

## **Name and surname**

Nicolae Popovici

## **Contact information**

**Work address:** Babeş-Bolyai University, Faculty of Mathematics and Computer Science,  
1, M. Kogălniceanu Street, 400084 Cluj-Napoca, Romania

**E-mail:** [popovici@math.ubbcluj.ro](mailto:popovici@math.ubbcluj.ro)

**Fax:** +40 264 591 906

## **Education**

**Habil. Mathematics:** March 2016, Babeş-Bolyai University, Cluj-Napoca; thesis title: „The role of generalized convexity in vector optimization and related variational problems”

**Ph.D. Mathematics:** June 1995; University of Limoges (France); thesis title: „Contribution à l’optimisation vectorielle”; advisor: Professor Michel Théra

**B.S. Mathematics:** June 1988; Babeş-Bolyai University, Cluj-Napoca; dissertation title: „Optimizare Pareto”; advisors: Professor Ioan Maruşciac and Professor Ioan Muntean

## **Languages**

Fluent in Romanian, French, and English; basic knowledge of German, Russian, and Ukrainian (dialect-mother tongue)

## **Positions held**

**2016 -** : full professor, Babeş-Bolyai University of Cluj-Napoca; member of the Council of the Faculty of Mathematics and Computer Science, member of the Senate of the University

**2007 - 2016:** associate professor, Babeş-Bolyai University of Cluj-Napoca; member of the Council of the Faculty of Mathematics and Computer Science since 2012

**1994 - 2007:** lecturer professor, Babeş-Bolyai University of Cluj; chancellor of the Faculty of Mathematics and Computer Science during 1996-2000

**1990 - 1994:** assistant professor, Babeş-Bolyai University of Cluj

**1988 - 1990:** teacher of Mathematics, High School No. 2, Sighetu-Marmaţiei

**Awards** Romanian Academy Award in Mathematical Sciences („Spiru Haret” Prize for 2005, awarded Dec. 2007)

## **Courses taught**

Calculus, Functional Analysis, Operations Research, Vector Optimization, Decision Theory, Convex Analysis, Multicriteria Optimization (at Universities of Cluj-Napoca, Limoges and Milan), Dynamic Optimization (at University of Varese)

## **Main research interests**

Scalar and vector optimization, Convex analysis

## **Visiting appointments abroad and fellowships**

**Feb. 2020:** Erasmus+ teaching mobility, University of Varese, Italy  
**Oct. 2019:** research mobility, University of Halle, Germany  
**Sep. 2019:** research mobility, University of Halle, Germany  
**July 2019:** research mobility, University of Halle, Germany  
**Feb. 2019:** Erasmus+ teaching mobility and Visiting professor, University of Varese, Italy  
**Oct. 2018:** research mobility, University of Halle, Germany  
**May 2018:** Erasmus+ teaching mobility, University of Derby, UK  
**Nov. 2017:** research mobility, University of Derby, UK  
**Oct. 2017:** research mobility, University of Vienna, Austria  
**Sep. 2017:** research mobility, University of Halle, Germany  
**June 2017:** visiting professor, University of Varese, Italy  
**May 2017:** Erasmus+ teaching mobility, University of Derby, UK  
**Mar. 2017:** visiting professor, University of Varese, Italy  
**Feb. 2017:** research mobility, University of Vienna, Austria  
**May 2016:** Erasmus+ teaching mobility, University of Derby, UK  
**Sep. 2015:** research mobility, University of Varese, Italy  
**May 2015:** Erasmus+ teaching mobility, University of Derby, UK  
**June 2015:** research mobility, Universities of Varese and Milan, Italy  
**Feb. 2015:** research mobility, University of Varese, Italy  
**Sep. 2014:** research mobility, University of Varese, Italy  
**July 2014:** research mobility, University of Derby, UK  
**June 2014:** research mobility, University of Varese, Italy  
**Mar. 2014:** research mobility, Universities of Varese (visiting professor) and Aosta Valley, Italy  
**Oct. 2013:** research mobility, Universities of Derby, UK; Milan, Varese and Pavia, Italy  
**Sep. 2013:** research mobility, Universities of Varese, Italy, and Limoges, France  
**May 2013:** research mobility, University of Varese, Italy  
**Feb. 2013:** research mobility as Cariplo visiting professor, University of Varese, Italy  
**Nov. 2012:** research mobility, University of Varese, Italy  
**June 2012:** research mobility, University of Varese, Italy  
**April 2012:** research mobility, Universities of Chemnitz and Halle, Germany  
**Dec. 2011:** research mobility, University of Varese, Italy  
**Nov. 2011:** research mobility, Universities of Chemnitz and Halle, Germany  
**June 2011:** research mobility, University of Limoges, France  
**May 2011:** research mobility, as Guest fellow, University of Varese, Italy  
**Sep. 2010:** research mobility, University of Varese, Italy

**May 2009:** research mobility, as Guest fellow, University of Varese, Italy  
**Sep. 2008:** research mobility, University of Varese, Italy  
**Apr. 2008:** research & teaching mobility, University of Varese, Italy  
**Dec. 2007:** research & teaching mobility, University of Milan, Italy  
**Sep. 2007:** research mobility, University of Milan, Italy  
**June - July. 2007:** research mobility, University of Limoges, France  
**Mar. - Apr. 2006:** Erasmus/Socrates teaching mobility, University of Limoges, France  
**Feb. - Mar. 2006:** research mobility, Universities of Halle and Chemnitz, Germany  
**Sep. 2004:** invited associate professor, University of Limoges, France  
**Apr. 2004:** Erasmus/Socrates teaching mobility, University of Limoges, France  
**Sep. 2001:** research mobility, University of Limoges, France  
**Feb. - May 2001:** invited associate professor, University of Limoges, France  
**Dec. 1999:** research mobility, University of Limoges, France  
**May 1999:** Erasmus/Socrates teaching mobility, University of Limoges, France  
**Feb. - June 1998:** invited associate professor, University of Limoges, France  
**Apr. - May 1995:** French Government doctoral fellowship, University of Limoges, France  
**Feb. - June 1993:** invited associate professor, University of Limoges, France  
**Feb. - July 1992:** European Community fellowship, University of Saint-Etienne, France

### **Research projects**

Romanian Grant PN-III-P4-ID-PCE-2016-0190; “*Equilibrium and optimization problems: theoretical and computational approaches*”, Director: Gábor Kassay, 2017 - 2019.

Romanian Grant PN-II-ID-PCE-2011-3-0024; “*The structure and sensitivity of the solution sets of variational inequalities, optimization and equilibrium problems under generalized monotonicity*”, Director: Gábor Kassay, 2011 – 2016.

Director of the Romanian Grant PN-II IDEI, Contract 543/2008, CNCSIS code 2261: „*Advanced researches on vector and set-valued optimization problems, and variational inequalities under generalized convexity assumptions*”, 2009 - 2011. Members of the research team : W. W. Breckner, Șt. Cobzaș, A. Grad, and G. Kassay.

Individual German Research Grant TITELGRUPPE 77: „*Multicriteria optimization*”, Martin Luther University of Halle (Germany), 2006.

Romanian Grant CEEEX: „*Efficient numerical methods with applications on supercomputers*”, Contract 2CEX06-11-96 / 19.09.2006, Director: Emil A. Căținaș, 2006 - 2008.

Romanian Grant CNCSIS type A: „*Researches on modern analysis and their applications*”, Contracts 148GR/23.05.2006, 34701/2005, 33374/29.06.2004, 33965/8.7.2003, and 33523/17.07.2002, Director: Wolfgang W. Breckner, 2002 - 2006.

Romanian Grant CNCSIS type A: „*Researches of nonlinear applied analysis*”, Contract 31400/7053/2001, Director: Wolfgang W. Breckner, 2001.

Romanian Grant CNCSIS type A: „*Researches of approximation theory and convex analysis*”, Contract 32575/1999, Director: Wolfgang W. Breckner, 1999 - 2000.

International (Romanian, Hungarian, French and Dutch researchers) Grant CNCSU, partially supported by the World Bank, Contract 46174/27.11.1997, Code 14, „*Researches of set-*

*valued analysis with applications in optimization*”, Director: Iosif Kolumban, 1997-2000.

Romanian Grant CNCSU: „*Researches of approximation theory and convex analysis*”, Contracts 16/1998, 7010/1997, 5010/1996, 4010/1995, and 3010/1994, Director: Wolfgang W. Breckner, 1994 - 1998.

## **Other professional activities**

### **Associate editor of:**

Mathematica (Romanian Academy, Cluj),  
Optimization: A Journal of Mathematical Programming and Operations Research (Taylor & Francis, London, UK)

**Guest editor of:** Journal of Global optimization (special issue of GCM10 - the 10th International Symposium on Generalized Convexity and Monotonicity, August 22-27, 2011, Cluj-Napoca, Romania)

### **Referee of:**

Acta Mathematica Scientia,  
Annals of Operations Research  
Applied Mathematics and Computation  
Applied Mathematics Letters,  
Journal of Applied Mathematics,  
Journal of Convex Analysis,  
Journal of Global Optimization,  
Journal of Industrial and Management Optimization,  
Journal of Mathematical Analysis and Applications,  
Journal of Optimization Theory and Application,  
Nonlinear Analysis: Theory, Methods & Applications,  
Operations Research Letters,  
Operational Research: An International Journal,  
Optimization,  
Optimization Letters,  
Results in Mathematics,  
Revista Investigacion Operacional,  
Revue d'Analyse Numérique et de Théorie de l'Approximation,  
Serdica Mathematical Journal,  
SIAM Journal on Optimization,  
Studia Universitatis Babes-Bolyai, Series Informatica,  
Taiwanese Journal of Mathematics,  
Yugoslav Journal of Operations Research.

### **Reviewer of:**

Zentralblatt für Mathematik,  
Mathematical Reviews.

### **Member of:**

AMS (American Mathematical Society),  
MCDM (International Society on Multiple Criteria Decision Making),  
WGGC (Working Group on Generalized Convexity),  
SSMR (Romanian Mathematical Society),  
EUROPT (The Continuous Optimization Working Group of EURO - Association of European Operational Research Societies).

**Director of:** Holografica Publishing House, Cluj.

**Chair of the Organizing Committee and Member of the Scientific Committee** of the 10th International Symposium on Generalized Convexity and Monotonicity, Cluj-Napoca, Romania, August 22-27, 2011.

**Member of the Scientific Committee** of

- First Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA), Cluj-Napoca, Romania, April 20-21, 2018;
- 12th Joint Conference on Mathematics and Computer Science, Cluj-Napoca, June 14 – 17, 2018
- 13th Joint Conference on Mathematics and Computer Science (the 13th MaCS), Budapest, Hungary, October 1-3, 2020.

**Member of the Local Organizing Committee** of COST Action CA16228 European Network for Game Theory Workshop: Games Dynamics and Optimization (GDO2019), Cluj-Napoca, Romania, 9-11 April 2019.

## Publications

### **Books:**

1. Breckner, B. E., Popovici, N., *Convexity and Optimization: An Introduction*, EFES, Cluj-Napoca, 2006 (202 pages, ISBN 978-973-7677-54-9).
2. Breckner, B. E., Popovici, N., *Problems of Operations Research* (in Romanian), EFES, Cluj-Napoca, 2006 (258 pages, ISBN 973-7677-12-9).
3. Popovici, N., *Vector Optimization* (in Romanian), Casa Cărții de Știință, Cluj-Napoca, 2005 (256 pages, ISBN 973-686-787-0).
4. Breckner, B. E., Popovici, N., *Problems of Convex Analysis in  $R^n$*  (in Romanian), Casa Cărții de Știință, Cluj-Napoca, 2003 (140 pages, ISBN 973-686-504-5).

### **Book chapters:**

1. Lowndes, V., Berry, S., Parkes, C., Bagdasar, O., Popovici, N.: *Further Use of Heuristic Methods*, Chapter 7 (pp. 199-235) in: Berry, S., Lowndes, V., Trovati, M. (Eds.) *Guide to Computational Modelling for Decision Processes: Theory, Algorithms, Techniques and Applications*, Springer, 2017 (ISBN 978-973-7677-54-9).

