of Geometers (5-th Conference on Differential Geometry), August 28-September 2, 2005, Mangalia, Romania; The 4-th International Colloquium Mathematics in Engineering and Numerical Physics, University Politehnica of Bucharest, October 6-8, 2006; The International Conference of Differential Geometry and Dynamical Systems, University Politehnica of Bucharest, October 5-7, 2007.

**Fields of Interest:** Differential Geometry, Optimizations on Riemannian Manifolds, Magnetic Dynamical Systems, Geometric Dynamics.

**Selected Books:**

*Minima and Maxima ...*, Editura Tehnică, Bucuresti, 1980.

*Algebra, Geometry and Diff.Eq.*, Editura Didactică și Pedagogică, Bucuresti, 1982.

*Field Lines*, Editura Tehnică, Bucuresti, 1988.

*Convex functions and optimization methods on Riemannian manifolds, Mathematics and Its Applications*, Kluwer Academic Publishers, Dordrecht, Boston, London, 1994.

*Linear Algebra, Analytic Geometry*, Geometry Balkan Press, Bucuresti, 1996.

*Differential Geometry, Differential Equations*, Geometry Balkan Press, 1997.

*Geometric Dynamics*, Mathematics and Its Applications, Kluwer Academic Publishers, Dordrecht, Boston, London, 2000.

*Atlas of Magnetic Geometric Dynamics*, Geometry Balkan Press, Bucharest, 2001.

*Extrema with Nonholonomic Constraints*, Geometry Balkan Press, Bucharest, 2002.

*Vector Fields and Their Applications*, Geometry Balkan Press, Bucharest, 2002.

*Economic Geometric Dynamics*, Geometry Balkan Press, Bucharest, 2004.

**Books:** over 40

**Research Contracts:** over 30 ( 23-Director ). **Examples:**

Research Grant 21815/23.09.1998 MEN, CNCSU-31, Sisteme dinamice electromagnetice si noi variante ale legii Lorentz - Electromagnetic dynamical systems and new variants of Lorentz law (derulat in perioada1999-2002); Grant 50, cod CNCSIS 1107, Dinamica Geometrica si Sisteme Dinamice Generalizate, MECT-UPB, 2003-2005; Economic Geometric Dynamics, Executive Programme of Scientific and Technological Cooperation Between Italy and Romania, 2006-2008; PROIECTUL EUROPEAN DE FORMARE DOCTORALA, FP6/HRM/EST3, 2005-; CNCSIS A1478/2003-2005.

**Author and Contributor** of over 180 articles to mathematical journals and over 200 papers to mathematical meetings

**Fields of Original Contributions:** education and methods, groups of motion, properties of the tangent bundle, almost coquaternion metric manifolds, variational calculus on Riemannian manifolds, Finsler-Lagrange-Hamilton manifolds, Riemannian convexity and optimization, magnetic dynamical systems, geometric dynamics and optimal control, the theory of spatial mechanisms, solar tower concentrator, applied mathematics.

**Selected Publications:**

1) Synthesis of spatial slider-crank mechanism for given slider stroke and crank length, Theory of Machines and Mechanisms, New York (1973), vol.8, 257-269, collaboration.

2) Coquaternion structures and almost coquaternion structures, Mathematica Balkanica 4(1974), 635-642;

