RESUME

NAME: Barov, Stoyu Tzvetkov

AFFILIATION: Institute of Mathematics, Bulgarian Academy of Sciences

DEGREE RECEIVED: Ph.D., The University of Alabama, May 2001

PH.D. ADVISOR: PROF. JAN J. DIJKSTRA

GPA: 4.00

ADDRESS:

EDUCATION

May 2001	Graduated from The University of Alabama, Degree received: Ph.D. The title of the dissertation: "*ON SETS WITH CONVEX SHADOWS*", Ph.D. Advisor: PROF. JAN J. DIJKSTRA
June 1999	Ph.D. student at the University of Alabama, Tuscaloosa after passing the Qualifying Exams in Mathematics
August 1998 – May 2001	GTA and Graduate Student at The University of Alabama, Department of Mathematics, Box 870350, Tuscaloosa, AL 35487
1994-1995	Joined the Post-Graduate Program "High School Teacher of English" at New Bulgarian University, Sofia, Bulgaria. Completed the Post-Graduate Program "High School Teacher of English" by defending a thesis.
1992	I received my Master's degree in Mathematics at Sofia University, Sofia, Bulgaria. The title of the thesis: *" Some properties of gF-topological spaces, spaces of the classes of K and K', and hyperspaces endowed with the Tychonoff topology."* Advisor: Prof. George Dimov

1984-1989	A student at Sofia University, Mathematics major
1982	Graduated from the High School of Mathematics, Pazardjik, Bulgaria

EMPLOYMENT

June 2004 – present	Researcher at the Bulgarian Academy of Sciences – Institute of Mathematics, Sofia, Bulgaria
August 2001 - May 2004	Assistant Professor at Ball State University
August 1998 - May 2001	Graduate Teaching Assistant at The University of Alabama, Tuscaloosa, AL 35487. Courses taught: *Applied Differential Equations, Calculus, Intermediate Algebra*.
September 1993 – 1996	Being an assistant of a professor I taught all levels of Advanced Calculus at Sofia University, Sofia, Bulgaria
March 1992 - June 1998	Mathematician at the Bulgarian Academy of Sciences – Institute of Mathematics, Sofia, Bulgaria
September 1989 - September 1991	Programmer at the Institute of Informatics, Sofia, Bulgaria

TEACHING EXPERIENCE

Year	**University**	**Classes taught**
2001- 2004	Ball State University	Discrete Mathematics, Calculus I, Calculus II, Applied Calculus, Business Calculus, Mathematics and its Applications, Linear Algebra.
1998 - 2001	The University of Alabama	Applied Differential Equations, Calculus, Intermediate Algebra.
September 1993 - 1996	Sofia University, Sofia, Bulgaria	Calculus I, Calculus II.

RESEARCH INTERESTS

Geometric Tomography, General Topology, Convex and Discrete Geometry; Banach Space Theory, Convex Analysis, Infinite-Dimensional Topology, Selection Theory, Topological Vector Spaces
Mathematics Subject Classification Numbers: 57, 52, 54

RESEARCH GRANTS

[1] Grant 040.11.120 given by the Netherlands Organization for Scientific Research (NWO)

[2] One-year Ball State Research Grant

[3] A member of the three-year grant MM-420/94 given by the Bulgarian National Foundation for Scientific Researches at the Bulgarian Ministry of Education.

[4] A member of the three-year grant MM-28/91 given by the Bulgarian National Foundation for Scientific Researches at the Bulgarian Ministry of Education.

MEMBERSHIP

A member of American Mathematical Society (AMS)

FELLOWSHIPS, AWARDS AND RECOGNITIONS

Ball State Research Grant – 2002-2003

Henry Miller Fellowship - Fall 1999, Spring 2000, Fall 2000, Spring 2001

2000-2001 Outstanding Dissertation Award

1999-2000 Outstanding Research by a Doctoral Student Award

Graduate Teaching Assistantship - 1998 – 2001

STUDENTS

Maurits van der Meer (co-advising with Jan J. Dijkstra) – MSc student, Free University – Amsterdam, Master's thesis: “On Cantor sets with shadows of prescribed dimension”

LANGUAGES

Fluent – Bulgarian, English

Very good – Russian, German

RESEARCH PROJECT VISITS

VRIJE UNIVERSITEIT AMSTERDAM – June 2002, July 2003, June 2004, October 2005, Oct.-Nov. 2006, Feb.-March 2008, Sept.-Dec. 2009, May 2013

OTHER ACTIVITIES

Member of the Organizing Committee of the International Conference "Complex Analysis and Applications '13", Sofia, 31 Oct. - 2 Nov. 2013.

PUBLICATIONS

[1] S. Barov, G. Dimov and St. Nedev, *On a theorem of H.-J. Schmidt*, C. R. Acad. Bulgare Sci., 46, No. 3, (1993), 9 - 11.

[2] S. Barov, G. Dimov and St. Nedev, *On a question of M. Paoli and E. Ripoli*, Bollettino U. M. I. (7), 10-A (1996), 127-141.

[3] S. Barov, *A note on spaces which are quotient compact-covering s-images of metric spaces*, C. R. Acad. Bulgare Sci., 52, No. 5-6, (1999), 11-14.

[4] S. Barov, *Some properties of star-countable covers*, C. R. Acad. Bulgare Sci., 52, No. 7-8, (1999), 5-8.

