

Curriculum Vitae

Valentin Gutev Gutev

Contact Information

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Personal Data

DATE OF BIRTH August 18, 1959

PLACE OF BIRTH Balchik, Bulgaria

NATIONALITY Bulgarian

PERMANENT RESIDENCE South Africa

MARITAL STATUS married
WIFE: Rossitza Ivanova (Slavova) Guteva
CHILDREN: Anelia and Alexander

Academic Experience

University Education

M.Sc. *Topology, Sofia University "St. Kliment Ohridski", Sofia, Bulgaria, 1984.*

PH.D. *Topology, Sofia University "St. Kliment Ohridski", Sofia, Bulgaria, 1989.*

Academic Promotions

SEPTEMBER, 2000 *Senior Research Associate II Degree in Geometry and Topology, Bulgarian Academy of Sciences, Sofia, Bulgaria.*

Academic Experience (continued)

Academic Employment

2008 – PRESENT	Full Professor, School of Mathematical Sciences, Westville Campus, University of KwaZulu-Natal, South Africa.
2001 – 2007	Associate Professor, School of Mathematical Sciences, Howard College Campus, University of KwaZulu-Natal, South Africa.
1999 – 2001	Lecturer, School of Mathematical and Statistical Sciences, Faculty of Science, Natal University – Durban, South Africa.
1992 – 1999	Assistant Professor (I rank), Department of Complex Analysis and Topology, Faculty of Mathematics and Informatics, Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria.
1991 – 1992	Assistant Professor (II rank), Department of Complex Analysis and Topology, Faculty of Mathematics and Informatics, Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria.
1988 – 1991	Assistant Professor (III rank), Department of Complex Analysis and Topology, Faculty of Mathematics and Informatics, Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria.

Teaching Experience

Undergraduate

1986 – 1996	Mathematical Analysis I and II
1989 – 1996	Complex Analysis
1999 – 2002	General Mathematics I
1999 – 2002	General Mathematics II
2000 – 2004	Analysis III
2003 – 2004	Advanced Calculus II
2005 – 2006	Real Analysis
2005 – 2005	Further Calculus and Fundamentals
2007 – PRESENT	Introduction to Algebra and Analysis
2008 – 2008	Advanced Calculus and Linear Algebra
2009 – PRESENT	Real Analysis

Graduate

1990/91	Infinite Dimensional Topology
1991/92	Plane Topology
1992/93	Dimension Theory
1993/94	Geometry and Topology
1995/96	Geometry and Topology
1995/96	Dimension Theory
2001 – 2002	Topology
2006 – 2007	Functional Analysis

Teaching Experience (continued)

Recent Lecture Notes (printed versions) *

1999/2000	General Mathematics II, 97 pages
2000	Analysis III, 131 pages
2001	Topology, 83 pages
2004	Complex Analysis, 50 pages
2005	Real Analysis, 145 pages
2005	Further Calculus and Fundamentals, 188 pages
2007	Functional Analysis, 68 pages
2007	Introduction to Analysis, 71 pages
2008	Introduction to Analysis, 88 pages
2009	Real Analysis, 125 pages

Lecture Notes (Web versions)

2004	Advanced Calculus II < http://del.maths.za.net/course/view.php?id=2 > [†]
2005	Further Calculus and Fundamentals < http://del.maths.za.net/course/view.php?id=6 > [*]

MSc Students

1995 – 1996	Daniela Bertacchi, Dipartimento di Matematica, Via Saldini 50, Università di Milano, 20133 Milano, Italy, co-supervision in agreement with Professor Sandro Levi.
1995 – 1996	Ivailo Shishkov, Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria. First position: Postgraduate Student, Section of Geometry and Topology, Institute of Mathematics, Bulgarian Academy of Sciences.
2003 – 2003	Faustine Rutayisire, School of Mathematical and Statistical Sciences, Faculty of Science, Natal University, Durban.
2007 – 2009	Narcisse Roland Loufouma Makala, School of Mathematical Sciences, University of KwaZulu-Natal, Durban, jointly with African Institute for Mathematical Sciences.