- 3) Diagonal lifts from a manifold to its tangent bundle, *Rendiconti di Matematica*, 9(1976), 539-550;
- 4) Kuhn Tucker theorem on Riemannian manifolds, *Colloquia Math. Societatis Janos Bolyai, Debrecen* (1984), 1247-1259;
- 5) Properties of irrotational vector fields, *Journal of Geometry and Physics*, 2(1985), 117-125;
- 6) Properties of v-curvature tensors in Finsler manifolds, *Tensor, N.S.*46(1987), 52-57;
- 7) Solar flux density calculation for a solar tower concentrator, *Rev. Roum. Physique*, 1988, collaboration;
- 8) d-Connections that assure nonconstant gravitational function, *Memoriile Academiei Române*, 11(1988), 79-92;
- 9) Convex nonholonomic hypersurfaces, *Math. Heritage of C.F. Gauss*, World Scientific Publ. Co. Singapore (1990), 769-784;
- 10) Convex programming on the Poincare plane, *Tensor, N.S.*, 51, 2(1992), 103-116;
- 11) On the Santalo-Yanez conjecture, *SEA Bull. Math.* 17, 1(1993), 59-68;
- 12) Completeness of Finsler manifolds, *Publications Mathematicae, Debrecen*, 42, 1-2(1993), 45-50.
- 13) Magnetic dynamical systems, In Editors L.Tamassy, J.Szenthe, *New Developments in Differential Geometry*, Kluwer Academic Publishers 1996, pp. 407-414; *Analele stiintifice ale Univ. Al. I. Cuza Iasi, Informatics* (1995), 105-126, collaboration.
- 14) Dynamics Induced by a Magnetic Field, In Editor J.Szenthe, *New Developments in Differential Geometry*, Budapest 1996, Kluwer Academic Publishers, 1998, p.429-442, collaboration.
- 15) Convex programs on Finsler manifolds, In Editor J.Szenthe, *New Developments in Differential Geometry*, Budapest 1996, Kluwer Academic Publishers, 1998, p.443-458.
- 16) Extrema Constrained by a Family of Curves and Local Extrema, *Journal of Optimization Theory and Applications* 97, 3(1998), 605-621, collaboration.
- 17) Finslerian Convexity and Optimization, in *Finslerian Geometries, A Meeting of Minds*, Edited by P.L.Antonelli, pp. 283-296, Kluwer Academic Publishers, Dordrecht, Boston, London, 2000.
- 18) Geometric Dynamics, *Southeast Asian Bulletin of Mathematics*, 24(2000), 313-322, Springer-Verlag.
- 19) Hamiltonian Approaches of Field Theory, *IJMMS*, 57 (2004), 3045-3056.
- 20) Noholonomic Optimization, *French-German-Spanish Conference on Optimization*, September 20-24, 2004, Avignon, France; Ed. A. Seeger, *Recent Advances in Optimization, Lectures Notes in Economics and Mathematical Systems*, Springer-Verlag, 2005, 119-132.
- 21) C. Udriste, Multi-Time maximum principle, Short Communication, *International Congress of Mathematicians, Madrid*, August 22-30, 2006.
- 22) C. Udriste, I. Tevy, Multi-time Euler-Lagrange-Hamilton Theory, *WSEAS Transactions on Mathematics*, 6, 6 (2007), 701-709.

#### **Quoting by Foreign Authors:**

- 1) K. Yano, S. Ishihara, *Tangent and Cotangent Bundles*, Marcel Decker, Inc. New York 1973, quotes and develops theorems from our paper *Congruences on Tangent Bundles of a Differentiable Manifold*, *Rev. Roum. Math. Pures Appl.* 15, 1970, 1079-1096.
- 2) A. Sirokov, *Structuri pe varietăți diferentiabile*, *Algebră, Topologie, Geometrie*, Itohi Nauki i tehnicki, t XXI, 1974, 153-207 quotes and uses the papers: *Asupra spațiului fibrat tangent al unei varietăți diferentiabile*, *St.Cerc. Mat. t. 22, nr.4 (1970) 599-611*; *Congruences on the tangent bundle of a differentiable manifold*, *Rev. Roum. Math. Pures et Appl. t. 15, nr.7, 1970, 1079-1096*; *Structures presque coquaternioniennes*, *Bull.Math.Soc.Sci.Math. Romania* 13 (61), 4 (1969), 487-507; *Almost coquaternion*



