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PERSONAL: Born in Buenos Aires, Argentina. Permanent resident in the United States since 1987

EDUCATION

- 1987-1996 Ph.D. in Sociology, Graduate Center of the City University of New York. Thesis: “Math fictions: Elementary mathematics education and the modern pedagogical paradigm.” Specialization fields: classical and contemporary social theory; sociology and philosophy of education; sociology of knowledge and culture; mathematics education; and mathematics teacher education
- 1980-1986 Licenciatura (Masters) in Educational Sciences, University of Buenos Aires, Argentina. General foundations of education, including philosophy, history and sociology of education in Latin America and in Argentina; special education; curriculum theory and design; and research methods. Preparation for teaching at the middle school, high school, and college levels
- 1978-1980 Studies in Mathematics and Physics, University of Buenos Aires. Completed five mathematics courses for the Licenciatura in Exact Sciences (up to Calculus II)

I. TEACHING CAREER OUTSIDE OF BROOKLYN COLLEGE

<u>Institution</u>	<u>Dates</u>	<u>Rank</u>	<u>Department</u>
City College, CUNY	9/00-8/02	Assistant	Education
Banks Street College Program	2/02-5/02	Adjunct	BETLA
Course taught: Curriculum development for mathematics leaders			
City College, CUNY.	9/99-8/00	Co-Director in de project “Mathematics in the City” (*)	
(*) Mathematics in the City: An in-service, NSF-funded teacher enhancement project directed by Catherine Fosnot (CCNY) in collaboration with M. Dolk and W. Uitenbogaard (Freudenthal Institute, Utrecht)			
City College, CUNY.	7/97-8/99	Project Associate in “Mathematics in the City”	
City College, CUNY	Summers 96 through 99.	Instructor in the project “Mathematics in the City”	

Summer Institutes

Pratt Institute. 2/95-5/95. Adjunct Lecturer Arts Education
Course taught: Foundations in the Philosophy of Education

Lehman College, CUNY. 9/93-5/94. Adjunct Lecturer. Sociology
Courses taught: Introduction to Sociology, Education and Social Inequality

II. ACADEMIC DATA IN THE BROOKLYN COLLEGE

A. TEACHING EXPERIENCE

9/02-Present Assistant Professor, School of Education, Middle Childhood
Mathematics

1) Courses:

- Ed 712.23 and Ed 713.23 (Advanced Methodology and Practice in Middle Childhood Mathematics Education)
- Ed 701.23 and Ed 702.23 (Seminar in Applied Theory and Research in Mathematics Education: I and II)
- Ed 742x (Perspectives on Education: Teaching Children and Adolescents in Cultural Contexts)
- Ed 765.1 (Issues in Teaching Middle School)
- Student teacher supervision: Ed 764.5T

2) MA Thesis Supervision:

Supervised in total more than 100 Master's thesis of graduate students in the Middle Childhood Mathematics Education

B. OTHER EXPERIENCE/EXPERIENCE OUTSIDE BROOKLYN COLLEGE

Non-Teaching Experiences

Feb. 1999-Present Co-director, with Ana Bressan, of the Grupo Patagónico de Didáctica de la Matemática (GPDM), a developmental research/study group of elementary and middle school teachers in San Carlos de Bariloche, Río Negro Province, Argentina

Spring 09 Consultant/Professional Developer for middle school mathematics teachers at Landmark High School, New York City

Fall 2008 Co-designed, together with Prof. Dor Abrahamson, an experimental course for pre-service mathematics teachers and doctoral students entitled: "Studying paradigmatic didactical-mathematical situations," which Abrahamson taught at the Berkeley Graduate School of Education (University of California).

Sept. 05-Present	Consultant/Professional Developer for elementary mathematics teachers at PS 340 (Bronx, NYC)
Sept. 04 – June 06	Consultant/Professional Developer for secondary mathematics teachers at the Manhattan Bridges High School
Aug. 01-May 02	Consultant/Professional Developer for middle school mathematics teachers in Community School District 15 (Brooklyn): classroom visits, co-teaching, unit training (<i>Mathematics in Context curriculum series</i>), and development of middle school math education staff developers/teacher leaders for the District
July 99-May 01	Consultant/Professional Developer for the <i>Mathematics in Context</i> Consulting Group, a network of mathematics educators seeking to support and promote mathematics reform through the implementation of <i>Mathematics in Context</i>
Sept. 98-May 99	Consultant/Professional Developer for middle school mathematics teachers (District 15, Brooklyn); facilitated biweekly a study group of teachers and staff developers aimed at increasing teachers' content knowledge in the context of standard-based reform initiatives and help them implement the <i>Mathematics in Context</i> curriculum series
Nov. 97-July 98	Consultant/Evaluator of the Real World Mathematics Initiative Teacher-Led Study Group Project, a professional development program for middle school teachers, jointly organized by New Visions for Public Schools and the NYC Board of Education
Aug. 97- June 98	Consultant, Mathematics Initiative, Community School District Two (Manhattan): in-service professional development for middle school mathematics teachers in the Jacob Riis Upper School of PS 126 in Lower Manhattan
Sept. 95-June 97	Consultant, New York State System Initiative, Urban Network Project for Mathematics, Science, and Technology, Rensselaer Polytechnic Institute: In-service professional development for elementary school mathematics teachers