### **Articles:**

1. Orzan, A., Popovici, N., *Convexity-preserving properties of set-valued ratios of affine functions*, *Studia Universitatis Babeș-Bolyai Mathematica*, 66 (2021) (3), 591–602. [[free](#)]
2. O’Neill, S., Bagdasar, O., Berry, S., Popovici, N., Ramachandran, R., *Modelling equilibrium for a multi-criteria selfish routing network equilibrium flow problem*, *Mathematics and Computers in Simulation*, doi: <https://doi.org/10.1016/j.matcom.2021.06.001>, Online: 12 June 2021.
3. Bagdasar, O., Berry, S., Popovici, N.: *Traffic assignment: On the interplay between optimisation and equilibrium problems*, *Optimization*, Special issue dedicated to Professor Boris Mordukhovich on the occasion of his 70th birthday, 69 (2020) (7-8), 1773-1790. [[free](#)]
4. Günther, C., Popovici, N., *The role of nonlinear scalarization functions in characterizing generalized convex vector functions*, *Journal of Applied and Numerical Optimization*, A Special Issue Dedicated to Christiane Tammer, 1 (2019) (3), 325-333. [[free](#)]
5. Günther, C., Köbis, E., Popovici, N., *On strictly minimal elements w.r.t. preorder relations in set-valued optimization*, *Applied Set-Valued Analysis and Optimization*, Special Issue Dedicated to Alfred Göpfert, 1 (2019) (3), 205-219. [[free](#)]

6. Günther, C., Popovici, N., *Characterizations of explicitly quasiconvex vector functions w.r.t. polyhedral cones*, Journal of Nonlinear and Convex Analysis, Special Issue in Memory of Professor Siegfried Schaible, 20 (2019) (12), 2653-2665.
7. Günther, C., Köbis, E. A., Popovici, N., *Computing minimal elements of finite families of sets w.r.t. preorder relations in set optimization*, Journal of Applied and Numerical Optimization, Special Issue Dedicated to Boris Polyak, 1 (2019) (2), 131-144. [[free](#)]
8. Bagdasar, O., Berry, S., O'Neill, S., Popovici, N., Ramachandran, R., *Traffic assignment: Methods and simulations for an alternative formulation of the fixed demand problem*, Mathematics and Computers in Simulation, 155 (2019) 360–373 [[free](#)].
9. Bagdasar, O., Popovici, N., *Unifying local-global type properties in vector optimization*, Journal of Global Optimization, 72 (2018) (2), 155–179 [[free \(view-only\)](#)].
10. Günther, C., Popovici, N., *New algorithms for discrete vector optimization based on the Graef-Younes method and cone-monotone sorting functions*, Optimization, 67 (2018) (7), 975-1003. [[free](#)]
11. Seto, K., Kuroiwa, D., Popovici, N., *A systematization of convexity and quasiconvexity concepts for set-valued maps, defined by l-type and u-type preorder relations*, Optimization, 67 (2018) (7), 1077-1094. [[free](#)]
12. Alzorba, S., Günther, C., Popovici, N., Tammer, C., *A new algorithm for solving planar multiobjective location problems involving the Manhattan norm*, European Journal of Operational Research, 258 (2017) (1), 35-46.
13. Bagdasar, O., Popovici, N., *Local maximizers of generalized convex vector-valued functions*, Journal of Nonlinear and Convex Analysis, 18 (2017) (12), 2229-2250 [[free \(view-only\)](#)].
14. Popovici, N., *A decomposition approach to vector equilibrium problems*, Annals of Operations Research, 251 (2017) (1), 105-115 [[free \(view-only\)](#)].
15. Kuroiwa, D., Popovici, N., Rocca, M.: *Characterizations of cone-convex vector-valued functions*, Carpathian Journal of Mathematics, 32 (2016) (1), 79-85 [[free \(view-only\)](#)].
16. Kuroiwa, D., Popovici, N., Rocca, M., *A characterization of cone-convexity for set-valued functions by cone-quasiconvexity*, Set-Valued and Variational Analysis, 23 (2015) (2), 295-304 [[free \(view-only\)](#)].
17. Bagdasar, O., Popovici, N., *Local maximum points of explicitly quasiconvex functions*, Optimization Letters, 9 (2015) (4), 769-777 [[free \(view-only\)](#)].
18. Alzorba, S., Günther, C., Popovici, N., *A special class of extended multicriteria location problems*, Optimization, 64 (2015) (5), 1305-1320. [[free](#)]
19. Popovici, N., Rocca, M., *Scalarization and decomposition of vector variational inequalities governed by bifunctions*, Optimization, 62 (2013) (6), 735-742. [[free](#)]
20. Popovici, N., Rocca, M., *Decomposition of generalized vector variational inequalities*, Nonlinear Analysis: Theory, Methods and Applications, 75 (2012) (3), 1516-1523.
21. La Torre, D., Popovici, N., Rocca, M., *A note on explicitly quasiconvex set-valued maps*, Journal of Nonlinear and Convex Analysis, 12 (2011), 113-118.
22. Popovici, N., Rocca, M., *Pareto reducibility of vector variational inequalities*, University of Insubria, Faculty of Economics, Working Paper 4/2010. [[free](#)]
23. La Torre D., Popovici N.: *Arcwise cone-quasiconvex multicriteria optimization*, Operations Research Letters, 38 (2010) (2), 143-146.
24. La Torre D., Popovici N., Rocca M.: *Scalar characterizations of weakly cone-convex and*

- weakly cone-quasiconvex functions*, *Nonlinear Analysis. Theory, Methods & Applications*, 72 (2010) (3-4), 1909-1915.
25. Breckner, B. E., Popovici, N., *An overview of five separation notions*, In: Şt. Cobzaş (ed.): *Topics in Mathematics, Computer Science and Philosophy. A Festschrift for Wolfgang W. Breckner on his 65th Anniversary*, Presa Universitară Clujeană, Cluj-Napoca, 2008, pp. 43-55.
  26. Popovici, N., *Involving the Helly number in Pareto reducibility*, *Operations Research Letters*, 36 (2008), 173-176.
  27. Popovici, N., *Explicitly quasiconvex set-valued optimization*, *Journal of Global Optimization*, 38 (2007), 103-118 [[free \(view-only\)](#)].
  28. Ait Mansour M., Popovici, N., Théra, M., *On directed sets and their suprema*, *Positivity*, 11 (2007), 155-169 [[free \(view-only\)](#)].
  29. Chiorean I., Lupşa L., Popovici, N., *Unimodal multicriteria optimization via Fibonacci numbers*, *Creative Mathematics and Informatics*, 16 (2007), 114-123 [[free](#)].
  30. Popovici, N., *A note on the boundary of radiant sets*, *Annals of the Tiberiu Popoviciu Seminar of Functional Equations, Approximation and Convexity*, 5 (2007), 119-128.
  31. Popovici, N., *Structure of efficient sets in lexicographic quasiconvex multicriteria optimization*, *Operations Research Letters*, 34 (2006), 142-148.
  32. Lupşa L., Popovici, N., *Generalized unimodal multicriteria optimization problems*, *Revue d'Analyse Numérique et de Théorie de l'Approximation*, 35 (2006) (1), 65-70 [[free](#)].
  33. Popovici, N., *Almost explicitly quasiconvex bicriteria optimization*, *Annals of the Tiberiu Popoviciu Seminar of Functional Equations, Approximation and Convexity*, 4 (2006), 101-109.
  34. Popovici, N., *Pareto reducible multicriteria optimization problems*, *Optimization*, 54 (2005), 253-263.
  35. Lupşa L., Popovici, N., *A new algorithm for solving multicriteria unimodal optimization problems*, *Annals of the Tiberiu Popoviciu Seminar of Functional Equations, Approximation and Convexity*, 3 (2005), 123-130.
  36. Benoist, J., Popovici, N., *Between quasiconvex and convex set-valued maps*, *Applied Mathematics Letters*, 17 (2004), 245-247 [[free](#)].
  37. Benoist, J., Borwein, M. J., Popovici, N., *A characterization of quasiconvex vector-valued functions*, *Proceedings of the American Mathematical Society*, 131 (2003), 1109-1113 [[free](#)].
  38. Benoist, J., Popovici, N., *Characterizations of convex and quasiconvex set-valued maps*, *Mathematical Methods of Operations Research*, 57 (2003), 427-435 [[free \(view-only\)](#)].
  39. Benoist, J., Popovici, N., *Generalized convex set-valued maps*, *Journal of Mathematical Analysis and Applications*, 288 (2003) (1), 161-166 [[free](#)].
  40. Popovici, N., *A characterization of cone-convex functions*, *Annals of the Tiberiu Popoviciu Seminar of Functional Equations, Approximation and Convexity*, 1 (2003), 123-131.
  41. Benoist, J., Popovici, N., *Characterizations of finite dimensional shaded sets*, *Nonlinear Analysis Forum*, 7 (2002) (1), 67-72 [[free](#)].
  42. Popovici, N., *Generalized quasiconvex set-valued maps*, *Revue d'Analyse Numérique et de Théorie de l'Approximation*, 31 (2002) (2), 199-206 [[free](#)].
  43. Popovici, N., *( $\Gamma, K$ )-quasiconvex set-valued maps*, In: E. Popoviciu (Ed.), *Proceedings of the "Tiberiu Popoviciu" Itinerant Seminar of Functional Equations, Approximation and*

Convexity, Editura SRIMA, Cluj-Napoca, 2002, pp. 223-230.

44. Popovici, N., *Almost Explicitly Quasiconvex Functions*, In: E. Popoviciu (Ed.), Séminaire de la théorie de la meilleure approximation, convexité et optimisation, Editura SRIMA, Cluj-Napoca, 2002, pp. 125-133.
45. Benoist, J., Popovici, N., *Contractibility of the efficient frontier of three-dimensional simply-shaded sets*, Journal of Optimization Theory and Applications, 111 (2001) (1), 81-116 [[free view-only](#)].
46. Popovici, N., *Scalar characterizations of generalized quasiconvex functions*, In: N. Hadjisavvas, J. E. Martinez-Legaz, J.-P. Penot (Eds), *Generalized Convexity and Generalized Monotonicity* (Proceedings of the 6<sup>th</sup> International Symposium on Generalized Convexity & Monotonicity, Karlovassi, Samos, Greece, August 30 - September 3, 1999), Lecture Notes in Economics and Mathematical Systems, Springer Verlag, Vol. 502 (2001), pp. 341-348.
47. Popovici, N., *Generalized quasiconvexity via properly characteristic functions associated to binary relations*, Acta Mathematica Vietnamica, 26 (2001) (2), 169-175 [[free](#)].
48. Malivert, C., Popovici, N., *The structure of efficient sets in bicriteria quasilinear optimization*, Journal of Nonlinear and Convex Analysis, 2 (2001) (3), 291-304.
49. Benoist, J., Popovici, N., *The structure of the efficient frontier of finite dimensional completely-shaded sets*, Journal of Mathematical Analysis and Applications, 250 (2000) (1), 98-117 [[free](#)].
50. Popovici, N., *Convexité au sens direct ou inverse et applications dans l'optimisation vectorielle*, Revue d'Analyse Numérique et de Théorie de l'Approximation, 29 (2000) (1), 75-82 [[free](#)].
51. Popovici, N., Malivert, C., *An algorithm for bicriteria optimization involving explicitly quasilinear objective functions*, In: G. Wanka (Ed.), *Decision Theory and Optimization in Theory and Practice* (Proceedings of the 9<sup>th</sup> Workshop of the GOR Working Group "Decision Theory and Practice", Chemnitz, Germany, March 3-5, 1999), Shaker Verlag, Aachen, 2000, pp. 53-62.
52. Malivert, C., Popovici, N., *Bicriteria linear fractional optimization*, In: Nguyen, V. H., Strodiot, J.-J., Tossings, P. (Eds.), *Optimization* (Proceedings of the 9<sup>th</sup> Belgian-French-German Conference on Optimization, Namur, Belgium, September 7-11, 1998), Lecture Notes in Economics and Mathematical Systems, Springer, Vol. 481 (2000), pp. 305-319.
53. Popovici, N., *Sur la structure topologique des ensembles d'efficience*, Mathematica (Cluj), 41(64) (1999) (2), 233-241.
54. Popovici, N., *Generalized quasiconvexity with respect to domination-type binary relations*, In: L. Lupşa and M. Ivan (Eds.), *Analysis, Functional Equations, Approximations and Convexity* (Proceedings of the Conference Held in Honour of Professor Elena Popoviciu, Cluj-Napoca, October 15-16, 1999), Carpatica, Cluj-Napoca, 1999, pp. 251-256.
55. Popovici, N., *Polygonal convexity in multicriteria linear fractional optimization*, In: E. Popoviciu (Ed.), *Research on Theory of Allure, Approximation, Convexity and Optimization*, SRIMA, Cluj-Napoca, 1999, pp. 249-256.
56. Popovici, N., *Sur l'approximation des ensembles d'efficience*, Revue d'Analyse Numérique et de Théorie de l'Approximation, 27 (1998) (2), 321-329 [[free](#)].
57. Popovici, N., *On the level sets of  $(\Gamma, \Omega)$ -quasiconvex functions*, Studia Universitatis Babeş-Bolyai, Ser. Mathematica, 43 (1998), 71-78.
58. Popovici, N., *Sur une notion abstraite de quasiconvexité*, Revue d'Analyse Numérique et de



Théorie de l'Approximation, 26 (1997) (1-2), 191-196 [[free](#)].

