

VASIL S. GOCHEV

Trinity College
Department of Mathematics
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Education:

Wesleyan University
Middletown, Connecticut

Sofia University
Sofia, Bulgaria

Sofia University

Sofia University

Degrees:

Ph.D., Mathematics, May 2007

Thesis: "Compact-open-like topologies on $C(X)$ and applications"

Thesis advisor: Anthony W. Hager

Ph.D. program in Mathematics, June 1988 – May 1991

Work equivalent to A.B.D. in U.S. system

Advisor: Vesko M. Valov

Research topics: Q - manifolds, continuous selections of set – valued mappings, topological games.

M.S., Mathematics, September 1987

Thesis: "Topological characterization of trivial fibration with fibers N^r and R^r "

Thesis advisor: Vesko M. Valov

B.S., Mathematics and Computer Science, June 1985

Teaching Positions:

Visiting Assistant Professor of Mathematics: July 2008 – Present

Department of Mathematics
Trinity College
Hartford, Connecticut (<http://www.trincoll.edu/>)
(Teaching Load – 2 courses per semester)

Visiting Assistant Professor of Mathematics: August 2007 – May 2008

**Department of Mathematical Sciences
Central Connecticut State University
New Britain, Connecticut (<http://www.ccsu.edu/>)
(Teaching Load – 12 hours per week)**

Courses Taught: MATH 115 – Trigonometry, MATH 119 – Pre-calculus with Trigonometry, Math152 – Calculus I, MATH 222 – Multivariable Calculus, MATH 125 – Applied Calculus.

Teaching Assistant: September 2003 – May 2007

**Department of Mathematics and Computer Science
Wesleyan University
Middletown, Connecticut (<http://www.wesleyan.edu>)**

Courses Assisted with: Math226 – Complex Analysis, Math122 – Calculus I – part II, Math221 - Vectors and Matrices, Math229 – Differential Equations, Math222 – Multivariable Calculus.

Instructor: January 2005 – May 2005

**Department of Mathematics and Computer Science
Wesleyan University
Middletown, Connecticut (<http://www.wesleyan.edu>)
(Teaching Load – 4 hours per week)**

Courses Taught: MATH 118 – Introduction to Calculus – part II.

Assistant Professor of Mathematics: November 2001 – August 2003

**Department of Complex Analysis and Topology
Sofia University “St. Kliment Ohridski”
Sofia, Bulgaria (<http://www.uni-sofia.bg/>)
(Teaching Load – 12 hours per week)**

Courses Taught: Real Analysis I, Real Analysis II, and Complex Analysis for students majoring in Physics and Applied Mathematics.

Assistant Professor of Mathematics:

September 1991 – October 2001

Department of Mathematics

Southwestern University

Blagoevgrad, Bulgaria (<http://www.swu.bg/>)

(Teaching Load – 12 hours per week)

Courses Taught: Real Analysis I, Real Analysis II, Linear Algebra, Abstract Algebra, and Complex Analysis for students majoring in Mathematics, Computer Science, Physics, and Chemistry.

Adjunct Assistant Professor of Mathematics

August 1988 – August 1994

Department of Complex Analysis and Topology

Sofia University “St. Kliment Ohridski”

Sofia, Bulgaria (<http://www.uni-sofia.bg/>)

(Teaching Load – 12 hours per week)

Courses Taught: Real Analysis I and Real Analysis II for students majoring in Mathematics, Computer Science, Physics, and Chemistry.

Research Interests:

General, Categorical, and Geometric Topology

Partially ordered sets of closure operators and convergences, topological groups, Archimedean lattice ordered groups, extensions of topological spaces, separations axioms, cardinal invariants, Q -manifolds, selections of set-valued mappings, topological games, and metrizability of proximity spaces.

Graph Theory

Hamiltonian graphs, graph coloring, embedding of graphs on surfaces.

Papers submitted:

- 1) *Topological group criterion for $C(X)$ in compact-open-like topologies- I.*
Joint work with R. Ball, A. Hager, S. Todorcevic, and S. Zoble (submitted).
- 2) *Monomorphisms in $LSpFi$ via compact-open-like topologies on $C(X)$* (submitted).

Papers in preparation:

- 1) *Filter-defined closure operators on $C(X)$* (manuscript).
- 2) *Partially ordered sets of topological group convergences* (manuscript).

- 3) *Topological group criterion for $C(X)$ in compact-open-like topologies- II*. Joint work with: R. Ball, A. Hager, S. Todorcevic, and S. Zoble (work in progress).
- 4) *On the hamiltonicity of the hypercube with some deleted vertices*. Joint work with N. Castaneda, I. Gotchev, and F. Latour (work in progress).
- 5) *On Craft's conjecture*. Joint work with I. Gotchev (work in progress).

