CHRISTINA SORMANI
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EDUCATION:

1996	**Courant Institute of Mathematical Sciences, Ph.D., May 1996.** Thesis: *Noncompact Manifolds with Lower Ricci Curvature Bounds and Minimal Volume Growth* Adviser: Professor Jeff Cheeger
1991	**College of Arts and Science, NYU** B.A., *magna cum laude* Majors: Mathematics and English, Minor: Physics

EXPERIENCE:

2010-present	**Lehman College, City University of New York, Full Professor**
2003-present	**Graduate Center, City University of New York, Doctoral Faculty**
2005-2009	**Lehman College, City University of New York, Associate Professor**
1999-2005	**Lehman College, City University of New York, Assistant Professor**
1997-1999	**Johns Hopkins University, Assistant Professor**
1996-1997	**Harvard University, Lecturer**

AWARDS:

2010-2013	**NSF Research Grant: DMS-1006059** *Convergence of Riemannian Manifolds*
2008-2010	**NSF MTTI Grant: MSP 0832247** *Mathematics Teacher Transformation Institute* PI with coPIs M. Wolfe, S. Gningue, S. Libfield, and S. Menendez
2001-2006	**NSF Research Grant: DMS-0102279** *The Topology of Open Manifolds with Nonnegative Ricci Curvature*
1999-2010	**PSC CUNY Research Grants**
1999-2000	**National Science Foundation AWM Travel Grant**
1997-1998	**National Science Foundation ICM98 Travel Grant**
1991 - 1996	**National Science Foundation Fellowship**

SERVICE/OUTREACH:

2008-present   **Mathematics Teacher Transformation Institute**
developed masters level geometry courses for MTTI

2006-present   **College Now Mathematics Advisor**

2004-2010   **Educational Policy Committee Elected Member**

2001-2009   **CUNY Differential Geometry Seminar Coorganizer**

2003-present   **AMS Riemannian Geometry Media Contact**

2002-2005   **Lehman College Calculus Committee Chair**

2003- 2005   **Presentations and Notes on Perelman's Work for the Public**

1999-2000   **Lehman College Math and Computer Science Club**

CONFERENCES ORGANIZED:

June 2009   **CUNY Differential Geometry Workshop Coorganizer**
coorganized with M. Munn,

August 2008   **CUNY Isoperimetric Inequality Workshop Coorganizer**
coorganized with M. Lucia,

February 2006   **CUNY Geometric Analysis 2006: The Laplace and Length Spectra**
coorganized with J. Dodziuk and Y. Petridis,

March 2006   **Joint CUNY/Courant NYC Rigidity Theory Workshop Coorganizer**
coorganized with Stefan Wenger,

April 2005   **Differential Geometry Workshop Organizer**

March 2005   **CUNY Geometric Analysis 2005 Coorganizer**
coorganized with J. Dodziuk and R. Sibner,

February 2004   **Geometric Analysis and its Applications Coorganizer**
coorganized Feldman's Retirement Conference with J. Dodziuk and I. Chavel,

March 2004   **2004 AMS Spring Eastern Sectional Meeting**
coorganized a **Special Session** with X. Rong and G. Wei,

January 2004   **Association of Women in Mathematics Joint Meeting Panel**
"Supporting the Diverse Personal Lives of Mathematicians"

March 2002   **2002 Spring Eastern Sectional Meeting of the AMS**
coorganizing a **Special Session** with R. Rotman and K. Tapp,

March 2001   **2001 Spring Eastern Sectional Meeting of the AMS**
coorganized a **Special Session** with Megan Kerr of Wellesley

November 2000   **2000 Fall Eastern Sectional Meeting of the AMS**
coorganized a **Special Session** with Xiaochun Rong of Rutgers

SELECTED INVITED TALKS:

2009   **Twenty-fourth Annual Geometry Festival, Plenary Address**
"The intrinsic flat distance between Riemannian manifolds"

2009   **University of Pennsylvania, Geometry-Topology Seminar**
"The intrinsic flat distance between oriented Riemannian manifolds"

2009   **Johns Hopkins University, Analysis Seminar**
"Intrinsic flat convergence of oriented Riemannian manifolds"