59. Popovici, N., *Multicriteria optimization with unimodal objective functions*, In: D.D. Stancu, Gh. Coman, W.W. Breckner and P. Blaga (Eds.), *Approximation and Optimization, Vol. I* (Proceedings of the International Conference on Approximation and Optimization, Cluj-Napoca, July 29 - August 1, 1996), Transilvania Press, Cluj-Napoca, 1997, pp. 341-344.
60. Popovici, N., *The excess from efficiency in vector optimization*, In: A. Göpfert, J. Seeländer and Chr. Tammer (Eds.), *Methods of Multicriteria Decision Theory* (Proceedings of the 6th Workshop of the DGOR-Working Group Multicriteria Optimization and Decision Theory, Alexisbad, Germany, March 11-14, 1996), Hänsel-Höhenhausen Verlag, Egelsbach, 1997, pp. 63-67.
61. Popovici, N., *L'écart d'efficience dans l'optimisation vectorielle*, *Revue d'Analyse Numérique et de Théorie de l'Approximation*, 25 (1996) (1-2), 217-224 [[free](#)].
62. Popovici, N., *Convexité en espaces métriques via l'efficience de Pareto*, *Mathematica (Cluj)*, 38 (1996), 169-175.
63. Popovici, N., *Suites efficaces dans l'optimisation vectorielle*, Babeş-Bolyai University, Faculty of Mathematics, Research Seminars, Seminar on Mathematical Analysis, Preprint Nr. 7 (1994), pp. 95-105.
64. Popovici, N., *On a special class of Pareto bicriterial optimization problems*, *Revue d'Analyse Numérique et de Théorie de l'Approximation*, 19 (1990) (2), 163-168 [[free](#)].
65. Popovici, N., *The degree of efficiency in the multiobjective optimization problems*, Babeş-Bolyai University, Faculty of Mathematics and Informatics, Research Seminars, Seminar on Mathematical Analysis, Preprint No. 7 (1990), pp. 143-154.

### **Editorial material:**

1. Mordukhovich, B.S., Popovici, N., Sheu, R.-L., *Preface: special issue of JOGO-GCM10*, *J. Global Optim.*, 57 (2013) (3), 613-615 [[free \(view-only\)](#)].

### **Selected talks**

- *A new concept of semistrict quasiconvexity for vector functions*, International Conference on Variational Analysis and Nonsmooth Optimization (ICVANO2021) - dedicated to Christiane Tammer, Halle (Saale), Germany, July 15-16, 2021.
- *Local-global extremality properties in vector optimization*, Colloquium Vector- and Set-Valued Optimization, Wittenberg, Germany, October 25-26, 2019.
- *New algorithms for solving discrete vector optimization problems*, Research Seminar, University of Insubria, Varese, Italy, February 15, 2019.
- *New algorithms for solving discrete vector optimization problems*, Research Seminar, University of Insubria, Varese, Italy, February 14, 2019.
- *A general local-global extremality principle in vector optimization*, Research Seminar, University of Insubria, Varese, Italy, February 13, 2019.
- *A systematization of quasiconvexity concepts for set-valued maps*, Research Seminar, Bocconi University, Milan, Italy, February 8, 2019.
- *A systematization of quasiconvexity concepts for set-valued maps*, Colloquium Vector- and Set-Valued Optimization, Wittenberg, Germany, October 25-26, 2018.
- *A general local-global extremality principle in vector optimization*, International Conference on Variational Analysis and Nonsmooth Optimization (ICVANO2018) - dedicated to Boris

Mordukhovich, Halle (Saale), Germany, June 28 - July 1, 2018.

- *A systematization of quasiconvexity concepts for set-valued maps*, First Romanian Itinerant Seminar on Mathematical Analysis and its Applications (RISMAA), Cluj-Napoca, Romania, April 20-21, 2018.
- *New algorithms for solving discrete vector optimization problem*, University of Derby, UK, Department of Electronics, Computing and Mathematics, Research Seminar, November 22, 2017.
- *Local-global type properties for generalized convex vector functions*, 18th French - German - Italian Conference on Optimization, Paderborn, Germany, September 25 - 28, 2017.
- *Local-global type properties for generalized convex vector functions*, Martin Luther University of Halle, Germany, Oberseminar Optimierung, September 7, 2017.
- *Decomposition of vector equilibrium problems*, Research Seminar, Università Cattolica del Sacre Cuore, Milano, June 22, 2017.
- *Local-global type properties for generalized convex vector functions*, Faculty of Mathematics, University of Vienna, Austria, February 1, 2017.
- *A decomposition approach to vector optimization and equilibrium problems*, University of Derby, UK, Department of Electronics, Computing and Mathematics, Research Seminar, May 11, 2016.
- *A decomposition approach to nonlinear multi-criteria optimization/equilibrium problems*, Riemann International School of Mathematics on Nonlinear Phenomena in Mathematics and Economics - a tribute to John Forbes Nash, Jr., Varese, Italy, September 14-18, 2015.
- *An embedding approach to characterize cone-convex set-valued functions*, Research Seminar, Department of Economics, University of Insubria, Varese, Italy, September 8, 2015.
- *A decomposition approach to vector equilibrium problems*, Research Seminar, Department of Economics, University of Insubria, Varese, Italy, February 9, 2015.
- *On certain classes of generalized convex set-valued functions*, Set Optimization meets Finance (SOMF2) - International Conference on Set-Valued Variational Analysis and Optimization with Applications in Finance, Bruneck-Brunico, Italy, September 8-12, 2014.
- *Special classes of generalized convex vector-valued functions*, Research Seminar, Department of Economics, University of Insubria, Varese, Italy, June 17, 2014.
- *Multicriteria optimization problems related to location theory*, University of Pavia, Italy, October 25, 2013.
- *Special classes of generalized convex vector-valued functions*, University of Insubria, Varese, Italy, October 24, 2013.
- *Efficiency versus optimality in multicriteria decision making*, University of Milan, Italy, October 23, 2013.
- *On the relationship between efficiency and weak efficiency in vector optimization*, Research Seminar, University of Derby, UK, October 21, 2013.
- *On the relationship between efficiency and weak efficiency in vector optimization*, invited talk at the XXXVII Meeting of the Italian Association for Mathematics Applied to Economic and Social Sciences (AMASES), Stresa, Italy, September 5-7, 2013.
- *Vector optimization: a state-of-the-art survey*, Workshop on Vector and Set Optimization, Varese, Italy, February 18, 2013.
- *Approximation of efficient points in vector optimization*, University of Valle d'Aosta, Research Seminar, February 15, 2013.
- *Decomposition of multicriteria planar location problems*, University of Insubria, Varese, Italy, Department of Economics, Research Seminar, November 20, 2012.
- *Semistrictly quasiconvex-like multicriteria optimization*, University of Insubria, Varese, Italy, Department of Economics, Research Seminar, June 26, 2012.
- *A special class of generalized convex functions with applications in vector optimization*, Chemnitz University of Technology, Research Seminar Optimization and Approximation,

- Germany, April 25, 2012.
- *Applications of generalized convexity in multicriteria optimization*, Martin Luther University of Halle, Germany, Oberseminar Optimierung, April 23, 2012.
  - *The structure of solution sets of vector variational inequalities defined by bifunctions*, University of Insubria, Varese, Italy, Department of Economics, Research Seminar, December 1, 2011
  - *Scalarization and decomposition of vector variational inequalities governed by bifunctions* Martin Luther University of Halle, Germany, Oberseminar Optimierung, November 24, 2011
  - *Reducibility of vector variational inequalities defined by bifunctions*, Chemnitz University of Technology, Research Seminar Optimization and Approximation, Germany, November 23, 2011
  - *Scalarization and decomposition of vector variational inequalities*, International Conference on Optimization Theory, Algorithms and Applications in Economics. A tribute to Juan Enrique Martínez-Legaz on the occasion of his 60th birthday, Bellaterra (Barcelona), Spain, October 24-28, 2011.
  - *Scalarization and decomposition of generalized vector variational inequalities*, Journée MOD, XLIM, University of Limoges, France, June 17, 2011.
  - *The structure of solution sets in vector network equilibrium problems*, invited talk at University of Milan, Italy, May 16, 2011
  - *Pareto reducibility of vector variational inequalities and vector network equilibrium problems*, invited talk at University of Varese, Italy, September 21, 2010.
  - *Vector variational inequalities and network equilibrium problems*, University of Milan, Italy, September 13, 2010.
  - *Scalar characterizations of convex and generalized convex vector functions*, Workshop on Optimization and Related Topics, Varese, Italy, May 5, 2009.
  - *Scalar characterizations of explicitly quasi-convex set valued maps*, University of Milan, Italy, April 15, 2008.
  - *Involving the Helly number in Pareto reducibility*, Workshop on Vector Optimization and Related Topics, Varese, Italy, April 10-11, 2008.
  - *Approximation of efficient points in vector optimization*, University of Varese, Italy, September 20, 2007.
  - *The role of generalized convexity in vector optimization*, University of Milan, Italy, September 17, 2007.
  - *The perpetual metamorphosis of the celebrated Farkas' lemma*, International Conference: Transylvanian Contributions to European Culture, Cluj-Napoca, Romania, November 23-24, 2006.
  - *Pareto reducibility and contractibility in vector optimization*, International Conference on Applied Analysis and Differential Equations, Iași, Romania, September 4-9, 2006.
  - *Pareto reducibility and contractibility of efficient sets in multicriteria optimization*, Journées Thématiques Optimisation Vectorielle, Université de Limoges, France, 30-31 mars 2006.
  - *Explicitly quasiconvex set-valued maps*, Martin-Luther-Universität Halle-Wittenberg, Fachbereich Mathematik und Informatik, Oberseminar Optimierung, Germany, March 14, 2006.
  - *Structure of efficient sets in multicriteria optimization*, Technische Universität Chemnitz, Fakultät für Mathematik, Forschungsseminar Optimierung und Approximation, Germany, March 7, 2006.
  - *Lexicographic quasiconvex vector optimization*, Martin-Luther-Universität Halle -Wittenberg, Fachbereich Mathematik und Informatik, Oberseminar Optimierung, Germany, March 2, 2006.
  - *Lexicographic quasiconvex vector optimization*, International Conference In Memoriam Gyula Farkas, Cluj-Napoca, Romania, August 23-26, 2005.

- *Almost explicitly quasiconvex functions*, The 12th French-German-Spanish Conference on Optimization (FGS2004), Avignon, France, September 20-24, 2004.
- *Optimisation multicritère*, University of Limoges, April 9, 2004.
- *Caractérisation des fonctions (quasi-)convexes vectorielles*, University of Limoges, France, May 11, 2001.
- *L'approximation des points proprement efficients*, University of Limoges, February 2, 2001.
- *The contractibility of efficient sets in vector optimization*, The French-German-Italian Conference on Optimization (FGI2000), Montpellier, France, September 04-08, 2000.
- *The structure of the efficient sets in multi-criteria linear fractional optimization*, The 17th European Conference on Operational Research (EURO XVII), Budapest, Hungary, July 16 - 19, 2000.
- *Une classe spéciale des problèmes d'optimisation bicritère*, University of Limoges, December 10, 1999.
- *Scalar characterizations of generalized quasiconvex functions*, The 6th International Symposium on Generalized Convexity & Monotonicity, Karlovassi, Samos, Greece, August 30 - September 3, 1999.
- *An algorithm for bicriteria optimization involving explicitly quasilinear objective functions*, The 9th Workshop of the GOR Working Group "Decision Theory and Practice", Chemnitz, Germany, March 3-5, 1999.
- *Stabilité des points super-efficients généralisés*, University of Limoges, France, May 15, 1998.
- *Approximation of efficient sets in vector optimization*, The 5th International Symposium on Generalized Convexity, Marseille-Luminy, France, June 17 - 21, 1996.
- *The excess from efficiency in vector optimization*, The 6th Workshop of the DGOR-Working Group, Multicriteria Optimization and Decision Theory, Alexisbad, Germany, March 11-14, 1996.
- *L'écart d'efficience et super efficience au sens de Borwein et Zhuang*, University of Limoges, June 9, 1995.
- *Sur quelques notions de convexité et quasi-convexité*, University of Avignon, June 18, 1992.
- *Quelques aspects géométriques sur la meilleure approximation vectorielle*, Jean-Monnet University of Saint Etienne, France, June 10, 1992.
- *Quasi-convexité et polarités dans l'optimisation vectorielle*, University of Dijon, France, June 3, 1992.
- *L'ordre d'efficience dans l'optimisation vectorielle*, University of Limoges, France, April 3, 1992.
- *The best approximation in vectorial sense*, Blaise Pascal University of Clermont-Ferrand, France, February 27, 1992.

## **Citations**

**The article [Bagdasar, O., Berry, S., Popovici, N.: *Traffic assignment: On the interplay between optimisation and equilibrium problems*, *Optimization*, Special issue dedicated to Professor Boris Mordukhovich on the occasion of his 70th birthday, 69 (2020) (7-8), 1773-1790] cited in:**

- M. Rojo, *Evaluation of traffic assignment models through simulation*, Sustainability, 12 (2020) (14), 5536
- M. Rojo, *Evaluation of Traffic Assignment Models through Simulation*, Chapter in: Maria Helena Henriques (Ed.): Prime Archives in Sustainability, Hyderabad, India: Vide Leaf, 2020.