- hypersurfaces, *Rev.Roum.Math. Pures et Appl.* 15, 9 (1970), 1545-1551; On  $\phi$ -transformations, *Analele St. Univ. Al.I. Cuza, Iași, Matematică* 17, 2 (1971), 455-464; On Almost coquaternion structures, *Studia Univ. Babeş -Bolyai, Math. Phys* 1 (1972), 11-20.
- 3) Kojiro Sato, On the Riemannian curvature tensor in a Kaehler manifold, *Bull.Math.Soc.Sci.Math. Romaine*, 20 (68), nr. 1-2 (1976), 193-197, quotes and develops theorems from our paper On the Riemannian curvature tensor, *Bull.Math.Soc.Sci.Math. Roumanie* 16 (64), nr.4 (1972), 471-476.
- 4) Tashio Takahashi, on the rank of a certain curvature tensor of a Sasaki manifold, *Kumamoto J.Sci.Math.* vol. 12 (1977) 52-55 quotes and develops theorems from our paper On the Riemannian curvature tensor, *Bull.Math.Soc.Sci.Math. Romaine* 16 (64), nr.4 (1972), 471-476.
- 5) T. Aikou, M. Hashiguchi, On the Cartan and Berwald expressions of Finsler connections, *Reports of Faculty of Science, Kagoshima University*, No 19 (1986), 7-17 mention in the introduction the originality of our ideas written on the manuscript.
- 6) Dolores Monar, 3-estructuras casicontacto, *Doctoral Thesis, Ses. Public. Univ. de la Laguna*, 1987 and Affine connections on manifolds with almost contact 3-structure, *Riv. Mat. Univ. Parma* (4) 14 (1988), 237-248 quotes and develops theorems from our papers regarding the almost coquaternion structures as for example Coquaternion structures and almost coquaternion structures, *Math. Balkanica* (4) 22 (1974), 635-642.
- 7) M. Petrovic, R. Roşca, L. Verstraelan, Exterior concurrent vector fields on Riemannian manifolds, *Soochow Journal of Math.* 15, 2 (1989), 179-187 quotes and develops theorems from our paper Properties of torse forming vector field, *Tensor N.S.* 42 (1982), 134-144.
- 8) Della C. Duncan, The connexion, *Fresno, USA* vol.1, nr.3 (1991) quotes the papers: Hamiltonian and Lagrangian structures connected to linear equations with partial derivatives; Convex programming on the Poincare plane; On the Santalo-Yanez conjecture about convex set in the hyperbolic plane; An analytical criterion for the completeness of Finsler manifolds.
- 9) R. B. Paul, D. N. Pathak, A study of generalized almost 3-structure manifold, *Acta Ciencia Indica*, 18 M, 1, 061 (1992), 61-66, quotes and develops theorems from our paper On contact 3-structure, *Bull. Univ. Braşov, C*, 16 (1974), 85-92.
- 10) R. B. Paul, Hypersurfaces of a generalized 3-structure manifold, *Acta Ciencia Indica*, 18M, 3 (1992), 249-254, quotes and develops theorems from our paper On contact 3-structure, *Bull. Univ. Braşov, C*, 16 (1974), 85-92.
- 11) K. Matsumoto, I. Mihai, R. Roşca, On gradient almost to use forming vector fields, *Math. J. Toyama Univ.* 19 (1996), 143-157, quotes and develops theorems from our paper Properties of torse forming vector fields, *tensor, NS*, 42 (1982), 134-144.
- 12) Tamas Rapcsak, *Smooth Nonlinear Optimization in  $R^n$* , Kluwer Academic Publishers, 1997, quotes and develops theorems from our book *Convex Functions and Optimization Methods on Riemannian Manifolds*, Kluwer Academic Publishers, 1994.
- 13) Yu. V. Pavlyuchenko, On characteristic directions of point correspondences between spaces: Algebraic aspect, *J. Math. Sci.*, New York 94, 5(1999), 1700-1747, quotes and develops theorems from our paper "On the deformation algebra of two connections, *Bull. Math. Soc. Sci. Math.* 20, 3-4(1977), 313-323".
- 14) M. Anastasiei, H. Shimada, Beil metrics associated to a Finsler space, *BJGA* 3,2 (1998), 1-17 quote and develop theorems from our papers "Completeness of Finsler manifolds, *Publ. Math. Debrecen*, 42, 1-2(1993), 45-50; "Convex functions and optimization methods on Riemannian manifolds, Kluwer Academic Publishers, 1994".
- 15) J. X. da Cruz Neto, L. L. Lima, R. P. Oliveira, Geodesic algorithms in Riemannian geometry, *BJGA* 3,2 (1998), 89-100 quote and develop theorems from our papers: Convex