III. SCHOLARLY ACTIVITY

A. PUBLICATIONS

- 2007 Rubel, L. & Zolkower, B. "Arranging blocks, climbing stairs and beyond: Learning about the significance of mathematical representations," (R) *Mathematics Teacher* 101(5), 340-4.
- 2007 Zolkower, B. and Shreyar, S. "A teacher's mediation of a thinking aloud discussion in a 6th grade mathematics classroom," (R) *Educational Studies in Mathematics* 65: 177-202.

- 2006 Zolkower, B. and Bressan, A., “La corriente realista de didáctica de la matemática: Experiencias de un grupo de docentes y capacitadores,” (R) *Yupana: Revista de Matemática de la Universidad del Litoral* n3. 06 (Argentina), pp.11-33.
- 2004 Bressan, A., Zolkower, B., and Gallego, F. “Los principios de la educación matemática realista.” In *Reflexiones Teóricas para la Educación Matemática*. Edited by Alagia, H., Bressan, A., and Sadovsky, P., Editorial Libros del Zorzal, Buenos Aires, Argentina, pp. 69-98.
- 2003 Martínez Pérez, M. L., Da Valle. N., Bressan, A., and Zolkower, B. “La relevancia de los contextos en la resolución de situaciones-problema: Una experiencia para docentes y sus capacitadores,” (R) *Paradigma* (Venezuela), pp. 59-94.

Works Accepted for Publication

de Freitas, E. & Zolkower, B. “Using social semiotics to prepare mathematics teachers to teach for social justice.” (R) To be published in a Special Issue on Social Justice of the *Journal for Mathematics Teacher Education* (Volume 12).

Work in Progress

Shreyar, S., Zolkower, B., and Perez, S. “Thinking aloud together: A 6th grade teacher’s mediation of a whole-class conversation about percents,” manuscript under review for *Educational Studies in Mathematics*.

Zolkower, B. Shreyar, S. and Perez, S. “Shifting con/texts and the guided reinvention of mathematizing: A case study in a 6th grade classroom.”

Zolkower, B. and Abrahamson, D. “Paradigmatic didactical-mathematical problematic situations as a vehicle for teacher preparation.”

What do you make of these problems? A Sourcebook of Non-Routine Mathematics Problems for Middle School Students and their Teachers, in collaboration with Willem Uittenbogaard (Freudenthal Institute).

Previous Publications

- 2006 Pérez, S., Bressan, A., and Zolkower, B. “Las imágenes y las preguntas en la escuela.” *Novedades Educativas* 182 (February), pp. 22-26.
- 2002 Zolkower, B. and Shreyar, S. “Shortest pathways: Interaction and semiotic apprenticeship in a 6th grade classroom.” *Proceedings of the 20th PANAMA Conference*, Freudenthal Institute (The Netherlands), pp. 141-162
- 2001 Pérez, S., Bressan, A., and Zolkower, B. “¿Seño, es cierto eso?” *Novedades Educativas* 13(130). Buenos Aires (Argentina), pp. 22-4.
- 2001 Rabino, A., Bressan, A., and Zolkower, B. “El aprendizaje de los números racionales.” *Novedades Educativas*, Volume 13(129), pp. 16-20.

- 1999 Zolkower, B. "Contextos y modelos en la didáctica realista de la matemática." *Novedades Educativas* 11(108), pp. 44-7.
- 1998 Zolkower, B. "Bridging the gap between school mathematics and common sense: A realistic turn." *The Constructivist* (Summer), pp. 5-14
- 1995 Zolkower, B. "Math fictions: What really solves the problem? In *Technoscience and Cyberculture*. Edited by Stanley Aronowitz et al., New York and London: Routledge, pp. 57-96.