*Available online at <<http://maths.za.org/lec-notes>>

†accessible via an evaluation anonymous account { username: school
password: math-del

Teaching Experience (continued)

PhD Students

1998 – 2001	Kazumi Miyazaki, Higasisumiyosi-ku Taka-ai 2-15-2, Osaka, 546, Japan, co-supervision in agreement with Professor Tsugunori Nogura.
1998 – 2001	Ivailo Shishkov, Section of Geometry and Topology, Institute of Mathematics, Bulgarian Academy of Sciences, Sofia, Bulgaria, co-supervision in agreement with Professor Stoyan Nedev.
2005 – 2005	Kannan Kankeyanathan, School of Mathematical Sciences, Faculty of Science, University of KwaZulu-Natal, Howard College Campus, Durban.
2005 – 2006	Takamitsu Yamauchi, Department of Mathematics, Faculty of Science, Tsukuba University, Japan, co-supervision in agreement with Professor Takao Hoshina.
2005 – 2007	Jiang Nan, Department of Mathematics, Faculty of Science, Ehime University, Japan, co-supervision in agreement with Professor Tsugunori Nogura.
2009-PRESENT	Narcisse Roland Loufouma Makala, DAAD Fellowship, School of Mathematical Sciences, University of KwaZulu-Natal, Durban.

Research Experience

Research Area

Set-valued mappings, selections, hyperspaces, absolute extensors and retracts, embedding-like properties, finite-dimensional spaces, infinite-dimensional spaces, fixed-point theory, reflexive Banach spaces, probability measures, trivial bundles.

Research Rating

B3 [*] (OBTAINED 2000)	National Research Foundation of South Africa.
B2 [†] (OBTAINED 2005)	National Research Foundation of South Africa.
B1 [‡] (OBTAINED 2006)	National Research Foundation of South Africa.

^{*}Definition: Most of the reviewers are convinced that the applicant is an independent researcher enjoying considerable international recognition for the high quality and impact of his/her recent research outputs.

[†]Definition: Reviewers are firmly convinced that the applicant is an independent researcher enjoying considerable international recognition for the high quality and impact of his/her recent research outputs.

[‡]Definition: All reviewers concur that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs, with some of them indicating that he/she is a leading international scholar in the field.

Research Experience (continued)

2001/2002/2003-2005	National Research Foundation of South Africa, Grants on "Selections and their Applications".
2007-2010	National Research Foundation of South Africa, Grant on "Selections and their Applications".
2008	Leading Reviewer of the Doctoral Scholarship and Fellowship Panel of the National Research Foundation of South Africa.

Visiting Positions

NOVEMBER, 1989	College on Differential Geometry, ICTP (<i>International Center for Theoretical Physics</i>), Trieste, Italy.
JUNE, 1993	Visiting Professor by Tempus Projection, University of Valencia, Spain.
MARCH 1997 – OCTOBER 1998	Visiting Professor of the JSPS (<i>Japan Society for the Promotion of Science</i>) Invitation Fellowship Program for Research in Japan, Department of Mathematics, Faculty of Science, Ehime University, Matsuyama, Japan.

Research Visits

AUGUST, 1999	Ehime University, Matsuyama, Japan.
JULY, 2002	Ehime University, Matsuyama, Japan.
FEBRUARY-MARCH, 2004	Ehime University, Matsuyama, Japan.
MARCH, 2004	Auckland University, Auckland, New Zealand.
MAY-JUNE, 2005	Nipissing University, North Bay, Canada.
JUNE, 2005	Tsukuba University, Tsukuba, Japan
JULY, 2005	Ehime University, Matsuyama, Japan.
AUGUST, 2007	Bremen University, Bremen, Germany.
DECEMBER, 2007	Ehime University, Matsuyama, Japan.
MARCH-APRIL, 2009	Ehime University, Matsuyama, Japan.
JUNE, 2009	Malta University, Matla.
JULY, 2009	Sofia University, Sofia, Bulgaria.