functions and optimization methods in Riemannian geometry, Kluwer Academic Publishers; Convergence of minimization methods on Riemannian manifolds, International Workshop on Differential and Its Applications, Bucharest, July 25-30, Scientific Bulletin, Politehnica University of Bucharest, 55, 3-4 (1993); Minimization algorithms on Riemannian manifolds, Proceedings of the 23-rd Conference on Geometry and Topology, Cluj-Napoca, Romania, 1995, 185-193; Optimization methods on Riemannian manifolds, Proceedings of IRB International Workshop, Monteroduni, Italy, August 8-12, 1995, Algebras, Groups and Geometries 14 (1997), 339-359; Riemannian convexity in programming (I), Proceedings of 25-th National Conference on Geometry and Topology, AL.I.Cuza University of Iassy, Romania, September 18-23, 1995; An. St. Univ.AL.I. Cuza, Iassy, 42(1996), 123-136; Sufficient decrease principle on Riemannian manifolds, Workshop on Differential Geometry, Global Analysis and Lie Algebras, Aristotle University of Thessaloniki, December 13-16, 1995; Balkan Journal of Geometry and Its Applications, 1,2(1996), 111-123; Riemannian convexity in programming (II), Balkan Journal of Geometry and Its Applications, 1,1(1996), 99-100.

16) E. Miglierina, Invex functions on differentiable manifolds, Generalized convexity and optimization for economic and financial decision, Verona 1998, 299-311, Pitagora, Bologna 1999 quotes and develops theorems from our book "Convex functions and optimization methods on Riemannian manifolds, Kluwer Academic Publishers, 1994".

17) R. Mahony, J. H. Manton, The geometry of the Newton method on non-compact Lie group, J. Global Optimization, 23, 3 (2002), 319-327, quotes and develops theorems from our book "Convex functions and optimization methods on Riemannian manifolds, Kluwer Academic Publishers, 1994".

18) J. P. Dedieu, P. Prioret, G. Malajovich, Newton method on Riemannian manifolds, IMA. J. Numer. Anal., 2002, quotes and develops theorems from our book "Convex functions and optimization methods on Riemannian manifolds, Kluwer Academic Publishers, 1994".

19) O. P. Ferreira, O. P. Oliveira, Proximal point algorithm on Riemannian manifolds, Optimization, 51, 2 (2002), 257-270, quotes and develops theorems from our book "Convex functions and optimization methods on Riemannian manifolds, Mathematics and Its Applications, 297, Kluwer Academic Publishers, 1994".

20) S. Z. Nemeth, Variational inequalities on Hadamard manifolds, Nonlinear Analysis 52 (2003), 1491-1498 quotes and develops theorems from our papers "C. Udriște, Convex functions on Riemannian manifolds, Stud. Cerc. Mat. 28 (6) (1976), 735-745" and "C.Udriște, Continuity of convex functions on Riemannian manifolds, Bull. Math. Roum. 21(1977), 215-218".

21) Charles Boyer, Krysztof Galiki, Benjamin M. Mann, Quaternionic geometry and 3-Sasakian manifolds, Proceedings of the Meeting on "Quaternionic structures in Mathematics and Physics, trieste, 5-9 September, 1994", ILAS/FM-6/1996, pp.7-24, quotes and develops theorems from our paper C. Udriste, Structures presque coquaternionennes, Bul.Mat.Sci.Math.Roumanie, 12 (1969), 487-507.