**The article [Günther, C., Popovici, N., *The role of nonlinear scalarization functions in characterizing generalized convex vector functions*, Journal of Applied and Numerical Optimization, A Special Issue Dedicated to Christiane Tammer, 1 (2019) (3), 325-333] cited in:**

- L. Chen, M.S. Saleem, M.S. Zahoor, R. Bano, *Some inequalities related to interval-valued-convex functions*, Journal of Mathematics, Volume 2021, Article ID 6617074.
- H. M. Srivastava, G. Kaur, G. Singh, *A class of analytic functions with bounded turnings involving cardioid domains*, Journal of Nonlinear and Convex Analysis, 22 (2021) (3), 511-526.

**The article [Günther, C., Köbis, E. A., Popovici, N.: *On strictly minimal elements w.r.t. preorder relations in set-valued optimization*, Applied Set-Valued Analysis and Optimization, Special Issue Dedicated to Alfred Göpfert, 1 (2019) (3), 205-219] cited in:**

- E. Quintana Aparicio: *On Set Optimization with Set Relations: A Scalarization Approach to Optimality Conditions and Algorithms*, PhD Dissertation, University of Halle-Wittenberg, 2020.
- G. Bouza, E. Quintana, C. Tammer: *A steepest descent method for set optimization problems with set-valued mappings of finite cardinality*, Preprint, January 2021

**The article [Günther, C., Köbis, E. A., Popovici, N., *Computing minimal elements of finite families of sets w.r.t. preorder relations in set optimization*, Journal of Applied and Numerical Optimization, Special Issue Dedicated to Boris Polyak, 1 (2019) (2), 131-144] cited in:**

- E. Quintana Aparicio: *On Set Optimization with Set Relations: A Scalarization Approach to Optimality Conditions and Algorithms*, PhD Dissertation, University of Halle-Wittenberg, 2020.
- G. Bouza, E. Quintana, C. Tammer: *A steepest descent method for set optimization problems with set-valued mappings of finite cardinality*, Preprint, January 2021
- E. Köbis, M.A. Köbis, X. Qin: *An inequality approach to approximate solutions of set optimization problems in real linear spaces*, Mathematics, 8 (2020) (1), 143.

**The article [Bagdasar, O., Berry, S., O'Neill, S., Popovici, N., Ramachandran, R., *Traffic assignment: Methods and simulations for an alternative formulation of the fixed demand problem*, Mathematics and Computers in Simulation, 155 (2019) 360–373] cited in:**

- M. Rojo, *Evaluation of traffic assignment models through simulation*, Sustainability, 12 (2020) (14), 5536.
- Marta Rojo, *Evaluation of Traffic Assignment Models through Simulation*, Chapter in: Maria Helena Henriques (Ed.): Prime Archives in Sustainability, Hyderabad, India: Vide Leaf, 2020.
- C. De Santos-Berbel, M. Castro: *Effect of vehicle swiveling headlamps and highway geometric design on nighttime sight distance*, Mathematics and Computers in Simulation, 170 (2020), 32-50
- T. Saber, C. Cachard, A. Ventresque: *RONIN: a SUMO interoperable mesoscopic urban traffic simulator*, SmartCity, IEEE, 2020

**The article [Seto, K., Kuroiwa, D., Popovici, N., *A systematization of convexity and quasiconvexity concepts for set-valued maps, defined by l-type and u-type preorder relations*, Optimization, 67 (2018) (7), 1077-1094] cited in:**

- C. Gutiérrez, R. López, J. Martínez: *Generalized  $\varepsilon$ -quasi solutions of set optimization problems*, Journal of Global Optimization, Published: 16 October 2021, DOI: 10.1007/s10898-021-01098-9
- M. Miholca, *Global Well-Posedness in Set Optimization*, Numerical Functional Analysis and

- Optimization, Published online: 07 Oct 2021, DOI: 10.1080/01630563.2021.1983594
- Y. Han: *Connectedness of the approximate solution sets for set optimization problems*, Optimization, Published online: 25 Aug 2021, DOI: 10.1080/02331934.2021.1969393
  - T. Gerlach, S. Rocktäschel: *On convexity and quasiconvexity of extremal value functions in set optimization*, Applied Set-Valued Analysis and Optimization, 3 (2021), 293-308.
  - Chuang-liang Zhang, Nan-jing Huang: *Well-posedness and stability in set optimization with applications*, Positivity, Published: 19 January 2021
  - L.Q. Anh, T.Q. Duy, D.V. Hien: *Stability of efficient solutions to set optimization problems*, Journal of Global Optimization, Published online: 21 July 2020
  - Chuang-liang Zhang, Li-wen Zhou, Nan-jing Huang: *Stability of minimal solution mappings for parametric set optimization problems with pre-order relations*, Pacific Journal of Optimization, 15 (2019) (4), 491-504
  - Chuang-liang Zhang, Nan-jing Huang: *On the stability of minimal solutions for parametric set optimization problems*, Applicable Analysis, Published online: 11 Aug 2019
  - A.J. Vílchez Medina: *Set Scalarizations based on the Oriented Distance with Applications in Set-valued Optimization*, PhD Thesis, National Distance Education University (UNED), Madrid, Spain, 2019
  - B. Jimenez, V. Novo, A. Vílchez: *Six set scalarizations based on the oriented distance: properties and application to set optimization*, Optimization 69 (2020) (3), 437-470.
  - G. De Marco: *On the convexity of preferences in decisions and games under (quasi-)convex/concave imprecise probability correspondences*, International Journal of Approximate Reasoning, 113 (2019), 256–286.

**The article [Bagdasar, O., Popovici, N., Unifying local-global type properties in vector optimization, Journal of Global Optimization, 72 (2018) (2), 155–179] cited in:**

- B. Khazayel, A.P. Farajzadeh, C. Günther, C. Tammer: *On the intrinsic core of convex cones in real linear spaces*, SIAM Journal on Optimization, 31 (2021) (2), 1276–1298.
- C. Günther: *Vectorial penalization in multi-objective optimization*, Chapter 9 in: A. A. Khan, E. Köbis, C. Tammer (Eds.), *Variational Analysis and Set Optimization: Developments and Applications*, CRC Press, Boca Raton, 2019
- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.

**The article [Günther, C., Popovici, N., New algorithms for discrete vector optimization based on the Graef-Younes method and cone-monotone sorting functions, Optimization, 67 (2018) (7), 975-1003] cited in:**

- E. Quintana Aparicio: *On Set Optimization with Set Relations: A Scalarization Approach to Optimality Conditions and Algorithms*, PhD Dissertation, University of Halle-Wittenberg, 2020.
- G. Bouza, E. Quintana, C. Tammer: *A steepest descent method for set optimization problems with set-valued mappings of finite cardinality*, Preprint, January 2021
- G. Eichfelder, P. Kirst, L. Meng, O. Stein: *A general branch-and-bound framework for continuous global multiobjective optimization*, Journal of Global Optimization, Published: 19 January 2021
- C. Tammer, P. Weidner: *Scalarization and Separation by Translation Invariant Functions with Applications in Optimization, Nonlinear Functional Analysis, and Mathematical Economics*, Springer, Cham, 2020

**The article [Alzorba, S., Guenther, C., Popovici, N., Tammer, C., A new algorithm for solving planar multiobjective location problems involving the Manhattan norm, European**

**Journal of Operational Research, Vol. 258 (1) 2017, pp. 35-46] cited in:**

- Jianqin Zhou, Shu-Cherng Fang, Shan Jiang, and Songdong Ju: *Optimal planar facility location with dense demands along a curve*, Journal of the Operational Research Society, Published online: 08 May 2021, DOI: 10.1080/01605682.2021.1907237
- R. Allmendinger, A. Jaszkievicz, A. Liefoghe, C. Tammer: *Many Objectives: Characterization and Structure*, Sect. 4.1 (pp. 64-76) in: C. M. Fonseca, K. Klamroth, G. Rudolph, M. M. Wiecek (Eds.), *Scalability in Multiobjective Optimization*, Report from Dagstuhl Seminar 20031, January 12–17, 2020, DOI: 10.4230/DagRep.10.1.52
- S. Nickel, J. Puerto, A.M. Rodríguez-Chía: *Location problems with multiple criteria*, In: Laporte G., Nickel S., Saldanha da Gama F. (eds), *Location Science*, Springer, Cham, 2019, pp. 215-260
- B. S. Mordukhovich, Nguyen Mau Nam: *The Fermat-Torricelli problem and Weiszfeld's algorithm in the light of convex analysis*, Journal of Applied and Numerical Optimization. 1 (2019) (3), 205-215
- C. Günther: *Vectorial penalization in multi-objective optimization*, Chapter 9 in: A.A. Khan, E. Köbis, C. Tammer (Eds.), *Variational Analysis and Set Optimization: Developments and Applications*, CRC Press, Boca Raton, 2019
- T. Chelmuş, M. Durea, E.-A. Florea: *Directional Pareto efficiency: concepts and optimality conditions*, Journal of Optimization Theory and Applications, 182 (2019) (1), 336-365.
- C. Günther: *Pareto efficient solutions in multiobjective optimization involving forbidden regions*, Investigación Operacional, 39 (2018) (3), 353-390
- C. Günther, C. Tammer, Jen-Chih Yao: *Necessary optimality conditions in generalized convex multi-objective optimization involving nonconvex constraints*, Applied Analysis and Optimization, 2 (2018) (3), 403-421
- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.
- C. Bosch, C.L. García, T. Gilsdorf, C. Gómez-Wulschner, R. Vera: *Fixed points of set-valued maps in locally complete spaces*, Fixed Point Theory and Applications, 2017:13
- C. Günther, C. Tammer: *Relationships between constrained and unconstrained multi-objective optimization and application in location theory*, Mathematical Methods of Operations Research, 84 (2016) (2), 359-387
- S. Alzorba: *Algorithms and Decomposition Methods for Multiobjective Location and Approximation Problems*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2015

**The article [Bagdasar, O., Popovici, N., Local maximizers of generalized convex vector-valued functions, Journal of Nonlinear and Convex Analysis, 18 (2017) (12), 2229-2250] cited in:**

- C. Günther: *Vectorial penalization in multi-objective optimization*, Chapter 9 in: A. A. Khan, E. Köbis, C. Tammer (Eds.), *Variational Analysis and Set Optimization: Developments and Applications*, CRC Press, Boca Raton, 2019
- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.

**The book chapter [Lowndes, V., Berry, S., Parkes, C., Bagdasar, O., Popovici, N.: Further Use of Heuristic Methods, Chapter 7 (pp. 199-235) in: Berry, S., Lowndes, V., Trovati, M. (Eds.) Guide to Computational Modelling for Decision Processes: Theory, Algorithms, Techniques and Applications, Springer, 2017] cited in:**

- França R.P., Monteiro A.C.B., Estrela V.V., Razmjoooy N.: *Using Metaheuristics in Discrete-Event Simulation*. In: Razmjoooy N., Ashourian M., Foroozandeh Z. (eds) *Metaheuristics and*

**The Habilitation thesis [Popovici, N.: *The role of generalized convexity in vector optimization and related variational problems*, Babeş-Bolyai University Cluj-Napoca, 2016] cited in:**

- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.

**The article [Kuroiwa, D., Popovici, N., Rocca, M., *A characterization of cone-convexity for set-valued functions by cone-quasiconvexity*, *Set-Valued and Variational Analysis*, 23 (2015) (2), 295-304] cited in:**

- G. M. Molnár, Zs. Páles, *An extension of the Rådström cancellation theorem to cornets*, *Semigroup Forum* (2021), Published online: 15 March 2021
- E. Mastrogiacomo, M. Rocca, *Set optimization of set-valued risk measures*, *Annals of Operations Research*, Published online 22 February 2020.
- N. Sissarat, R. Wangkeeree, G. M. Lee, *On set containment characterizations for sets described by set-valued maps with applications*, *Journal of Optimization Theory and Applications*, 184 (2020) (3), 824–841.
- A.R. Doagoeei, Thanh Tam Le; C. Tammer, *Convexity in the framework of variable domination structures and applications in optimization*, *Journal of Nonlinear and Convex Analysis*, 20 (2019) (12), 2539-2556.