Activities in Journals

Invitations to act as a Referee

Annales de la faculte des Sciences de Toulouse
Bulletin of the Malaysian Mathematical Science Society
Commentationes Mathematicae Universitatis Carolinae
Filomat
Fundamenta Mathematicae
Houston Journal of Mathematics
Journal of the Australian Mathematical Society

Activities in Journals (continued)

Journal of Fixed Point Theory and Applications
Indian Journal of Mathematics
Mathematika Balkanika
Mathematica Slovaca
Publicacions Matemàtiques
Proceedings of the American Mathematical Society
Real Analysis Exchange
Rendiconti Del Circolo Matematico Di Palermo
Serdica
Set-Valued Analysis
Topology and its Applications
Topology Proceedings

Editor's Positions

- 2008 – PRESENT Questions and Answers in General Topology.
2008 – PRESENT International Journal of Mathematics and Mathematical Sciences.
1999 – 2002 Topology Proceedings – editor of the Electronic Edition in Topology Atlas, and technical editor of the Summer Volume.
2004 – 2005 Guest Editor: Topology and its Applications 153, No. 17, 3219-3372 (2006). Special issue: Topology and Analysis in Applications, Regional KZN conference, Durban, South Africa, July 12-16, 2004.

Conference Activities

Conference Organization

Chair, Organizing Committee, Regional KZN Conference, "Topology and Analysis in Applications", Durban, 12-16 July, 2004, South Africa, <<http://maths.za.net/index.php?cf=1>>.

Conference Presentations

- APRIL, 1990 Workshop on Topology, University of Niš, Yugoslavia.
SEPTEMBER, 1990 International Conference on Topology, Varna, Bulgaria.
SEPTEMBER, 1994 *Invited Speaker*, International Conference on Convergence Theory, Dijon, France.
JUNE, 1995 Workshop on Topology, Gulechitza, Bulgaria.
AUGUST, 1996 8th Prague Topological Symposium, Prague, Czech Republic.
MAY, 1997 *Invited Speaker*, Conference on Topology, Shizuoka University, Shizuoka, Japan.
DECEMBER, 1997 *Invited Speaker*, Conference on Topology, Shimane University, Matsue, Japan.

Conference Activities (continued)

- MARCH, 1998 *Invited Speaker*, Conference on General and Geometric Topology, RIMS, Kyoto University, Kyoto, Japan.
- MARCH, 1998 *Invited Speaker*, Seminar on General and Geometric Topology, Osaka University, Osaka, Japan.
- MAY, 1998 *Invited Speaker*, Conference on Topology, Ehime University, Matsuyama, Japan.
- AUGUST, 1999 *Invited Speaker*, International Conference on Topology and its Applications, Yokohama, Japan.
- JANUARY, 2000 5th Pan African Congress of Mathematicians, University of the Western Cape, Cape Town, South Africa.
- JANUARY, 2001 Workshop on Topology, University of Durban Westville, Durban, South Africa.
- AUGUST, 2001 9th Prague Topological Symposium, Prague, Czech Republic.
- JUNE, 2002 *Invited Speaker*, International Conference on Topology and its Applications joined with Second Japan-Mexico Topology Symposium, Topology in Matsue, Shimane University, Matsue, Japan.
- MAY, 2003 Annual KZN Mathematics Conference, University of Durban Westville, Durban, South Africa.
- JULY, 2004 *Plenary Speaker*, 19th "Summer" Conference on Topology and its Applications of the American Mathematical Society, Cape Town, South Africa.
- MAY, 2005 *Invited Speaker*, Workshop on General and Geometry Topology, Nipissing University, North Bay, Canada.
- JUNE, 2005 *Invited Speaker*, Session on General Topology, Summer Meeting of the Canadian Mathematical Society, University of Waterloo, Waterloo, Canada.
- JUNE, 2005 *Invited Speaker*, 40th Anniversary Conference on Topology in Japan, University of Tsukuba, Tsukuba, Japan.
- JUNE, 2005 *Invited Talk*, One hour research representation in University of Tsukuba, Tsukuba, Japan.
- JULY, 2005 *Invited Talk*, One hour research representation in Kanagawa University, Yokohama, Japan.
- JULY, 2007 *Session co-organizer*, Special Session on Set-Theoretical Topology, 22nd Summer Conference on Topology and its Applications of the American Mathematical Society, Castelló, Spain.
- DECEMBER, 2007 *Invited Speaker*, Special Session on "Set-Theory, Set-Theoretic Topology, Continuum Theory, Geometric Topology", International Conference on Topology and its Applications at Kyoto (Jointly with 4th Japan Mexico Topology Conference), Kyoto, Japan.