B. OTHER EVIDENCE OF SCHOLARLY OR CREATIVE ACTIVITY

1. Invited Presentations:

- Feb 2009 "Shifting con/texts and the guided reinvention of mathematizing: A case study in a 6th grade classroom," EMST/SESAME Colloquium, Graduate School of Education, University of California at Berkeley.
- Feb 2009 Invited lecture at Ed 195C SEM 001: "Knowing and Learning Math and Science," a course co-taught by Professors Alan Schoenfeld, Dor Abrahamson, and Angela Little in the Cal-Teach Program, Graduate School of Education, University of California
- Nov 2008 "Aportes a la Enseñanza de la Matemática desde la línea de la Educación Matemática Realista," Congreso Internacional de la Enseñanza de las Ciencias y la Matemática, Córdoba, Argentina.
- August 2008 Inaugural address at the Third Winter Institute in Didactics of Mathematics, Universidad de la República, Salto (Uruguay), with Ana Bressan. In addition, Zolkower presented "Tablas, barras y líneas: Tres herramientas para trabajar con porcentajes que nos propone la corriente realista: Un racconto acerca de la apropiación de estas herramientas por alumnos de una clase de sexto grado."
- July 2007 "Pensando juntos en voz alta: El papel de una docente de matemática en el manejo de una situación de interacción de toda la clase," Winter Institute of Specialized Didactics at the University of San Martin, Buenos Aires (Argentina)
http://www.unsam.edu.ar/escuelas/humanidades/escuela_invierno/programa.htm
- Aug 2005 "La problemática de la (re)contextualización en la enseñanza-aprendizaje de la matemática," co-presented with Fernanda Gallego at the Congreso Provincial "Contextos y Prácticas Aulicas." Mendoza, Argentina
- Aug 2004 Mathematics Institute for Leadership in Education (MILE), a five-day seminar for secondary school mathematics teachers, Metro-Math Center for Teaching and Learning, co-taught with Laurie Rubel.
- Aug 2003 "Using M.A.K. Halliday's functional grammar for analyzing transcripts of mathematics lessons with an eye to describing modalities of teacher

orchestration of whole-class conversations.” A three-day seminar for the GPDM, co-facilitated with Sam Shreyar

May 2003 Planned, coordinated, and featured a documentary for the NYS Department of Education Tools for Schools Program (“Access to Quality Teaching”), broadcasted on Channel 13 (May 14, 2003)

2. Abstracts and Papers Contributed at Professional Meetings:

- April 2009 “Studying paradigmatic didactical-mathematical situations: Design and implementation of an experimental graduate level course for pre-service mathematics teachers and doctoral students,” with Dor Abrahamson, paper, American Educational Research Association, San Diego, CA
- April 2009 “A social semiotics model for mathematics lesson study groups,” with Elizabeth de Freitas, roundtable, AERA, San Diego, CA
- April 2009 “Mathematics education research for urban schools: Examples and directions,” a symposium with Laurie Rubel and other colleagues from Brooklyn College, to be held at the NCTM Research Pre-Session, Washington DC, April 20-22
- April 2009 “Disrupting the diagram: Semiotic tools for teachers,” with Elizabeth de Freitas, NCTM Research Pre-Session, Washington, DC, April 20-22
- May 2008 “Focusing on mathematical non-routine problems: A modified Lesson Study group in New York City,” presented at the Seventh Annual Lesson Study Conference, Chicago, IL, May 8-10
- April 2008 “Beginning middle school teachers and non-routine mathematics problems: A modified Lesson Study model,” co-presented with Hanna Haydar at the New England Education Research Organization (NEERO), Cape Cod, MA, April 10-11
- March 2008 “Thinking aloud together: The role of a mathematics teacher in mediating a whole-class discussion about percents,” co-presented with Sam Shreyar at the American Education Research Association, New York City, March 24-28
- January 2008 “Beginning teachers and non routine problems: Modified lesson study group in an urban context,” co-presented with Hanna Haydar at the 12th Annual Conference of the Association for Mathematics Teacher Educators, Tulsa, OK, January 24-26
- Sept 2006 “Enseñando a matematizar, aprendiendo a didactizar: Ideas y experiencias en torno a la capacitación de docentes de matemática,” co-presented with Ana Bressan. Conference of the REM-UMA, Bahía Blanca, Argentina