**The article [Alzorba, S., Günther, C., Popovici, N., *A special class of extended multicriteria location problems*, *Optimization*, Vol. 64 (5) (2015), pp. 1305-1320] cited in:**

- N. Fröhlich, S. Ruzika: *Interdicting facilities in tree networks*, *TOP* (2021), Online first published 10 May 2021, <https://doi.org/10.1007/s11750-021-00600-6>
- G. Eichfelder: *Twenty years of continuous multiobjective optimization in the twenty-first century*, *EURO Journal on Computational Optimization*, Volume 9, 2021, 100014
- S. Nickel, J. Puerto, A.M. Rodríguez-Chía: *Location problems with multiple criteria*, In: Laporte G., Nickel S., Saldanha da Gama F. (eds), *Location Science*, Springer, Cham, 2019, pp. 215-260
- C. Günther: *Pareto efficient solutions in multiobjective optimization involving forbidden regions*, *Investigación Operacional*, 39 (2018) (3), 353-390
- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.
- C. Günther, C. Tammer: *Relationships between constrained and unconstrained multi-objective optimization and application in location theory*, *Mathematical Methods of Operations Research*, 84 (2016) (2), 359-387
- S. Alzorba: *Algorithms and Decomposition Methods for Multiobjective Location and Approximation Problems*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2015
- A. Wagner: *A New Duality Based Approach for the Problem of Locating a Semi-obnoxious Facility*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2014

**The article [Bagdasar,O., Popovici, N., *Local maximum points of explicitly quasiconvex functions*, *Optimization Letters*, Vol. 9 (4) (2015), pp. 769-777] cited in:**

- C. Günther: *Vectorial penalization in multi-objective optimization*, Chapter 9 in: A. A. Khan, E. Köbis, C. Tammer (Eds.), *Variational Analysis and Set Optimization: Developments and Applications*, CRC Press, Boca Raton, 2019
- C. Günther, C. Tammer: *On generalized-convex constrained multi-objective optimization*, *Pure and Applied Functional Analysis*, 3 (2018) (3), 429-461



- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.

**The article [Popovici, N., Rocca, M., *Scalarization and decomposition of vector variational inequalities governed by bifunctions*, Optimization, Vol. 62 (6) (2013), pp. 735-742] cited in:**

- A.A. Khan, Chr. Tammer, C. Zălinescu, *Set-valued optimization. An introduction with applications*, Springer, Berlin, 2015

**The article [La Torre, D, Popovici, N., Rocca, M., *A note on explicitly quasiconvex set-valued maps*, Journal of Nonlinear and Convex Analysis, Vol. 12 (1) (2011), pp. 113-118] cited in:**

- J. L. Ródenas Pedregosa: *Caracterización de soluciones de problemas de equilibrio vectoriales*, PhD Thesis, Universidad Nacional de Educación a Distancia (España), 2018
- C. Gutiérrez, V. Novo, J. L. Ródenas-Pedregosa, T. Tanaka: *Nonconvex separation functional in linear spaces with applications to vector equilibria*, SIAM Journal on Optimization, 26 (2016) (4), 2677-2695

**The article [Popovici, N., Rocca, M., *Pareto reducibility of vector variational inequalities*, University of Insubria, Faculty of Economics, Working Paper 4/2010] cited in:**

- N. Hebestreit: *Vector variational inequalities and related topics: A survey of theory and applications*, Applied Set-Valued Analysis and Optimization, 1 (2019) (3), 231-305.

**The article [La Torre, D., Popovici N., *Arcwise cone-quasiconvex multicriteria optimization*, Operations Research Letters, Vol. 38 (2) (2010), pp. 143-146] cited in:**

- N. Hamada, S. Ichiki: *Free disposal hull condition to verify when efficiency coincides with weak efficiency*, Journal of Optimization Theory and Applications, Published: 09 Nov 2021.
- N. Hamada, S. Ichiki: *Characterization of the equality of weak efficiency and efficiency on convex free disposal hulls*, <https://arxiv.org/pdf/1910.02867.pdf>
- N. Hamada: *Simple problems: the simplicial gluing structure of Pareto sets and Pareto fronts*, In: Proceedings of the Genetic and Evolutionary Computation Conference Companion, GECCO '17, Berlin, Germany, pp. 315-316, ACM, 2017
- GuoLin Yu: *Arcwise connected cone-quasiconvex set-valued mappings and Pareto reducibility in vector optimization*, Journal of Inequalities and Applications, 2015, 2015:317
- S. Alzorba: *Algorithms and Decomposition Methods for Multiobjective Location and Approximation Problems*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2015
- U. Freiberg, D. La Torre, F. Mendivil: *Iterated Function Systems and stability of variational problems on self-similar objects*, Nonlinear Analysis: Real World Applications, 12 (2011) (2), 1123-1129

**The article [LaTorre D., Popovici N., Rocca M.: *Scalar characterizations of weakly cone-convex and weakly cone-quasiconvex functions*, Nonlinear Analysis. Theory, Methods & Applications, 72 (3-4) (2010), 1909-1915] cited in:**

- A.J. Vilchez Medina: *Set Scalarizations based on the Oriented Distance with Applications in Set-valued Optimization*, PhD Thesis, National Distance Education University (UNED), Madrid, Spain, 2019
- J. L. Ródenas Pedregosa: *Caracterización de soluciones de problemas de equilibrio vectoriales*, PhD Thesis, Universidad Nacional de Educación a Distancia (España), 2018
- S. Khoshkhabar-amiranloo, E. Khorram, M. Soleimani-damaneh: *Nonlinear scalarization functions and polar cone in set optimization*, Optimization Letters, 11 (2017) (3), 521–535
- C. Gutiérrez, V. Novo, J. L. Ródenas-Pedregosa, T. Tanaka: *Nonconvex separation functional*

in linear spaces with applications to vector equilibria, *SIAM Journal on Optimization*, 26 (2016) (4), 2677-2695

- GuoLin Yu: *Arcwise connected cone-quasiconvex set-valued mappings and Pareto reducibility in vector optimization*, *Journal of Inequalities and Applications*, 2015, 2015:317
- E. Kiyani, M. Soleimani-Damaneh: *Approximate proper efficiency on real linear vector spaces*, *Pacific Journal of Optimization*, 10 (2014) (4), 715-734
- I. Kuwano: *Some minimax theorems of set-valued maps and their applications*, *Nonlinear Analysis: Theory, Methods & Applications*, 109 (2014), 85–102
- S. Khoshkhabar-amiranloo, M. Soleimani-damaneh: *Scalarization of set-valued optimization problems and variational inequalities in topological vector spaces*, *Nonlinear Analysis. Theory, Methods & Applications*, 75 (2012) 1429–1440
- I. Kuwano: *Study on Scalarization Methods for Sets in Optimization Theory*, PhD Thesis, Niigata University, 2012
- U. Freiberg, D. La Torre, F. Mendivil: *Iterated Function Systems and stability of variational problems on self-similar objects*, *Nonlinear Analysis: Real World Applications*, 12 (2011) (2), 1123-1129

**The article [Popovici, N., *Involving the Helly number in Pareto reducibility*, *Operations Research Letters*, Vol. 36 (2008), 173-176] cited in:**

- S. Sayin, M. Binois, M. M. Wiecek: *Data and Preference Driven Objective Space Reduction in Multiobjective Optimization*, Sect. 4.8 (pp. 116-125) in: C. M. Fonseca, K. Klamroth, G. Rudolph, M. M. Wiecek (Eds.), *Scalability in Multiobjective Optimization*, Report from Dagstuhl Seminar 20031, January 12–17, 2020, DOI: 10.4230/DagRep.10.1.52
- N. Hamada, S. Ichiki: *Free disposal hull condition to verify when efficiency coincides with weak efficiency*, *Journal of Optimization Theory and Applications*, Published: 09 Nov 2021.
- N. Hamada, S. Ichiki: *Characterization of the equality of weak efficiency and efficiency on convex free disposal hulls*, <https://arxiv.org/pdf/1910.02867.pdf>
- F. Plastria: *On the structure of the weakly efficient set for quasiconvex vector minimization*, *Journal of Optimization Theory and Applications*, 184 (2020) (2), 547-564.
- C. Günther, C. Tammer: *On generalized-convex constrained multi-objective optimization*, *Pure and Applied Functional Analysis*, 3 (2018) (3), 429-461
- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.
- S. Alzorba: *Algorithms and Decomposition Methods for Multiobjective Location and Approximation Problems*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2015
- P.G. Georgiev, D.T. Luc, P.M. Pardalos: *Robust aspects of solutions in deterministic multiple objective linear programming*, *European Journal of Operational Research*, 229 (2013), 29-36.

**The preprint [La Torre, D., Popovici, N., Rocca, M.: *Scalar characterization of explicitly quaxiconvex set-valued maps*, [http://wp.demm.unimi.it/tl\\_files/wp/2008/DEMM-2008001wp.pdf](http://wp.demm.unimi.it/tl_files/wp/2008/DEMM-2008001wp.pdf) (2008)] cited in:**

- C. Gutiérrez, V. Novo, J. L. Ródenas-Pedregosa, T. Tanaka: *Nonconvex separation functional in linear spaces with applications to vector equilibria*, *SIAM J. Optim.*, 26 (4) (2016), 2677-2695.

**The article [Popovici, N.: *Explicitly quasiconvex set-valued optimization*, *Journal of Global Optimization* 38 (2007), 103-118] cited in:**

- B. Khazayel, A.P. Farajzadeh, C. Günther, C. Tammer: *On the intrinsic core of convex cones in real linear spaces*, [www.optimization-online.org/DB\\_HTML/2019/08/7349.html](http://www.optimization-online.org/DB_HTML/2019/08/7349.html)
- B. S. Mordukhovich: *Variational Analysis and Applications*, Springer, 2018

- J. L. Ródenas Pedregosa: *Caracterización de soluciones de problemas de equilibrio vectoriales*, PhD Thesis, Universidad Nacional de Educación a Distancia (España), 2018
- N. Hamada: *Simple problems: The simplicial gluing structure of Pareto sets and Pareto fronts*, In: Proceedings of the Genetic and Evolutionary Computation Conference Companion, GECCO '17, Berlin, Germany, pp. 315-316, ACM, 2017
- F. Li, X.M. Yang: *Characterizations of properly quasiconvex set-valued maps*, Journal of Nonlinear and Convex Analysis, 18 (2017) (3), 473-483
- A. Mohammadi, M. Soleimani-damaneh: *Reconstruction of the core convex topology and its applications in vector optimization and convex analysis*, arXiv:1704.06932
- C. Gutiérrez, V. Novo, J. L. Ródenas-Pedregosa, T. Tanaka: *Nonconvex separation functional in linear spaces with applications to vector equilibria*, SIAM Journal on Optimization, 26 (4) (2016), 2677-2695
- GuoLin Yu: *Arcwise connected cone-quasiconvex set-valued mappings and Pareto reducibility in vector optimization*, Journal of Inequalities and Applications, 2015, 2015:317
- S. Alzorba: *Algorithms and Decomposition Methods for Multiobjective Location and Approximation Problems*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2015
- I. Kuwano, T. Tanaka: *Continuity of cone-convex functions*, Optimization Letters 6 (2012) (8), 1847-1853
- S. Alzorba, C. Günther, *Algorithms for Multicriteria Location Problems*, In: T.E. Simos, G. Psihoyios, C. Tsitouras et al. (Eds.), International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), Kos, Greece, Sep 19-25, 2012, Numerical Analysis and Applied Mathematics (ICNAAM 2012), Vols. A and B, Book Series: AIP Conference Proceedings, Vol. 1479, 2286-2289, 2012
- I. Kuwano: *Study on Scalarization Methods for Sets in Optimization Theory*, PhD Thesis, Niigata University, 2012
- Chai, Yan-Fei; Cho, Yeol Je; Li, Jun: *Some characterizations of ideal points in vector optimization problems*. Journal of Inequalities and Applications, Volume 2008 (2008), Art. ID 231845, 8 pp.