Conference Activities (continued)

- DECEMBER, 2007 *Invited Speaker*, International Topology Conference “Hyperspaces, Set-Valued Maps and Selections”, Matsuyama, Ehime, Japan.
- MAY, 2008 *Invited Speaker*, International Conference “Analysis, Topology and Applications” (ATA2008), Vrnjachka Banja, Serbia.
- JUNE, 2008 *Plenary Speaker with Workshop Lectures*, Workshop course “Hyperspaces, Set-Valued Mappings and Selections”, International Conference “Advances in Set-Theoretic Topology”, Erice, Sicily (Italy).
- JUNE, 2009 *Invited Talk*, One hour research representation in Malta University, Malta.

Principal Publications

- [1] V. Gutev, *Continuous selections and finite-dimensional sets in collectionwise normal spaces*, C. R. Acad. Bulgare Sci. **39** (1986), no. 5, 9–12.
- [2] V. Gutev, *Unified selection and factorization theorems*, C. R. Acad. Bulgare Sci. **40** (1987), no. 5, 13–15.
- [3] V. Gutev, *Set-valued continuous selections*, C. R. Acad. Bulgare Sci. **40** (1987), no. 6, 9–11.
- [4] V. Gutev and V. Valov, *Selection theorems for $AE(n)$ -spaces*, C. R. Acad. Bulgare Sci. **41** (1988), no. 5, 11–12.
- [5] V. Gutev, S. Nedev, J. Pelant and V. Valov, *Cantor set selectors*, Topology Appl. **44** (1992), no. 1-3, 163–166.
- [6] V. Gutev, *Selection theorems under an assumption weaker than lower semi-continuity*, Topology Appl. **50** (1993), no. 2, 129–138.
- [7] V. Gutev, *Open mappings looking like projections*, Set-Valued Analysis **1** (1993), no. 3, 247–260.
- [8] V. Gutev, *Selections for quasi-l.s.c. mappings with uniformly equi- LC^n range*, Set-Valued Analysis **1** (1993), no. 4, 319–328.
- [9] V. Gutev and V. Valov, *Classical-type characterizations of non-metrizable $ANE(n)$ -spaces*, Fund. Math. **145** (1994), 243–259.
- [10] V. Gutev, *Continuous selection, G_δ -subsets of Banach spaces andusco mappings*, Comment. Math. Univ. Carolinae **35** (1994), no. 3, 533–538.
- [11] V. Gutev, *Trivial bundles of spaces of probability measures and countable-dimensionality*, Studia Math. **114** (1995), no. 1, 1–11.
- [12] V. Gutev, *A fixed-point theorem for UV^n usco mappings*, Proc. Amer. Math. Soc. **124** (1996), no. 3, 945–952.
- [13] V. Gutev, *Selections and hyperspace topologies via special metrics*, Topology Appl. **70** (1996), no. 2-3, 147–153.

Principal Publications (continued)