- Dec 2004 “A social-semiotic approach to interaction in heterogeneous mathematics classrooms,” co-presented with Sam Shreyar at the Emergent Scholarship in Urban Education Conference, CUNY Graduate Center, New York City
- August 2004 “La educación matemática realista. Principios en que se sustenta,” Winter Institute of Didactics of Mathematics (Buenos Aires, Argentina), with Ana Bressan and Fernanda Gallego
- Feb 2004 “Una mirada a la didáctica realista de la matemática a través de experiencias de aula de docentes y capacitadores.” Co-presenters: Ana Bressan and Fernanda Gallego. Presented at the Conference: Mente y Cultura. Centro Regional Universitario Bariloche, Universidad Nacional del Comahue
- July 2002 “La relevancia de los contextos en la resolución de problemas de matemática.” Co-presented, with GPDM teachers, at the 4th Meeting of the Association of Mathematics Education of the Southern Cone (SOAREM), Buenos Aires, Argentina
- Nov 2001 “Shortest pathways: The centrality of writing for the collective production of a mathematics text in a 6th grade classroom,” with Sam Shreyar. Presentation at the 20th PANAMA Conference: Interaction in Mathematics Classrooms, Noordwijkerhout, Netherlands

3. Other Creative Work and Scholarly Activity:

- 2009 Technical revision of the translation to Spanish of *Children Learn Mathematics* (2001), edited by Marja van den Heuvel-Panhuizen (Freudenthal Institute, The Netherlands)
- 2006 Collaborated with Fernanda Gallego et al. in translating to Spanish of Dekker, T. and Querelle, N. (2002): *Great Assessment Problems*. Utrecht. Freudenthal Institute
- May 2003 Presented photographs at the 7th Annual Brooklyn College Faculty Day, together with Prof. David Fuys

IV. GRANTS

A. GRANTS FUNDED:

- Sept 2008- June 2011 Examining Teacher Discourse and Whole-Class Interaction: A Social Semiotics Model for Mathematics Lesson Study Groups (Co-PI: Elizabeth de Freitas). Awarded by the National Science Foundation, Discovery Research K-12 (\$439,746)
- Summer 2008 Non-Routine Mathematics Problems and Beginning Middle School Teachers: An Exploratory Inquiry on a Lesson Study Group, in collaboration with Hanna Haydar. Funds provided by the Responsive Research Network MSP (Hunter College) (\$15,000)

Summer 2008	Teacher Induction Project: Summer Pilot II, in collaboration with Hanna Haydar. Funds provided by the City University of New York for engaging 12 beginning mathematics teachers in a one-month lesson study group (\$16,600)
Summer 2007	Teacher Induction Project: Summer Pilot I, in collaboration with Haydar. Funds provided by CUNY for engaging 12 beginning mathematics teachers in a one-month lesson study group (\$13,500)
2001-2002	Bridging the Gap between School Mathematics and Common Sense: The Realistic Approach. PSC-CUNY Research Award Program
2000-2001	Teachers as Researchers, Teachers as Writers: A Developmental Research Group in Realistic Mathematics Education (PI: Catherine Fosnot, Co-PI/Director: Betina Zolkower), awarded by NSF as supplemental funds to Mathematics in the City (\$74,000)

B. GRANT PROPOSALS SUBMITTED:

2009	<i>A mathematics lesson study group and an after-school math club</i> , submitted to the Motorola Foundation (with Haydar) (\$74,964).
2008	<i>Community Research in the Environment for Students and Teachers (CREST)</i> , submitted to NSF (MSP Targeted Award), PI: Allan Ludman, Queens College, CUNY (\$10,992,951). Not funded. To be revised and re-submitted
2005	<i>Title IIB Math and Science Partnership Grant</i> , proposal for a professional development initiative, a collaboration between Brooklyn College and Districts 15-8, Brooklyn, to the NYS Department of Education (\$325,000). Not awarded.
2003	<i>From the bottom up and the inside out: A developmental research group on realistic mathematics education in the Argentinean Patagonia</i> , PI: Betina Zolkower, submitted to the Spencer Foundation. Not awarded. Revised and then submitted successfully to the NSF.
2002	<i>Brooklyn Bridge to Mathematics Teaching</i> , submitted to the National Science Foundation, PI: Prof. Rosamond Welchman. Not awarded but received highly positive feedback.

V. PROFESSIONAL AWARDS

FELLOWSHIPS:

Fall 2007	Tow Travel Fellowship
Spring 2005	CUNY Faculty Fellowship Publications Program
1993-1994	Spencer Foundation Dissertation Fellowship for Research Related to Education

Signature

REFERENCES

Christine Keitel, Professor, Freie Universitat of Berlin, Germany

Willem Uittenbogaard, Freudenthal Instiute, Utrecht, The Netherlands

Laurie Rubel, Assistant Professor, Brooklyn College, CUNY, New York

Elizabeth de Freitas, Associate Professor, Adelphi University, New York

Dor Abrahamson, Assistant Professor, University of California at Berkeley

Ana Maria Bressan, Co-director, GPDM, San Carlos de Bariloche, Argentina

Yeuk-Sze Leong, Mathematics Teacher, MAT - PS 126, New York City