**The article [Ait Mansour, M., Popovici, N., Théra, M., On directed sets and their suprema, Positivity, Vol. 11 (2007), pp. 155-169] cited in:**

- M. Ait Mansour and H. Riahi: *On the cone minima and maxima of directed convex free disposal subsets and applications*, Minimax Theory and its Applications, 1 (2016) (2), 163-195

**The article [Popovici, N.: Structure of efficient sets in lexicographic quasiconvex multicriteria optimization, Operations Research Letters, 34 (2) (2006), 142-148] cited in:**

- Y. Han: *Connectedness of the approximate solution sets for set optimization problems*, Optimization, Published online: 25 Aug 2021, DOI: 10.1080/02331934.2021.1969393
- N. Hamada, S. Ichiki: *Free disposal hull condition to verify when efficiency coincides with weak efficiency*, Journal of Optimization Theory and Applications, Published: 09 Nov 2021.
- N. Hamada, S. Ichiki: *Characterization of the equality of weak efficiency and efficiency on convex free disposal hulls*, <https://arxiv.org/pdf/1910.02867.pdf>
- C. Gunther, C. Tammer: *On generalized-convex constrained multi-objective optimization*, Pure and Applied Functional Analysis, 3 (2018) (3), 429-461
- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.
- N. Hamada: *Simple Problems: The Simplicial Gluing Structure of Pareto Sets and Pareto Fronts*, In: Proceedings of the Genetic and Evolutionary Computation Conference Companion, GECCO '17, Berlin, Germany, pp. 315-316, ACM, 2017

- GuoLin Yu: *Arcwise connected cone-quasiconvex set-valued mappings and Pareto reducibility in vector optimization*, Journal of Inequalities and Applications, 2015, 2015:317
- S. Alzorba: *Algorithms and Decomposition Methods for Multiobjective Location and Approximation Problems*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2015
- X. F. Hu, L. N. Wang: *Lagrangian duality for multiobjective programming problems in lexicographic order*, Abstract and Applied Analysis, Article Nr. 573408, 2013
- A. Engau: *Nonlinear multiobjective programming*, in: J. J. Cochran (Ed.), Wiley Encyclopedia of Operations Research and Management Science, John Wiley & Sons, 2010
- X.B. Li, S.J. Li, Z.M. Fang: *A minimax theorem for vector-valued functions in lexicographic order*, Nonlinear Analysis: Theory, Methods & Applications, 73 (4) (2010), 1101-1108

**The article [Lupşa L., Popovici, N., *Generalized unimodal multicriteria optimization problems*, Revue d'Analyse Numérique et de Théorie de l'Approximation, Vol. 35 (2006), pp. 65-70] cited in:**

- L. Lupşa, I. Chiorean: *Numerical methods for solving unimodal multiple criteria optimization problems - a synthesis*, Revue d'Analyse Numérique et de Théorie de l'Approximation, 37 (2008) (1), 59-70

**The book [Breckner, B. E., Popovici, N.: *Convexity and Optimization: An Introduction*, EFES, Cluj-Napoca, 2006] cited in:**

- W. W. Breckner, T. Trif: *Convex Functions and Related Functional Equations. Selected Topics*. Presa Universitară Clujeană, 2008.

**The article [Popovici, N.: *Pareto reducible multicriteria optimization problems*, Optimization 54 (2005), 253-263] cited in:**

- Stefan Banholzer: *ROM-Based Multiobjective Optimization with PDE Constraints*, Doctoral Thesis, University of Konstanz, 2021.
- C. Gutiérrez, R. López: *On the existence of weak efficient solutions of nonconvex vector optimization problems*. Journal of Optimization Theory and Applications, 185 (2020), 880–902
- S. Sayin, M. Binois, M. M. Wiecek: *Data and Preference Driven Objective Space Reduction in Multiobjective Optimization*, Sect. 4.8 (pp. 116-125) in: C. M. Fonseca, K. Klamroth, G. Rudolph, M. M. Wiecek (Eds.), *Scalability in Multiobjective Optimization*, Report from Dagstuhl Seminar 20031, January 12–17, 2020, DOI: 10.4230/DagRep.10.1.52
- N. Hebestreit: *Vector variational inequalities and related topics: A survey of theory and applications*, Applied Set-Valued Analysis and Optimization, 1 (2019) (3), 231-305.
- C. Günther: *Vectorial penalization in multi-objective optimization*, Chapter 9 in: A. A. Khan, E. Köbis, C. Tammer (Eds.), *Variational Analysis and Set Optimization: Developments and Applications*, CRC Press, Boca Raton, 2019
- N. Hamada, S. Ichiki: *Free disposal hull condition to verify when efficiency coincides with weak efficiency*, Journal of Optimization Theory and Applications, Published: 09 Nov 2021.
- N. Hamada, S. Ichiki: *Characterization of the equality of weak efficiency and efficiency on convex free disposal hulls*, <https://arxiv.org/pdf/1910.02867.pdf>
- B. Gebken, S. Peitz, M. Dellnitz: *On the hierarchical structure of Pareto critical sets*, Journal of Global Optimization, 73 (2019), 891-913.
- M. Tabatabaei, A. Lovison, M. Tan, M. Hartikainen, K. Miettinen: *ANOVA-MOP: ANOVA Decomposition for Multiobjective Optimization*, SIAM Journal on Optimization, 28 (2018) (4), 3260-3289
- L. Pourkarimi, M. Soleimani-damaneh: *Existence, proper Pareto reducibility, and connectedness in multi-objective optimization*, Journal of Nonlinear and Convex Analysis, 19 (2018) (7), 1287-1295

- C. Günther: *On Generalized-Convex Constrained Multi-Objective Optimization and Application in Location Theory*, PhD Thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018.
- C. Günther, C. Tammer, Jen-Chih Yao: *Necessary optimality conditions in generalized convex multi-objective optimization involving nonconvex constraints*, *Applied Analysis and Optimization*, 2 (2018) (3), 403-421
- C. Günther: *Pareto efficient solutions in multiobjective optimization involving forbidden regions*, *Investigación Operacional*, 39 (2018) (3), 353-390
- C. Gunther, C. Tammer: *On generalized-convex constrained multi-objective optimization*, *Pure and Applied Functional Analysis*, 3 (2018) (3), 429-461
- N. Hamada: *Simple Problems: The Simplicial Gluing Structure of Pareto Sets and Pareto Fronts*, In: *Proceedings of the Genetic and Evolutionary Computation Conference Companion, GECCO '17*, Berlin, Germany, pp. 315-316, ACM, 2017
- K. Klamroth, S. Mostaghi, B. Naujoks, S. Poles, R. Purshous, G. Rudolph, S. Ruzika, S. Sayin, M. Wiecek, X. Yao: *Multiobjective optimization for interwoven systems*, *Journal of Multi-Criteria Decision Analysis*, 24 (2017) (1-2), 71-81
- C. Gunther, C. Tammer: *Relationships between constrained and unconstrained multi-objective optimization and application in location theory*, *Mathematical Methods of Operations Research*, 84 (2016) (2), 359-387.
- GuoLin Yu: *Arcwise connected cone-quasiconvex set-valued mappings and Pareto reducibility in vector optimization*, *Journal of Inequalities and Applications*, 2015, 2015:317
- S. Alzorba: *Algorithms and Decomposition Methods for Multiobjective Location and Approximation Problems*, PhD Thesis, Martin-Luther University Halle-Wittenberg, 2015
- P.G. Georgiev, D. T. Luc, P. M. Pardalos: *Robust aspects of solutions in deterministic multiple objective linear programming*, *European Journal of Operational Research*, 229 (2013), 29-36.
- Sh. Alzorba, Chr. Guenther, *Algorithms for Multicriteria Location Problems*, In: T.E. Simos, G.Psihoyios, C. Tsitouras et al. (Eds.), *International Conference of Numerical Analysis and Applied Mathematics (ICNAAM)*, Kos, Greece, Sep 19-25, 2012, *Numerical Analysis and Applied Mathematics (ICNAAM 2012)*, Vols. A and B, Book Series: AIP Conference Proceedings, Vol. 1479, 2286-2289, 2012.
- M. Gardenghi, T. Gómez, F. Miguel, M. Wiecek: *Algebra of efficient sets for multiobjective complex systems*, *Journal of Optimization Theory and Applications*, 149 (2011), 385-410
- A. Engau: *Interactive decomposition-coordination methods for complex decision problems*, Chapter 12 in: C. Zopounidis and P. M. Pardalos (Eds.), *Handbook of Multicriteria Analysis*, Applied Optimization, Vol. 103, pp. 329-365, Springer, Berlin Heidelberg, 2010
- M. Gardenghi, M. Wiecek: *Algebra of efficient sets for complex systems*, Clemson University, Department of Mathematical Sciences, Technical Report TR2009\_4\_GW, 2009
- A. Engau: *Tradeoff-based decomposition and decision-making in multiobjective programming*, *European Journal of Operational Research*, 199 (2009), 883-891
- M. Wiecek, M. Gardenghi: *Decomposition and coordination for multiobjective complex systems*, In: K. Deb, S. Greco, K. Miettinen and E. Zitzler (Eds.), *Hybrid and Robust Approaches to Multiobjective Optimization*, Dagstuhl Seminar Proceedings, Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, Germany, 2009. [<http://drops.dagstuhl.de/opus/volltexte/2009/1999>]
- A. Engau, M. Wiecek: *Interactive coordination of objective decompositions in multiobjective programming*, *Management Science*, 54 (2008), 1350-1363
- R. Schuster: *Pareto-Reduzierbarkeit bei Problemstellungen aus der Logistik*, Diplomarbeit, Martin-Luther-Universität Halle-Wittenberg, Fachbereich Mathematik und Informatik, Halle, 2007

**The article [Lupşa L., Popovici, N., *A new algorithm for solving multicriteria unimodal optimization problems*, Annals of the Tiberiu Popoviciu Seminar of Functional Equations, Approximation and Convexity, Vol. 3 (2005), pp. 123-130] cited in:**

- L. Lupşa, I. Chiorean: *Algorithms to determine the point of minimum of a real unimodal function on a set - a survey*, Carpathian Journal of Mathematics, 25 (2009) (1), 37-48
- L. Lupşa, I. Chiorean: *Numerical methods for solving unimodal multiple criteria optimization problems - a synthesis*, Revue d'Analyse Numérique et de Théorie de l'Approximation, 37 (2008) (1), 59-70
- L. Lupşa, I. Chiorean: *Numerical methods for minimizing real functions unimodal on a set*, Calcolo, 43 (2006) (2), 83-94

**The article [Benoist, J., Popovici, N.: *Between quasiconvex and convex set-valued maps*, Applied Mathematics Letters 17 (2004), 245-247] cited in:**

- M. Soleimani-damaneh: *Characterizations and applications of generalized invexity and monotonicity in Asplund spaces*, TOP 20 (2012) (3), 592-613
- Hu-Nan Li, Yu-Lan Liu: *Cone Quasi-convexity of Set-Valued Mappings in Topological Vector Spaces*, The Ninth International Symposium on Operations Research and Its Applications (ISORA'10), Chengdu-Jiuzhaigou, China, August 19–23, 2010, ORSC & APORC, pp. 83–88
- M. Soleimani-damaneh: *On generalized convexity in Asplund spaces*, Nonlinear Analysis: Theory, Methods & Applications, 70 (2009), 3072-3075
- Ya-Ping Fang, Nan-Jing Huang: *Conditions for the Equivalence of Cone Preinvexity and Cone Weak Preinvexity of Set-Valued Mappings*, Sichuan University, China, 2008
- M. Soleimani-damaneh: *Characterization of nonsmooth quasiconvex and pseudoconvex functions*, Journal of Mathematical Analysis and Applications 330 (2007), 1387-1392

**The article [Benoist, J., Popovici, N.: *Generalized convex set-valued maps*, Journal of Mathematical Analysis and Applications, 288 (2003), 161-166] cited in:**

- EL-Fassi, Ii., Nikodem, K. & Popa, D. *Set-valued solutions of a two-variable functional equation with involutions*, Aequationes Mathematicae, Published online: 13 September 2021.
- K. Nikodem, T. Rajba: *Ohlin-type theorem for convex set-valued maps*. Results Math. 75, Article number 162 (2020).
- I. EL-Fassi, E. El-Hady, K. Nikodem: *On set-valued solutions of a generalized bi-quadratic functional equation*, Results Math. 75 (89) (2020), Published online: 02 June 2020.
- E. Jablonska, K. Nikodem: *K-midconvex and K-midconcave set-valued maps bounded on "large" sets*, Journal of Convex Analysis, 26 (2) (2019)
- A. R. Baias, B. Moşneguţu, D. Popa: *Set-valued solutions of a generalized quadratic functional equation*, Results in Mathematics, 73 (2018) (4), Article: 129
- K. Nikodem, J. L. Sánchez, L. Sánchez: *Jensen and Hermite-Hadamard inequalities for strongly convex set-valued maps*, Mathematica Aeterna, 4 (2014) (8), 979-987
- H. Leiva, N. Merentes, K. Nikodem, J. L. Sánchez: *Strongly convex set-valued maps*, Journal of Global Optimization, 57 (2013) (3), 695-705
- M. Oveisih, J. Zafarani: *Super efficient solutions for set-valued maps*, Optimization 62 (2013) (6), 817-834
- T. Jabarootian, J. Zafarani: *Characterizations of preinvex and prequasiinvex set-valued maps*, Taiwanese Journal of Mathematics, 13 (2009) (3), 871-898

**The article [Benoist, J., Popovici, N.: *Characterizations of convex and quasiconvex set-valued maps*, Mathematical Methods of Operations Research 57 (2003), 427-435] cited in:**

- T. Gerlach, S. Rocktäschel: *On convexity and quasiconvexity of extremal value functions in*