- [14] V. Gutev, *Factorizations of set-valued mappings with separable range*, Comment. Math. Univ. Carolinae **37** (1996), no. 4, 809–814.
- [15] V. Gutev, *Extending of homotopies via selections and extending of selections via homotopies*, Proceedings of the Eighth Prague Topological Symposium (1996), 128–148 (electronic), Topol. Atlas, North Bay, ON, 1997.
- [16] V. Gutev, *Continuous selections for continuous set-valued mappings and finite-dimensional sets*, Set-Valued Analysis **6** (1998), 149–170.
- [17] V. Gutev, *Factorizing dimension-like properties of subsets of topological spaces*, Acta Math. Hungar. **82**(1-2) (1999), 131–142.
- [18] V. Gutev, *A solution to a problem of Teodor Przymusiński*, General and Geometric Topology (editor Kazuhiro Kawamura), RIMS Kyoto, 1999, pp. 47–54.
- [19] V. Gutev, *Weak factorizations of continuous set-valued mappings*, Topology Appl. **102** (2000), no. 1, 33–51.
- [20] V. Gutev, *Generic extensions of finite-valued u.s.c. selections*, Topology Appl. **104** (2000), 101–118.
- [21] V. Gutev and T. Nogura, *Selections for Vietoris-like hyperspace topologies*, Proc. London Math. Soc. **80** (2000), no. 3, 235–256.
- [22] V. Gutev and H. Ohta, *Does C^* -embedding imply C -embedding in the realm of products with a non-discrete metric factor ?*, Fund. Math. **163** (2000), 241–265.
- [23] V. Gutev, *An exponential mapping over set-valued mappings*, Houston J. Math. **26** (2000), no. 4, 721–739.
- [24] V. Gutev and S. Nedev, *Continuous selections and reflexive Banach spaces*, Proc. Amer. Math. Soc. **129** (2001), 1853–1860.
- [25] V. Gutev and T. Nogura, *Vietoris continuous selections and disconnectedness-like properties*, Proc. Amer. Math. Soc. **129** (2001), 2809–2815.
- [26] V. Gutev and T. Nogura, *Selections and order-like relations*, Applied General Topology **2** (2001), no. 2, 205–218.
- [27] V. Gutev and V. Valov, *Continuous selections and C -spaces*, Proc. Amer. Math. Soc. **130** (2002), 233–242.
- [28] V. Gutev, *Fell-continuous selections and topologically well-orderable spaces II*, Proceedings of the Ninth Prague Topological Symposium (2001), 157–163 (electronic), Topol. Atlas, North Bay, ON, 2002.
- [29] C. Costantini and V. Gutev, *Recognizing special metrics by topological properties of the “metric”-proximal hyperspace*, Tsukuba J. Math. **26** (2002), no. 1, 145–169.
- [30] S. García-Ferreira, V. Gutev, T. Nogura, M. Sanchis and A. Tomita, *Extreme selections for hyperspaces of topological spaces*, Topology Appl. **122** (2002), 157–181.
- [31] V. Gutev, *Extending of selections via homotopies*, JP Jour. Geometry & Topology **2** (2002), no. 2, 117–140.

Principal Publications (continued)

- [32] V. Gutev, H. Ohta and K. Yamazaki, *Selections and sandwich-like properties via semi-continuous Banach-valued functions*, J. Math. Soc. Japan **55** (2003), no. 2, 499–521.
- [33] V. Gutev and V. Valov, *Dense families of selections and finite-dimensional spaces*, Set-Valued Analysis **11** (2003), no. 4, 373–391.
- [34] V. Gutev and T. Nogura, *Some problems on selections for hyperspace topologies*, Applied General Topology **5** (2004), no. 1, 71–78.
- [35] V. Gutev and T. Nogura, *Fell continuous selections and topologically well-orderable spaces*, Mathematika **51**(2004), 27–33.
- [36] V. Gutev and T. Nogura, *Selection pointwise-maximal spaces*, Topology Appl. **146/147** (2005), 397–408.
- [37] V. Gutev, *Selections and approximations in finite-dimensional spaces*, Topology Appl. **146/147** (2005), 353–383.
- [38] V. Gutev and T. Nogura, *A topology generated by selections*, Topology Appl. **153** (2005), 900–911.
- [39] V. Gutev, H. Ohta and K. Yamazaki, *Extensions by means of expansions and selections*, Set-Valued Analysis **14** (2006), 69–104.
- [40] V. Gutev, *Approaching points by continuous selections*, J. Math. Soc. Japan **58** (2006), no. 4, 1203–1210.
- [41] V. Gutev, *Preface* [Special issue: Topology and Analysis in Applications], Topology Appl. **153** (2006), no. 17, 3219.
- [42] J. Cao, S. García-Ferreira and V. Gutev, *Baire spaces and Vietoris hyperspaces*, Proc. Amer. Math. Soc. **135** (2007), no. 1, 299–303.
- [43] V. Gutev and T. Nogura, *Selection Problems for Hyperspaces*, in Open Problems in Topology 2 (Elliott Pearl, ed.), Elsevier BV., Amsterdam, 2007, pp. 161–170.
- [44] V. Gutev and A. Tomita, *Selections generating new topologies*, Publ. Mat. **51** (2007), no. 1, 3–15.
- [45] V. Gutev, *Completeness, sections and selections*, Set-Valued Analysis, **15** (2007), 275–295.
- [46] V. Gutev, *Weak orderability of second countable spaces*, Fund. Math. **196** (2007), no. 3, 275–287.
- [47] V. Gutev, *Selections and topological convexity*, Topology Appl. **155** (2008), no. 8, 814–823.
- [48] V. Gutev and T. Nogura, *Selections and totally disconnected spaces*, Topology Appl. **155** (2008), no. 8, 824–829.
- [49] V. Gutev and T. Nogura, *Weak selections and flows in networks*, Comment. Math. Univ. Carolin. **49** (2008), no.3, 509–517.
- [50] J. Cao, S. García-Ferreira and V. Gutev, *Erratum to "Baire spaces and Vietoris hyperspaces"*, Proc. Amer. Math. Soc. **136** (2008) , 3729–3731.