2009   **Rutgers University, Differential Geometry Seminar**
"The intrinsic flat distance between oriented Riemannian manifolds"

2009   **Workshop on Riemannian and Non-Riemannian Geometry, IUPUI**
"The intrinsic flat distance between oriented Riemannian manifolds"

2009   **Harvard University, Differential Geometry Seminar**
"Intrinsic Flat Convergence of Riemannian Manifolds"

2009   **NYU Polytechnic Colloquium**
"Perelman's proof of the Poincare Conjecture"

2009   **Dartmouth University Colloquium and Seminar**
"Distances between Riemannian manifolds and metric spaces"

2009   **Columbia University, Analysis Seminar**
"The intrinsic flat distance between oriented Riemannian manifolds"

2009   **AMS Meeting, short talk**
"A new distance between Riemannian manifolds"

2008   **UNAM Workshop Global Riemannian Geometry, May 2008**
"Open Questions on Open Manifolds with $Ricci \geq 0$"
plenary talk in Mexico

2008   **Seminaire Borel: New Approaches to Curvature August 24-29, 2008**
"Gromov Hausdorff Convergence and the Covering Spectrum"
Four hour course for doctoral students in Switzerland

2008   **Southeast Geometry Conference, Plenary Talk, March 14-6, 2008**
"Understanding the Topology of Manifolds with Nonnneg Ricci Curvature"

2008   **University of Arizona, Colloquium, January 24, 2008**
"An Almost Isotropic Universe"

2007   **Brown University, Extreme Geometry Seminar, March 1, 2007**
"Covering Spectra of Riemannian Manifolds and Length Spaces"

2007   **University of Connecticut, Geometry Seminar, March 13, 2007**
"The Rescaled and Cut-off Covering Spectra"

2007	**Texas Geometry and Topology Conference, March 23-5, 2007** "Various Covering Spectra Spectra and Shift Spectra "
2007	**Urbana-Champagne, Differential Geometry Seminar, April 12, 2007** "Almost Isotropy and Exponential Length Spaces"
2007	**Bloomington Geometry Workshop, Plenary Address, April 2007** "The Cut-off Covering Spectrum and Gromov-Hausdorff Convergence"
2006	**Midwest Geometry Conference, Plenary Address** "The Topology of Rioemannian Manifolds with Nonnegative Ricci Curvature"
2006	**Princeton University, Geometric Analysis Seminar,** "The Spacelike Stability of the Isotropic Friedmann Model"
2006	**Semi-Annual Workshop in Dynamical Systems and Related Topics** Geometry session talk on the topology of manifolds with $Ricci \geq 0$
2006	**Cornell University, Analysis Seminar,** "Ricci Curvature and the Topology of Open Manifolds"
2005	**Harvard University, Differential Geometry Seminar,** "The Covering Spectrum and Convergence of Manifolds"
2005	**Rutgers University, Topology/Geometry Seminar,** "Subsets of the Length Spectrum and Convergence"
2005	**Penn State Univ, Geometry and Topology Seminar,** "Gromov-Hausdorff Stability of Schur's Lemma"
2004	**Dartmouth College, Colloquium,** "Inhomogeneity and the Curvature of the Spacelike Cosmos"
2004	**U. Penn Analysis Seminar,** "The Covering Spectrum"
2004	**Rutgers University at Newark, Colloquium** "The Gromov-Hausdorff Stability of the Friedman Model"
2004	**Dartmouth College, Differential Geometry Seminar,** "The Length and Covering Spectra"
2004	**Spectral Geometry Workshop, CRM , Montreal** "The Covering Spectrum, the Length Spectrum and Convergence"
2003	**Lehigh University, Conference on Geometry and Topology** "The Stability of Isotropy and the Friedmann Model "
2003	**University of Maryland, College Park, Geometry-Topology Seminar** "Exponential Length Spaces "
2003	**U Penn, Differential Geometry and Analysis Seminar** "Almost Isotropy, Schur's Lemma and Cosmology"

2003	**Spring Eastern Sectional Meeting of the AMS**
	Nonlinear Partial Differential Equations in Differential Geometry
	"Almost Rigidity and Stability"

2003   **Spring Eastern Sectional Meeting of the AMS**
            Nonlinear Partial Differential Equations in Differential Geometry
            "Almost Rigidity and Stability"