- set optimization*, Applied Set-Valued Analysis and Optimization, 3 (2021), 293-308.
- Z. Zhou, W. Chen, X. Yang: *Scalarizations and optimality of constrained set-valued optimization using improvement sets and image space analysis*, Journal of Optimization Theory and Applications, 183 (2019), 944-962
  - G. De Marco: *On the convexity of preferences in decisions and games under (quasi-)convex/concave imprecise probability correspondences*, International Journal of Approximate Reasoning, 113 (2019), 256–286.
  - X. Xu, Y.D. Xu, Y.M. Sun: *Semicontinuity of the minimal solution set mappings for parametric set-valued vector optimization problems*, Journal of the Operations Research Society of China, First Online: 21 November 2019
  - Le Thanh Tam: *Set optimization with respect to variable domination structures*, PhD thesis, Martin Luther University of Halle-Wittenberg, Halle, Germany, 2018
  - C. Antoni, M. Alshahrani: *Images, fixed points and vector extremum problems*, Journal of Optimization Theory and Applications, 177 (2018) (3), 889-905
  - Phan Nhat Tinh, Maria Do Rosário de Pinho: *Characterizations of generalized convex functions in terms of coderivative*, Journal of Mathematics and Statistical Science, 3 (2017) (5), 123–138
  - F. Li, X.M. Yang: *Characterizations of properly quasiconvex set-valued maps*, Journal of Nonlinear and Convex Analysis, 18 (2017) (3), 473-483
  - G. P. Crespi, D. Kuroiwa, M. Rocca: *Quasiconvexity of set-valued maps assures well-posedness of robust vector optimization*, Annals of Operations Research, 251 (2017) (1-2), 89-104
  - G. Eichfelder, C. Krüger, A. Schöbel: *Decision uncertainty in multiobjective optimization*, Journal of Global Optimization, 69 (2017) (2), 485-510
  - Phan Nhat Tinh, M. Do Rosário de Pinho: *Characterizations of generalized convex functions in terms of coderivative*, Journal of Mathematics and Statistical Science, 3 (2017) (5), 123-138
  - Fei Li, Liping Tang, Xinmin Yang: *A kind of cone-convexity for set-valued maps and its scalarization*, Operations Research Transactions, 20 (2016) (4), 21-29
  - Y.D. Xu, Li, S.J.: *On the solution continuity of parametric set optimization problems*, Mathematical Methods of Operations Research 84 (2016) (1), 223–237
  - M. Chinaie, J. Zafarani: *A new approach to constrained optimization via image space analysis*, Positivity, 20 (2016) (1), 99-114
  - S. Drapeau, A.H. Hamel, M. Kupper: *Complete duality for quasiconvex and convex set-valued functions*, Set-Valued and Variational Analysis, 24 (2016) (2), 253-275
  - GuoLin Yu: *Arcwise connected cone-quasiconvex set-valued mappings and Pareto reducibility in vector optimization*, Journal of Inequalities and Applications, 2015, 2015:317
  - G.P. Crespi, A.H. Hamel, C. Schrage: *A Minty variational principle for set optimization*, Journal of Mathematical Analysis and Applications, 423 (2015) (1), 770-796
  - A.H. Hamel, F. Heyde, A. Löhne, B. Rudloff, C. Schrage: *Set Optimization—A Rather Short Introduction*. In: Hamel A., Heyde F., Löhne A., Rudloff B., Schrage C. (eds) Set Optimization and Applications - The State of the Art. Springer Proceedings in Mathematics & Statistics, Vol. 151. Springer, 2015, pp. 65-141
  - G.P. Crespi, D. Kuroiwa, M. Rocca: *Convexity and global well-posedness in set-optimization*, Taiwanese Journal of Mathematics, 18 (6) (2014), 1897-1908
  - G. Eichfelder: *Variable Ordering Structures in Vector Optimization*, Springer, 2014
  - Tinh, Phan, Kim, Do: *On generalized Fenchel-Moreau theorem and second-order characterization for convex vector functions*, Fixed Point Theory and Applications 2013:328 (2013)
  - S. Suneja, M. Sharma:  *$\varepsilon$ -optimality in multivalued optimization*, American Journal of Operations Research, 3 (2013) (4), 413-420
  - Phan Nhat Tinh; Kim, Do Sang: *Convex vector functions and some applications*, Journal of

- Nonlinear and Convex Analysis, 14 (2013) (1), 139-161
- M. Oveisiha, J. Zafarani: *Super efficient solutions for set-valued maps*, Optimization 62 (2013) (6), 817-834
  - X. X. Huang, J. C. Yao: *Characterizations of the nonemptiness and compactness for solution sets of convex set-valued optimization problems*, Journal of Global Optimization, 55 (2013) (3), 611-626
  - M. Chinaie, J. Zafarani: *Image space analysis and scalarization for  $\varepsilon$ -optimization of multifunctions*, Journal of Optimization Theory and Applications, 157 (2013) (3), 685-695
  - G. Eichfelder: *Cone-valued maps in optimization*, Applicable Analysis, 91 (2012) (10), 1831-1846
  - C. Gutiérrez, E. Miglierina, E. Molho, V. Novo: *Pointwise well-posedness in set optimization with cone proper sets*, Nonlinear Analysis: Theory, Methods & Applications, 75 (2012) 1822–1833
  - J. Fu, S. Wang: *Symmetric vector quasi-equilibrium problems for set-valued mappings*, Acta Math. Appl. Sin. 34 (2011) (1), 40-49
  - G. P. Crespi, I. Ginchev, M. Rocca: *Minty variational principle for set-valued variational inequalities*. Pacific Journal of Optimization, 6 (2010), 39-56
  - M. Chinaie, J. Zafarani: *Image space analysis and scalarization of multivalued optimization*, Journal of Optimization Theory and Applications, 142 (2009), 451-467
  - T. Jabarootian, J. Zafarani: *Characterizations of preinvex and prequasiinvex set-valued maps*, Taiwanese Journal of Mathematics, 13 (2009) (3), 871-898
  - A. Takeda, S. Taguchi, R.H. Tütüncü: *Adjustable robust optimization models for a nonlinear two-period system*. Journal of Optimization Theory and Applications 136 (2008), 275-295
  - G.P. Crespi, I. Ginchev, M. Rocca: *Some remarks on set-valued Minty variational inequalities*, Vietnam Journal of Mathematics, 35 (2007) (1), 81–106
  - D. La Torre: *On arcwise connected convex multifunctions*, In: I. V. Konnov, D. T. Luc, A. M. Rubinov (Eds.), Generalized Convexity and Related Topics, Lecture Notes in Economics and Mathematical Systems 583, Springer, Berlin Heidelberg, 2006, 337-345.

**The article [Benoist, J., Borwein, M. J., Popovici, N.: A characterization of quasiconvex vector-valued functions, Proceedings of the American Mathematical Society, 131 (2003), 1109-1113] cited in:**

- S. Dempe, N.A. Gadhi, K. Hamdaoui: *Minimizing the difference of two quasiconvex functions over a vector-valued quasiconvex system*, Optimization, 69 (2020) (5), 997-1012.
- N. Sisarath, R. Wangkeeree: *Necessary and sufficient KKT optimality conditions in non-convex multi-objective optimization problems with cone constraints*, Pacific Journal on Optimization, 15 (2019) (3), 477-490.
- J. Y. Bello Cruz, G. C. Bento, G. Bouza Allende, R. F. B. Costa: *The inexact projected gradient method for quasiconvex vector functions*, arXiv:1212.1048v1
- F. Li, X.M. Yang: *Characterizations of properly quasiconvex set-valued maps*, Journal of Nonlinear and Convex Analysis, 18 (2017) (3), 473-483.
- E. Ernst, A. Zaffaroni: *Characterizing sets of lower bounds: a hidden convexity result*, Set-Valued and Variational Analysis, 25 (2017) (4), 639-650
- Phan Nhat Tinh: *Characterizations of generalized convex functions in terms of coderivative*, Hue University Journal of Science, 116 (2016) (2), 91-101.
- Tran Ngoc Thang, Dinh The Luc, Nguyen Thi Bach Kim: *Solving generalized convex multiobjective programming problems by a normal direction method*, Optimization, 65 (2016) (12), 2269-2292
- J. M. Borwein, Qiji J. Zhu: *A variational approach to Lagrange Multipliers*, Journal of Optimization Theory and Applications, 171 (2016) (3), 727-756
- M. Ait Mansour and H. Riahi: *On the cone minima and maxima of directed convex free*



- disposal subsets and applications*, Minimax Theory and its Applications, 1 (2016) (2), 163-195.
- M. Chinaie, J. Zafarani: *A new approach to constrained optimization via image space analysis*, Positivity, 20 (2016) (1), 99-114.
  - S. Drapeau, A. H. Hamel, M. Kupper: *Complete duality for quasiconvex and convex set-valued functions*, Set-Valued and Variational Analysis, 24 (2016) (2), 253-275.
  - GuoLin Yu: *Arcwise connected cone-quasiconvex set-valued mappings and Pareto reducibility in vector optimization*, Journal of Inequalities and Applications, 2015, 2015:317.
  - G. P. Crespi, A. H. Hamel, C. Schrage: *A Minty variational principle for set optimization*, Journal of Mathematical Analysis and Applications, 423 (2015) (1), 770-796.
  - S. Suneja, M. Sharma:  *$\varepsilon$ -optimality in multivalued optimization*, American Journal of Operations Research, 3 (2013) (4), 413-420.
  - S. Suzuki: *Observations of constraint qualifications for quasiconvex programming*, Proceedings of the 3th Asian Conference on Nonlinear Analysis and Optimization, Matsue, Japan, 2012, 303-313.
  - S. Suzuki, D. Kuroiwa: *Some constraint qualifications for quasiconvex vector-valued systems*, Journal of Global Optimization, 55 (2013) (3), 539-548.
  - F. Flores-Bazan, E. Hernandez: *Optimality conditions for a unified vector optimization problem with not necessarily preordering relations*, Journal of Global Optimization 56 (2013) (2), 299-315.
  - M. Chinaie, J. Zafarani: *Image space analysis and scalarization for  $\varepsilon$ -optimization of multifunctions*, Journal of Optimization Theory and Applications, 157 (2013) (3), 685-695.
  - F. Flores-Bazan, F. Lara: *Inner and outer estimates for solution sets and their asymptotic cones in vector optimization*, Optimization Letters, 6 (2012) (7), 1233-1249
  - M. Soleimani-damaneh: *Characterizations and applications of generalized invexity and monotonicity in Asplund spaces*, TOP 20 (2012) (3), 592-613
  - J.Y. Bello Cruz, L.R. Lucambio Pérez, J.G. Melo: *Convergence of the projected gradient method for quasiconvex multiobjective optimization*, Nonlinear Analysis: Theory, Methods & Applications, 74 (2011), 5268-5273.
  - L. Nascimento: *Essays on Decision Theory*, Dissertation, New York University, 2011
  - L. Nascimento, G. Riella: *A class of incomplete and ambiguity averse preferences*, Journal of Economic Theory, 146 (2011), 728-750.
  - M. Soleimani-damaneh: *E-convexity and its generalizations*, International Journal of Computer Mathematics, 88 (2011), 3335-3349.
  - J. Fu, S. Wang: *Symmetric vector quasi-equilibrium problems for set-valued mappings*, Acta Math. Appl. Sin. 34 (2011) (1), 40-49
  - J. M. Borwein, J. D. Vanderwerf: *Convex Functions: Constructions, Characterizations and Counterexamples*, Springer, 2011
  - G.P. Crespi, I. Ginchev, M. Rocca: *Minty variational principle for set-valued variational inequalities*. Pacific Journal of Optimization, 6 (2010), 39-56.
  - M. Chinaie, J. Zafarani: *Image space analysis and scalarization of multivalued optimization*, Journal of Optimization Theory and Applications, 142 (2009), 451-467.
  - M. Soleimani-damaneh: *On generalized convexity in Asplund spaces*, Nonlinear Analysis: Theory, Methods & Applications, 70 (2009), 3072-3075.
  - F. Flores-Bazan, C. Vera: *Unifying efficiency and weak efficiency in generalized quasiconvex vector minimization on the real-line*, International Journal of Optimization: Theory, Methods and Applications, 1 (2009) (3), 247-265.
  - T. Jabarootian, J. Zafarani: *Characterizations of preinvex and prequasiinvex set-valued maps*, Taiwanese Journal of Mathematics, 13 (2009) (3), 871-898.
  - I. Ginchev: *Vector optimization problems with quasiconvex constraints*, Journal of Global Optimization, 44 (2009), 111-130.