Principal Publications (continued)

- [51] V. Gutev, *Orderability in the presence of local compactness*, J. Math. Soc. Japan **60** (2008), no. 3, 741–766.
- [52] S. García-Ferreira, V. Gutev and T. Nogura, *Extensions of 2-point selections*, New Zealand J. Math. **38** (2008), 1–8.
- [53] S. García-Ferreira and V. Gutev, *Baire Property and web-adjacent spaces*, Houston J. Math. **35** (2009), 857–875.
- [54] V. Gutev, *Ordinals and set-valued zero-selections for hyperspaces*, Topology Appl. **156** (2009), 1172–1176.
- [55] V. Gutev and V. Valov, *Open maps having the Bula property*, Fund. Math. **205** (2009), 91–104.
- [56] V. Gutev and V. Valov, *Sections, selections and Prohorov's theorem*, J. Math. Anal. Appl. **360** (2009), 377–379.
- [57] V. Gutev and T. Nogura, *Set-maximal selections*, Topology Appl. **157** (2010), 53–61.
- [58] V. Gutev, *Selections and hyperspaces of finite sets*, Topology Appl. **157** (2010), 83–89.
- [59] V. Gutev, *Weak selections and weak orderability of function spaces*, Czech. Math. J. **60** (2010), 273–281.
- [60] V. Gutev and T. Nogura, *Weak orderability of topological spaces*, Topology Appl. **157** (2010), 1249–1274.
- [61] V. Gutev and T. Yamauchi, *Strong paracompactness and multiselections*, Topology Appl. **157** (2010), 1430–1438.
- [62] V. Gutev and N. R. L. Makala, *Sections, extensions and collectionwise normality*, J. Math. Anal. Appl. **368** (2010), 573–577.

Other Publications

- [63] V. Gutev, *Continuous selections between set-valued mappings*, International Conference on Topology, 24–29 September, 1990, Varna, Bulgaria, p. 24.
- [64] V. Gutev, *An exponential mapping over set-valued mappings*, General Topology Symposium, 16–18 December, 1997, Shimane University, pp. 82–85.
- [65] V. Gutev, *Selections and hyperspace topologies*, Topology Atlas Invited Contributions, vol. 5, issue 1 (2000), 29–33.

Submitted for Publication

- [S1] D. Buhagiar and V. Gutev, *Selections and countable compactness*, 20 pages (2010).
- [S2] V. Gutev, *Closed graph multiselections*, 19 pages (2010).

In Preparation

- [P1] D. Buhagiar and V. Gutev *Weak selections and cut points*.
- [P2] V. Gutev and T. Yamauchi, *Factorizing usco mappings*.

Unpublished Manuscripts

- [U1] V. Gutev, *Continuity of the modulus of continuity*, 1994, 4 pages: a solution to a problem of D. Repovš and P. Semenov.
- [U2] V. Gutev, *Selections and continuity-like set-valued mappings*, 1996, 101 pages: a survey presented at the 8th Toposym, 1996, Prague, Czech Republic.
- [U3] V. Gutev, *Selections of set-valued mappings and hyperspace topologies*, 1997, 36 pages: a survey containing 59 open questions.