22) Charles Boyer, Krysztof Galiki, Benjamin M. Mann, Elmer G. Rees, Einstein manifolds of positive scalar curvature with arbitrary second Betti number, Balkan Journal of Geometry and Its Applications, 1, 2 (1996), 1-7, quotes and develops theorems from our paper C. Udriste, On fiberings of almost coquaternion manifolds, An. St. Univ. Iasi, Matematica, 18 (1972), 407-415.

23) V. Balan, Synge-Beil and Riemann-Jacobi jet structures with applications to physics, IJMMS, 2003,1693-1702 quotes and develops theorems from our book "Geometric Dynamics, Mathematics and Its Applications, 513, Kluwer Academic Publishers, 2000".

24) S. Z. Nemeth, Geometric aspects of Minty-Browder monotonicity, PhD Thesis, Budapest, <http://www.sztaki.hu/~snemeth/thesis.htm>, quotes and develops theorems from our

book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

25) E. A. Papa Quiroz, P. R. Oliveira, A new self-concordant barrier for the Hypercube, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

26) F. Alvarez, J. Bolte, J. Munier, A unifying local convergence result for Newton method in Riemannian manifolds, INRIA, Rocquencourt, Rapport de recherche no 5381, 2004, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

27) P. A. Absil, R. Mahony, R. Sepulchre, Riemannian geometry of Grassmann manifolds with a view on algorithmic computation, *Acta Applicandae Mathematicae*, 80, 2 (2004), 199-220, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

28) J. P. Dedieu, D. Nowicki, Computational aspects of Newton method on Riemannian manifolds: the case of submanifolds, MIP. Departement de Mathematique, University Paul Sabatier, Draft, January 5, 2004, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

29) M. Moakher, A differential geometric approach to the geometric mean of symmetric positive definite matrices, *Siam J. Matrix Anal. Appl.*, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

30) M. Moakher, Means and averaging in the group of rotations, *Siam J. Matrix Anal. Appl.*, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

31) O. P. Ferreira, P. R. Oliveira, Subgradient algorithm on Riemannian manifolds, *Journal of Optimization Theory and Applications*, 97,1 (1998), 93-104, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

32) N. Bila, Particular nonclassical symmetries for Monge-Ampere equations, *Journal of Symbolic Computation*, quotes and develops theorems from the papers "C. Udriste, C. Bila, Symmetry Lie groups of the Monge-Ampere equation, *Balkan Journal of Geometry and Its Applications*, 3,(1998), 121-134, C. Udriste, C. Bila, Symmetry group of Titeica surfaces PDE, *Balkan Journal of Geometry and Its Applications*, 4,(1999), 123-140.

33) J. H. Manton, On the various generalisations of Optimization algorithms to manifolds, Invited paper presented at MTNS 2004 in KU Leuven, Belgium, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

34) O. P. Ferreira, B. F. Svaiter, Kantorovich's theorem on Newton's method in Riemannian manifolds, *Journal of Complexity*, 18, 1(2002), 304-329, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

35) G. W. Gibbons, A. Ishibashi, Convex functions and spacetime geometry, *Classical and Quantum Gravity*, 18 (2001), 4607-4627, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.

36) F. Giannoni, A. Masiello, P. Piccione, Convexity and the finiteness of the number of geodesics. Applications to the multiple-image effect, *Class. Quantum Grav.*, 16 (1999), 731-748, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.