- G.P. Crespi, I. Ginchev, M. Rocca: *Some remarks on the Minty vector variational principle*, Journal of Mathematical Analysis and Applications, 345 (2008), 165–175.
- Dinh The Luc: *Pareto Optimality*, In: A. Chinchuluun, P. M. Pardalos, A. Migdalas, L. Pitsoulis (Eds.), *Pareto Optimality, Game Theory and Equilibria*, Springer Optimization and its Applications, 17, Springer, 2008, 481-516
- I. Ginchev: *Optimality conditions for scalar and vector optimization problems with quasiconvex inequality constraints*, Università dell’Insubria, Facoltà di Economia, Quaderni, 2008/5
- M. Soleimani-damaneh: *Characterization of nonsmooth quasiconvex and pseudoconvex functions*, Journal of Mathematical Analysis and Applications 330 (2007), 1387-1392
- G.P. Crespi, I. Ginchev, M. Rocca: *Some remarks on set-valued Minty variational inequalities*, Vietnam Journal of Mathematics, 35 (2007) (1), 81–106
- G.P. Crespi, I. Ginchev, M. Rocca: *Increasing-along-rays property for vector functions*, Journal of Nonlinear and Convex Analysis, 7 (2006) (1), 39-50.
- G.P. Crespi, I. Ginchev, M. Rocca: *Points of efficiency in vector optimization with increasing-along-rays property and Minty variational inequalities*, In: I. V. Konnov, D. T. Luc, A.M. Rubinov (Eds.), *Generalized Convexity and Related Topics, Lecture Notes in Economics and Mathematical Systems 583*, Springer, Berlin Heidelberg, 2006, 209-226.
- J. Gwinner: *On the Work of W. Oettli in Generalized Convexity and Nonconvex Optimization - a Review and Some Perspectives*, In: I. V. Konnov, D. T. Luc, A. M. Rubinov (Eds.), *Generalized Convexity and Related Topics, Lecture Notes in Economics and Mathematical Systems 583*, Springer, Berlin Heidelberg, 2006, 297-314.
- D.T. Luc: *Generalized convexity in vector optimization*, Chapter in: N. Hadjisavvas, S. Komlósi, S. Schaible (Eds.), *Handbook of generalized convexity and generalized monotonicity, Nonconvex Optimization and its Applications 76*, Springer, New York, 2005, 195-236
- J. Benoist: *Characterization of quasiconvexity for locally Lipschitz vector-valued functions*, Optimization, 52 (2003) (2), 145-152 (cites the preprint appeared at CECM)

**The article [Benoist, J., Popovici, N.: *Characterizations of finite dimensional shaded sets*, *Nonlinear Analysis Forum* 7 (2002), 67-72] cited in:**

- D. Duca: *Multicriteria optimization in complex space*, Casa Cărții de Știință, Cluj-Napoca, 2005.

**The article [Benoist, J., Popovici, N.: *Contractibility of the efficient frontier of three-dimensional simply-shaded sets*, *Journal of Optimization Theory and Applications* 111 (2001), 81-116] cited in:**

- M. B. Donato, M. Milasi, C. Vitanza: *Generalized variational inequality and general equilibrium problem*, Journal of Convex Analysis, 52 (2018) (2), 515-527.
- M. B. Donato, M. Milasi, C. Vitanza: *Variational problem, generalized convexity, and application to a competitive equilibrium problem*, Numerical Functional Analysis and Optimization, 35 (2014) (7-9), 962-983.
- I. Ginchev: *Arcwise connectedness of efficient sets*, Communications in Mathematical Analysis, 10 (2011) (2), 1–17.
- A. Daniilidis, Y. Garcia Ramos: *Some remarks on the class of continuous (semi-)strictly quasiconvex functions*, Journal of Optimization Theory and Applications, 133 (2007), 37-48.
- N. Q. Huy, N. D. Yen: *Contractibility of the solution sets in strictly quasiconcave vector maximization on noncompact domains*, Journal of Optimization Theory and Applications 124 (2005), no. 3, 615-635.
- Dinh The Luc: *Generalized convexity in vector optimization*, Chapter in: N. Hadjisavvas, S. Komlósi, S. Schaible (Eds.), *Handbook of generalized convexity and generalized*

monotonicity, *Nonconvex Optimization and its Applications* 76, Springer, New York, 2005, 195-236.

- D. Duca: *Multicriteria optimization in complex space*, Casa Cărții de Știință, Cluj-Napoca, 2005.
- J. Benoist: Contractibility of efficient frontier of simply shaded sets, *Journal of Global Optimization*, 25 (2003) (3), 321-335.

**The article [Malivert, C., Popovici, N.: *The structure of efficient sets in bicriteria quasilinear optimization*, *Journal of Nonlinear and Convex Analysis* 2 (2001), 291-304] cited in:**

- A. Engau: *Nonlinear multiobjective programming*, in: J. J. Cochran (Ed.), *Wiley Encyclopedia of Operations Research and Management Science*, John Wiley & Sons, 2010.
- D. Duca: *Multicriteria optimization in complex space*, Casa Cărții de Știință, Cluj-Napoca, 2005.

**The article [Benoist, J., Popovici, N.: *The structure of the efficient frontier of finite dimensional completely-shaded sets*, *Journal of Mathematical Analysis and Applications* 250 (2000), 98-117] cited in:**

- N. Hamada, S. Ichiki: *Free disposal hull condition to verify when efficiency coincides with weak efficiency*, *Journal of Optimization Theory and Applications*, Published: 09 Nov 2021.
- N. Hamada, S. Ichiki: Characterization of the equality of weak efficiency and efficiency on convex free disposal hulls, <https://arxiv.org/pdf/1910.02867.pdf>
- Z. D. Slavov, Chr. Slavova Evans: *An application of the Maximum Theorem in multi-criteria optimization, properties of Pareto-retract mappings, and the structure of Pareto sets*, *Applied Mathematics*, 3 (2012), 1415-1422
- Z. Slavov: *Compactness and connectedness of the Pareto-optimal set in multi-criteria convex maximization*, *Mathematica Balkanica, New Series* 26 (2012) (3-4), 399-407
- Z. D. Slavov: *On Pareto sets in multi-criteria optimization*, *Union of Bulgarian Mathematicians*, Vol. 40, No 1, (2011), 207-212.
- E. Miglierina, E. Molho: *Sectionwise connected sets in vector optimization*, *Operations Research Letters* 37 (2009) (4), 295-298.
- E. Miglierina, E. Molho, F. Patrone, S. H. Tijs: *Axiomatic approach to approximate solutions in multiobjective optimization*, *Decisions in Economics and Finance* 31 (2008), 95–115.
- N. Q. Huy, N. D. Yen: *Contractibility of the solution sets in strictly quasiconcave vector maximization on noncompact domains*, *Journal of Optimization Theory and Applications* 124 (2005), no. 3, 615-635.
- D. Duca: *Multicriteria optimization in complex space*, Casa Cărții de Știință, Cluj-Napoca, 2005.
- N. Q. Huy: *Topology of the efficient sets of convex sets in  $R^2$* , *Vietnam Journal of Mathematics* 31 (2003) (1), 45-55.
- J. Benoist: *Contractibility of efficient frontier of simply shaded sets*, *Journal of Global Optimization*, 25 (2003) (3), 321-335
- N. Q. Huy: *Arcwise connectedness of the solution sets of a semistrictly quasiconcave vector maximization problem*, *Acta Mathematica Vietnamica* 27 (2002) (2), 165-174
- J. Benoist: *Contractibility of the efficient set in strictly quasiconcave vector maximization*, *Journal of Optimization Theory and Applications*, 110 (2001) (2), 325-336

**The article [Malivert, C., Popovici, N.: *Bicriteria linear fractional optimization*, In: Nguyen, V. H., Strodiot, J.-J., Tossings, P. (Eds.), *Optimization. Proceedings of the 9<sup>th</sup> Belgian-French-German Conference on Optimization, Namur, Belgium, September 7-11, 1998*. *Lecture Notes in Economics and Mathematical Systems* 481, Springer Verlag, 2000, 305-319] cited in:**

- N.D. Yen, X. Yang: *Affine variational inequalities on normed spaces*, Journal of Optimization Theory and Applications, 178 (2018) (1), 36-55
- R. Cambini, L. Carosi, L. Martein: *Generating the efficient frontier of a class of bicriteria generalized fractional programming*, Decisions in Economics and Finance, 40 (2017) (1-2), 81-101
- N.D. Yen: *Parametric optimization problems and parametric variational inequalities*, Vietnam Journal of Mathematics, 37 (2009) (2-3). 191-223
- I. M. Stancu-Minasian: *A sixth bibliography of fractional programming*, Optimization 55 (2006) (4), 405-428.
- H. Tuy, N.T. Hoai-Phuong: *Optimization under composite monotonic constraints and constrained optimization over the efficient set*, In: L. Liberti, N. Maculan (Eds.), Global optimization. From theory to implementation, Nonconvex Optimization and Its Applications 84, Springer, New York, 2006, 3-31.
- T.N. Hoa, T.D. Phuong, N.D. Yen: *On the parametric affine variational inequality approach to linear fractional vector optimization problems*, Vietnam Journal of Mathematics 33 (2005) (4), 477-489.
- T.N. Hoa, T.D. Phuong, N.D. Yen: *Bicriteria strictly quasiconcave maximization on noncompact sets*, Nonlinear Analysis Forum 10 (2005) (2), 137-144.
- G.M. Lee, N.N. Tam, N.D. Yen: *Quadratic programming and affine variational inequalities. A qualitative study*, Nonconvex Optimization and Its Applications 78, Springer Netherlands, 2005, 143-154.
- T.N. Hoa, T.D. Phuong, N.D. Yen: *Number of connected components of the solution sets in linear fractional vector optimization*, Vietnamese Academy of Science and Technology, Institute of Mathematics, Preprint Series 11/2002.

**The article [Popovici, N.: *Polygonal convexity in multicriteria linear fractional optimization*, In: E. Popoviciu (Ed.), *Research on Theory of Allure, Approximation, Convexity and Optimization*, SRIMA, Cluj-Napoca, 1999, 249-256] cited in:**

- I. M. Stancu-Minasian: *A sixth bibliography of fractional programming*, Optimization 55 (2006) (4), 405-428.

**The article [Popovici, N.: *Sur l'approximation des ensembles d'efficience*, Revue d'Analyse Numérique et de Théorie de l'Approximation 27 (1998), 321-329] cited in:**

- S. Ruzika, M. M. Wiecek: *Approximation methods in multiobjective programming*, Journal of Optimization Theory and Applications 126 (2005) (3), 473-501.

**The article [Popovici, N.: *Sur une notion abstraite de quasiconvexité*, Revue d'Analyse Numérique et de Théorie de l'Approximation 26 (1997), 191-196] cited in:**

- C. Malivert, N. Boissard: *Structure of efficient sets for strictly quasi-convex objectives*, Journal of Convex Analysis 1 (1994) (2), 143-150 (cited as preprint *Sur une notion de quasi-convexité pour des fonctions vectorielles*).

**The article [Popovici, N., *Multicriteria optimization with unimodal objective functions*, In: D.D. Stancu, Gh. Coman, W.W.Breckner and P. Blaga (Eds.), *Approximation and Optimization*, Vol. I (Proceedings of the International Conference on Approximation and Optimization, Cluj-Napoca, July 29 - August 1, 1996), Transilvania Press, Cluj-Napoca, 1997, pp. 341-344] cited in:**

- L. Lupşa, I. Chiorean: *Numerical methods for solving unimodal multiple criteria optimization problems - a synthesis*, Revue d'Analyse Numérique et de Théorie de l'Approximation, 37 (2008) (1), 59-70

**The Ph.D. thesis [Popovici, N.: *Contribution à l'optimisation vectorielle*, Université de Limoges, France, 1995] cited in:**

- D.T. Luc: *Pareto Optimality*, In: A. Chinchuluun, P. M. Pardalos, A. Migdalas, L. Pitsoulis (Eds.), *Pareto Optimality, Game Theory and Equilibria*, Springer Optimization and its Applications 17, Springer, 2008, 481-516.
- D.T. Luc: *Generalized convexity in vector optimization*, In: N. Hadjisavvas, S. Komlósi, S. Schaible (Eds.), *Handbook of generalized convexity and generalized monotonicity*, Nonconvex Optimization and its Applications 76, Springer, New York, 2005, 195-236.
- N. Hadjisavvas: *Generalized convexity, generalized monotonicity and nonsmooth analysis*, Chapter in: N. Hadjisavvas, S. Komlósi, S. Schaible (Eds.), *Handbook of generalized convexity and generalized monotonicity*, Nonconvex Optimization and its Applications 76, Springer, New York, 2005, 465-499.
- G. Isac, V.A. Bulavsky, V.V. Kalashnikov: *Complementarity, Equilibrium, Efficiency and Economics. Nonconvex Optimization and its Applications*, 63. Kluwer Academic Publishers, Dordrecht, 2002.
- J. Benoist: *Connectedness of the efficient set for strictly quasiconcave sets*, Journal of Optimization Theory and Applications 96 (1998) (3), 627-654.

**The article [Popovici, N.: *On a special class of Pareto bicriterial optimization problems*, *Revue d'Analyse Numérique et de Théorie de l'Approximation* 19 (1990), 163-168] cited in :**

- A. Cambini, L. Martein, I. M. Stancu-Minasian: *A survey of bicriteria fractional problems*, Advanced Modeling and Optimization 1 (1999) (1), 9-46.
- I.M. Stancu-Minasian: *A fifth bibliography of fractional programming*, Optimization 45 (1999) (1-4), 343-367.