2003   **Joint Mathematics Meetings, Baltimore, January**
            Recent Advances in Riemannian and Lorentzian Geometry,
            "The Stability of the Friedmann Model"

2002   **Fall Eastern Sectional Meeting of the AMS**
            Developments and Applications in Differential Geometry
            "The Gromov-Hausdorff Stability of the Spacelike Friedmann Model"

2002   **Stanford University and AIM, General Relativity Workshop**
            "Using Gromov-Hausdorff Convergence to understand the Spacelike Cosmos"

2002   **Columbia University, Geometry and Analysis Seminar**
            "Limits of covers of balls with Ricci curvature bounded below"

2002   **Brown University, Geometry Seminar**
            "Gromov-Hausdorff Limits of Manifolds with Lower Ricci Curvature Bounds"

2002   **Johns Hopkins University, Analysis Seminar**
            "Universal Covers Exists on Limits of Manifolds with Lower Ricci Curvature
            Bounds "

2001   **State University of New York, Stony Brook, Colloquium**
            "Hausdorff Convergence and Universal Covers"

2001   **Lehigh University, Conference on Geometry and Topology**
            "Limits and Covers of Compact Spaces with Ricci Curvature Bounds"

PUBLISHED RESEARCH PAPERS:

"Weak Convergence of Currents and Cancellation"
written with Stefan Wenger
Appendix by Raanan Schul and Stefan Wenger,
Calculus of Variations and P.D.E, Vol 38, No 1-2, May 2010

"The Cut-off Covering Spectrum"
written with Guofang Wei
Transactions of the American Mathematical Society 362 (2010), 2339-2391.

"Conjugate Points in Length Spaces"
written with Krishnan Shankar
Advances in Mathematics, 220 (2009), 791-830.

"Convergence and the Length Spectrum".
Advances in Mathematics, Vol 213, Issue 1, 1 August 2007, pp 405-439.

"The Covering Spectrum of a Compact Length Space".
written with Guofang Wei,
Journal of Differential Geometry 67 (2004) 35-77.

"Friedmann Cosmology and Almost Isotropy".
Geometric and Functional Analysis, Vol. 14 (2004) 853-912.

"Universal Covers for Hausdorff Limits of Noncompact Spaces".
written with Guofang Wei, 34 pages
Transactions of the AMS 356 (2004), no. 3 pp. 1233-1270

"Hausdorff Convergence and Universal Covers".
written with Guofang Wei
Transactions of the American Mathematical Society 353 (2001), 3585-3602.

"The Codimension One Homology of a Complete Manifold with Nonnegative Ricci Curvature"
written with Zhongmin Shen
American Journal of Mathematics 123 (2001) , 515-524.

"On Loops Representing Elements of the Fundamental Group of a Complete Manifold with Nonnegative Ricci Curvature"
Indiana Univ. Math. Journal 50 (2001), no. 4, 1867–1883.

"Nonnegative Ricci Curvature, Small Linear Diameter Growth and Finite Generation of Fundamental Groups".
Journal of Differential Geometry 54 (2000) 547-559.

"Harmonic Functions on Manifolds with Nonnegative Ricci Curvature and Linear Volume Growth".
Pacific Journal of Mathematics, Vol 192, No 1, (2000) 183-189.

"The Almost Rigidity of Manifolds with Lower Bounds on Ricci Curvature and Minimal Volume Growth".
Communications in Analysis and Geometry Vol 8 No. 1 (2000) 159-212.

"Busemann Functions on Manifolds with Lower Bounds on Ricci Curvature and Minimal Volume Growth".
The Journal of Differential Geometry, Vol 48, (1998) 557-585.

SURVEY ARTICLES:

"The Topology of Open Manifolds of Nonnegative Ricci Curvature".
written with Zhongmin Shen, Midwest Geometry Conference 2006,
Communications in Mathematical Analysis, Conf. 01. (2008) pp 11-19.

PREPRINTS:

"Intrinsic Flat Distance between Riemannian manifolds and Integral Current Spaces".
written with Stefan Wenger.
http://comet.lehman.cuny.edu/sormani/intrinsicflat.html
to appear in *Journal of Differential Geometry*