[5] S. Barov and J. J. Dijkstra, *More on compacta with convex projections*, Real Analysis Exchange, 26 (2000/01), 277-284.

[6] S. Barov and J. J. Dijkstra, *On boundary avoiding selections and some extension theorems*, Pacific J. Math., Vol. 203, No. 1, 2002, 79-87.

[7] S. Barov, J. Cobb and J. J. Dijkstra, *On closed sets with convex projections,* Journal of London Math. Society, (2) 65 (2002), 154-166.

[8] S. Barov, *Covers of topological spaces and compact-covering maps,* Topology Proceedings, Vol. 30, No. 1, 2006, 1-10.

[9] S. Barov and Jan J. Dijkstra, *On closed sets with convex projections in Hilbert space,* Fundamenta Mathematicae, Vol. 197, No. 1, 2007, 17-33.

[10] S. Barov and Jan J. Dijkstra, *On closed sets with convex projections under a narrow set of directions*, Transactions of Amer. Math. Soc., Vol. 360, No. 12 (2008), 6525-6543.

[11] S. Barov, *On a characterization of normal and countably paracompact spaces via set-valued selections*, Comment. Math. Univ. Carolin. 49, 1 (2008) 45-52.

[12] S. Barov and Jan J. Dijkstra, *On closed sets with convex projections under somewhere dense sets of directions,* Proc. Amer. Math. Soc., **137** (2009), 2425-2435.

[13] S. Barov and Jan J. Dijkstra, *On closed sets in Hilbert space with convex projections under somewhere dense sets of directions*, Journal of Topology and Analysis, Vol. 2, No. 1 (2010), 123-143.

[14] S. Barov, Jan J. Dijkstra and Maurits van der Meer, *On Cantor sets with shadows of prescribed dimension,* Topology and its Applications, **159** (2012), 2736-2742 .

[15] S. Barov and Jan J. Dijkstra, *On exposed points and extremal points of convex sets in* R^n *and Hilbert space* , Fundamenta Mathematicae, 232 (2016), 117-129.

[16] S. Barov, *Smooth convex bodies in* R^n *with dense union of facets,* Topology Proceedings, **58** (2021), 71-83.

[17] S. Barov, *More on exposed points and extremal points of convex sets in* R^n *and Hilbert space,* Comment. Math. Univ. Carolin., 64, 1 (2023), 63-72.

[18] S. Barov, *Recognition and reconstruction of sets in* l^2 *via their projections,* submitted.

PRESENTED PAPERS

[1] *Some properties of gF-topological spaces* at The Joint Sofia-Nish Seminar, June 1994, Gulechiza, Bulgaria.

[2] *Factorization of set-valued mappings* at The Spring Topology Conference, 18-21 March 1999, Salt Lake City, Utah.

[3] *On compacta with convex projections* at AACTM 50th Annual Meeting at Troy State

University, Troy, Alabama, February 12, 2000.

[4] *More on compacta with convex projections* at The Spring Topology Conference, 16-19 March 2000, San Antonio, Texas.

[5] *Some properties of closed sets with convex projections in* R^n at Applied Mathematics Meeting, December 2, 2000, Huntsville, Alabama.

[6] *On boundary avoiding continuous selections* at the Annual AMS Meeting, 10-13 January 2001, New Orleans, Louisiana.

[7] *On boundary avoiding selections and some extension theorems* at Ben Fitzpatrick Memorial Topology Conference, February 9-10, 2001, Auburn University, Auburn, Alabama.

[8] *Convex projections of closed sets in* R^n at 14th Real Analysis Conference, March 30-31, 2001, University of Louisville, Louisville, Kentucky.

[9] *On closed sets with convex shadows in* R^n at 18th Annual Workshop in Geometric Topology, June 21-23, 2001, Oregon State University, Corvallis, Oregon.

[10] *On closed sets with convex projections in Hilbert space (**30-minute invited talk**)* at the Annual AMS Meeting, January 15-18, 2003, Baltimore, Maryland.

[11] *Zero-dimensional screens and k-imitations in Hilbert space* at The Spring Topology and Dynamical Systems Conference 2003, March 20-22, 2003, Texas Tech University, Lubbock, Texas.

[12] *Projections onto finite-dimensional planes in Hilbert space* at the Spring Topology and Dynamical Systems Conference 2004, March 25-27 2004, University of Alabama at Birmingham, Birmingham, Alabama.

[13] *On closed and convex sets in* l^2 *with empty geometric interiors* at the International Conference "Complex Analysis and Applications '13", Sofia, 31 Oct. - 2 Nov. 2013.

[14] *On closed `minimal`* k*-imimitations of closed convex sets in* R^n at the International Conference "Mathematics Days in Sofia", Sofia, July 7-10, 2014.

[15] *More on closed convex sets in* l^2 *with empty geometric interiors* at International Workshop on Geometry of Riemannian and Hermitian Manifolds, Dec. 7-10, 2015, Sofia, Bulgaria.

[16] *On some theorems related to closed convex sets in* l^2 *with empty geometric interiors* at Mini-conference "Topology and its Applications", June 6-7, 2016, Sofia.

[17] *A relation between exposed points and extremal points of convex sets* at the International

Conference “Mathematics Days in Sofia”, Sofia, July 10-14, 2017.

[18] *Geometric Tomography in l^2: Reconstruction of closed convex sets in l^2 with empty geometric interior* at the Spring Conference, March 16, 2019, Sofia University.