
FLORIN DUMITRESCU

Department of Mathematics
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Education

Ph.D. in Mathematics, University of Notre Dame, June 2006
Dissertation: Superconnections and Parallel Transport
Advisor: Prof. St. Stolz.

M.S. in Mathematics, University of Notre Dame, December 2001
Advisor: Prof. St. Stolz, Coadvisor: Prof. W. Dwyer.

B.S. in Mathematics, Universitatea de Vest, Timisoara, Romania, July 1997
Undergraduate thesis: Fibre Bundles. Classification Theorems.
Advisor: Prof. Dan I. Papuc

Positions Held

Postdoctoral Scholar, August 2006-May 2008, Pennsylvania State University

Graduate/ Teaching Assistant, 2000-2006, University of Notre Dame

Areas of Interest

Topology and Geometry; Elliptic Cohomology, K-theory, Index Theory, Supersymmetry, Non-commutative Geometry, Math. Quantum Field Theory

Publications

Superconnections and parallel transport, to appear in *Pacific Journal of Mathematics*

Connections and parallel transport: an equivalence statement (with St. Stolz), in preparation

Invited Talks

“Supermanifolds and Superconnections, I, II, III”, GFA Seminar, Pennsylvania State University (October 2006)

“Superconnections and super parallel transport”, AMS Sectional Meeting, University of Notre Dame (April 2006)

“Superconnections and super parallel transport”, Wayne State University (April 2006)

“Quillen superconnections and super parallel transport”, University of Notre Dame (October 2005)

“Super-facets of geometry”, Graduate Student Seminar, ND, Indiana (February 2005)

“Morse theory and Floer homology”, Graduate Student Seminar, ND, Indiana (April 2004)

“What is a geometric string structure?”, Workshop on Elliptic Cohomology and Geometry, MIT-Talbot House, Vermont (March 2004)

“The sigma model of a torus”, University of Notre Dame (November 2003)

“Obstructions to having a positive scalar curvature metric”, First Graduate Student Topology Conference, University of Notre Dame (April 2003)

“The spectral sequence for tmf localised at 3”, University of Notre Dame (April 2003)

“Geometry of formal groups”, University of Notre Dame (March 2003)

“Properties of the Witten genus”, Universitatea de Vest, Timisoara, Romania, (January 2003)

“The Adams Spectral Sequence”, University of Notre Dame (November 2002)

“Introduction to Formal Group Laws”, University of Notre Dame (October 2002)

“Special Lagrangian Cones”, University of Notre Dame (April 2002)

Conferences Attended

Elliptic Cohomology and the Geometry of Loop Spaces, Conference in Honor of J.Morava’s 60-th Birthday, The Fields Institute, Toronto, CA-ON, September 2004

Conference on String Geometry, AMS-IMS-SIAM Conference, Snowbird, Utah, June 2004

Great Lakes Geometry Conference at University of Notre Dame, Notre Dame, Indiana, April 2004

**Conferences Attended
(Cont)**

Midwest Topology Seminar MWTOPSEM at Northwestern University, Evanston, Illinois, February 2004

MWTOPSEM at University of Illinois at Urbana-Champaign, Urbana, Illinois, April 2003

NCGOA Spring Conference, Vanderbilt University, Nashville, Tennessee, April 2003

First Graduate Student Topology Conference, University of Notre Dame, Notre Dame, Indiana, April 2003

MWTOPSEM at Purdue University Calumet, Hammond, Indiana, February 2003

MWTOPSEM at Western Michigan University, Kalamazoo, Michigan, November 2002

Minimal Varieties in Geometry and Physics, Conference in honor of Blaine Lawson's 60th birthday, SUSB, Stony Brook, New York, June 2002

Geometry and Topology in Dimensions 3 and 4, Ohio State University, Columbus, Ohio, March 2002

Great Lakes Geometry Conference at Northwestern University, Evanston, Illinois, April 2001

Workshops and Schools

Interactions between Homotopy Theory and Algebra, University of Chicago, Chicago, Illinois, July-August 2004

Elliptic Cohomology and Geometry, MIT-Talbot House, Vermont, VM, March 2004

NCGOA Spring School on Noncommutative Geometry and Operator Algebra, Vanderbilt University, Nashville, Tennessee, April 2003

Spring School in Symbolic Dynamics at Universiteit Utrecht, Netherlands, April-May 2000

Summer School at Scuola Matematica Interuniversitaria Perugia, Perugia, Italy, August 1999

Visiting student in the Erasmus-Socrates program at Dortmund University, Germany, February-July 1999

Professional Membership

American Mathematical Society

**Teaching Experience
at PennState**

Instructor, Spring 2008, Calculus III for science majors

Instructor, Spring and Fall 2007, Calculus II for engineer and science majors

Instructor, Fall 2006, Calculus I for engineer and science majors

**Teaching Experience
at University
of Notre Dame**

Teaching Assistant, Fall 2004, Calculus I pre-medical school and natural science students

Instructor, Spring 2004, Calculus II for pre-medical school and natural science students

Teaching Assistant, Fall 2003, Calculus II for engineering and physical sciences students

Teaching Assistant, Spring 2003, Calculus III for engineering and physical sciences students

Instructor, Fall 2002, Calculus II for engineering and physical sciences students

Instructor, Summer 2002, Calculus II for engineering and physical sciences students

Teaching Assistant, Spring 2002, Calculus II for engineering and physical sciences students

Teaching Assistant, Fall 2001, Calculus I for pre-medical school and natural science students

Languages

Fluent in English and Romanian (first language), can read some German, French and Italian.

References

The following persons have agreed to write letters of recommendation on my behalf:

Stephan Stolz, Rev. John A. Zahm Professor of Mathematics
University of Notre Dame, IN, ph. (574) 631-5451, email: stolz.1@nd.edu

Nigel Higson, Evan Pugh Professor of Mathematics
PennState University, PA, ph. (814) 863-9069, email: higson@math.psu.edu

Liviu Nicolaescu, Associate Professor
University of Notre Dame, IN, ph. (574) 631-3370, email: nicolaescu.1@nd.edu