Research Grants:

Topological and more general structures. Cardinal invariants. Generalized metrizable spaces. Applications in mathematical logic and theoretical physics.
 Project #MM427 / 1994 sponsored by the National Science Fund, Ministry of Science and Education, Republic of Bulgaria.

Research – Related Activities and Talks:

- 1) *Topological group criterion for $C(X)$ in compact-open-like topologies*, Faculty Research Conference Connecticut State University System, March, 2008.
- 2) *Compact-open-like topologies on $C(X)$ and applications*, Mathematics Colloquium at CCSU, November 2007.
- 3) *Monomorphisms in $LSpFi$ via compact-open-like topologies on $C(X)$*
 - Graduate student's seminar, Wesleyan University, March 2007.
 - Topology et al. Seminar, Wesleyan University, March 2007.
- 4) *Filter-defined closure operators and convergences on $C(X)$*
 - Graduate students' seminar, Wesleyan University, May 2006.
 - Topology et al. Seminar, Wesleyan University, May 2006.
- 5) *Filter-defined closure operators on $C(X)$*
 - Graduate students' seminar, Wesleyan University, May 2005.
 - Topology et al. Seminar, Wesleyan University, May 2005.
- 6) Initiator and organizer of the Seminar in Functional Analysis at Southwestern University (1994 – 2001).
- 7) Presentations on Q -manifolds, selections of set-valued mappings, topological games, and metrizability of proximity spaces at the Topology Seminar organized in the Institute of Mathematics at the Bulgarian Academy of Sciences (1986 - 2003).

Conference Presentations:

- 1) *Topological group criterion for $C(X)$ in compact-open-like topologies*, Faculty Research Conference Connecticut State University System, March, 2008.
- 2) *Filter-defined closure operators on $C(X)$* , 3rd Annual Workshop on General and Geometric Topology, Nipissing University, Canada, May 2005.
- 3) *Filter-defined closure operators on $C(X)$* , 20th Summer Conference on Topology and its Applications, Denison University, Granville, Ohio, July 2005.

Conferences Attended:

- 1) Faculty Research Conference Connecticut State University System, March, 2008.
- 2) Graph Theory Day Fifty Four, Department of Mathematics and Computer Science, Manhattan College, October 27, 2007.
- 3) Joint Mathematics Meetings, New Orleans, January 5 – 8, 2007.
- 4) 3rd Annual Workshop on General and Geometric Topology, Nipissing University, Canada, May 2005.
- 5) 20th Summer Conference on Topology and its Applications, Denison University, Granville, Ohio, July, 2005.
- 6) Discrete Math Days in the Northeast, Department of Mathematics and Computer Science, Wesleyan University, February 26, 2005.
- 7) International Conference on Topology, Varna, Bulgaria, September 24 – 29, 1990.

Awards, Fellowships, and Distinctions:

- 1) Proposed by the students for the Excellence in teaching award at CCSU, 2008.
- 2) Member of the extended Bulgarian high school team (16 members) for the International Mathematical Olympiad, Sofia, Bulgaria, 1980.
- 3) Third prize, Bulgarian National Mathematics High School Competition, Kazanlak, Bulgaria, 1980.
- 4) First prize, Regional Mathematics Competition, Sliven, Bulgaria, 1979.
- 5) Third prize, Bulgarian National Mathematics High School Competition “A. Radev“, Yambol, Bulgaria, 1978.
- 6) Third prize, Regional Mathematics Competition, Bourgas, Bulgaria, 1978.

Professional Memberships and Activities:

- 1) Member of the American Mathematical Society.
- 2) Member of the Mathematical Association of America.
- 3) Member of the Union of Bulgarian Mathematicians.
- 4) Department scientific secretary, Department of Complex Analysis and Topology, Sofia University, 2001 – 2003.
- 5) Member of the Curriculum Committee, Southwestern University, 1991 – 2001.
- 6) Student Advisor, Southwestern University, 1991 – 2001.

Additional Information:

- 1) Computer languages: C++, PASCAL, FORTRAN, BASIC, PL/I.
- 2) Languages: Fluent in Bulgarian and Russian. French with dictionary.

References¹:

- A.W. Hager**, Ph.D., Professor of Mathematics, Topology
Department of Mathematics
Wesleyan University
Middletown, CT 06459
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- W. W. Comfort**, Ph.D., Professor of Mathematics, Topology
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- M. Hovey**, Ph.D., Associate Professor of Mathematics, Algebraic Topology
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- V. Valov**, Ph.D., Professor of Mathematics, Topology
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- T. Craine**, Ph.D., Professor of Mathematics, Chair
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- N. Castaneda**, Ph.D., Professor of Mathematics

¹ Please, feel free to contact directly as many of the referees on this list as you deem necessary.

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