- 37) F. Alvarez, J. Bolte, O. Brahic, Hessian Riemannian gradient flows in convex programming, *Siam J. Control Optim.*, 43, 2 (2004), 477-501, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.
- 38) P. A. Absil, C. G. Baker, K. A. Gallivan, Trust-region methods on Riemannian manifolds, Technical Report FSU-CSIT-04-13, July 2, 2004, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.
- 39) P. A. Absil, C. G. Baker, K. A. Gallivan, Trust-region methods on Riemannian manifolds with applications in numerical linear algebra, Dynamical Systems and Computation Day, CESAME, Univ. Catholique de Louvain, Belgium, July 15, 2004, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.
- 40) S. A. Miller, J. Malick, Newton methods for nonsmooth convex minimization: connections between U-lagrangian, Riemannian Newton and SQP methods, *Mathematical Programming*, 2005, quotes and develops theorems from our book *Convex functions and optimization methods on Riemannian manifolds*, Kluwer Academic Publishers, 1994.
- 41) Gh. Pitis, Integral submanifolds with closed conformal vector field in Sasakian manifolds, *New York Journal of Mathematics*, 11 (2005) 157-170, quotes and develops theorems from C. Udriste, On conformal vector fields, *Tensor N.S.* 46(1987), 265-270, Zbl 0684.53019.
- 42) D. E. Blair, J. Davidov, O. Muskarov, Hyperbolic Twistor Spaces, arXiv:math.DG/0312364 v1 18 Dec 2003, quotes and uses the ideas in the paper: *Asupra spa'tiului fibrat tangent al unei variet'a'ti diferen'tiabile*, *St.Cerc. Mat. t. 22, nr. 4 (1970)* 599-611.
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### **Membership of Associations:**

American Mathematical Society, 1987-;  
 Tensor Society, Japan, 1985- ;  
 Society of Mathematical Sciences in Romania, 1963- :  
 Balkan Society of Geometers, Vice-President 1994 – 2005;  
 Balkan Society of Geometers, President 2005.

### **Prizes, Awards:**

Dragomir Hurmuzescu Prize, Academy of Romania, 1985;  
 Award for Distinguished Didactic and Scientific Activity, Ministry of Education and Instruction of Romania, 1988;  
 Correspondent Member of the Academia Peloritana dei Pericolanti, 1997-;  
 Member Research Board of Advisors, ABI, 1999-.  
 Prize COPIRO - 2000 for Exact Sciences.  
 Premio Anassilloos International 2002, Arte Cultura Scienze.  
 Titular Member of Academy of Romanian Scientists, Nov. 2007-

### **Invention:**

T. Crețu, C. Udriște, P. Știucă, Gh. Macarie, C. Popescu, Șt. Marin, Solar collector of type fix spherical concentrator with mobil receiver, registered under the number no.3249/28.08.1984.

### **Journal Editor and Reviewer:**

Editor, Math. Gazette, Bucharest, 1963-1964;  
 Member, Editorial Bd. Math. Gazette, Bucharest, 1978-1986;  
 Reviewer, Zbl. Berlin, 1973- ; MR. Ann. Arbor, U.S.A., 1986- ; Acta Applicandae Mathematicae, 1990 -;  
 Member of Advisory Board, Scientific Bulletin, University Politehnica of Bucharest, Applied Mathematics and Physics, 1993-;  
 Founder, Executive Editor, Member of Board Committee, Balkan Journal of Geometry and Its Applications, 1995-.  
 Founder, Executive Editor, Differential Geometry and Dynamical Systems, Electronic Journal, 1999-  
 Founder, Executive Editor, Applied Sciences, Electronic Journal, 1999-  
 Member of Editorial Board, WSEAS Transactions on Mathematics, 2007-  
 Editorial Review Board, Math&Statistics, Scientific Journals International, 2007-

**Biographical books in which I am listed:**

Dictionary of International Biography, Men of Achievement, Men and Women of Distinction, International Leaders in Achievement, International Who's Who of Intellectuals, The International Directory of Distinguished Leadership, International Register of Profile Who's Who in the World, Man of the Year - 1999, 2000 Outstanding Intellectuals of the 20-th Century, Outstanding People of the 20-th Century, Five Hundred Leaders of Influence, etc.

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6 Septembrie 2007

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