

GRACIELA M. CEREZO MENEGAY
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Citizenship: USA, Argentina

EDUCATION

Ph.D., Applied Mathematics, Virginia Tech, December, 1996.

Dissertation: Solution Representation and Identification for Singular Neutral Functional Differential Equations.

M.S., Applied Mathematics, Virginia Tech, May, 1994.

Thesis: Numerical Approximation and Identification for Singular Differential Equations.

B.S./M.S., Applied Mathematics, University of Buenos Aires, Argentina, March, 1990.

Thesis: Optimization of Hydroelectric Resources by Nonlinear Optimization Techniques.

WORK EXPERIENCE

Teaching:

Instructor, Department of Mathematics, Virginia Tech, Blacksburg VA. 2017-present.

- Teaching Calculus (Math 1225 and Math 1226), Intermediate Calculus (Math 2024) courses.
- Teaching Calculus (Math 1226), Introduction to Differential Equations (Math 2214) and Intermediate Calculus (Math 2024) courses.

Adjunct Faculty, Department of Mathematics, New River Community College, Dublin VA. 2009 - 2016.

- Teaching Applied Calculus (Math 163), Statistics (Math 157) and General Mathematics (Math 151) courses.

Adjunct Faculty, Department of Mathematics, Radford University, Radford, VA, 2010- 2011.

- Taught Mathematics Education Courses for students that will teach elementary and middle school curricula.

Adjunct Professor, Department of Mathematics, Jamestown Community College, Olean NY, 2002 - 2003.

- Taught Elementary Statistics.

Instructor and Assessment Coordinator, Department of Mathematics, Virginia Tech, 1999-2000.

- Taught an ODE class to sophomore students.
- Led statistical assessment tasks for the Math Emporium, a center for web-based instruction in mathematics.

Graduate Teaching Assistant, Department of Mathematics, Virginia Tech, 1992-1996.

- Advised undergraduate students, graded homework and tests, 1992-1993.
- Taught linear algebra, calculus, and trigonometry courses for undergraduate students, 1993-1996.

Teaching Assistant, University of Buenos Aires, Department of Pharmacology and Biochemistry, 1987-1990.

- Taught calculus, linear algebra, statistics, and biostatistics courses at graduate and undergraduate level.

Computer Lab Instructor, Mary Graham School, Buenos Aires, Argentina, 1985-1987.

- Organized and taught an introductory computer course to high school students.

Research:

Visiting Scholar, Biology Department, University of Buenos Aires, 1997-1998.

- Developed a mathematical model to study the population dynamics of the clam *Mesodesma Mactroides*, a species which inhabits the coasts of Argentina and Uruguay.

Graduate Assistant, Department of Mathematics, Virginia Tech, 1992-1996.

- Studied the solution representation problem for a class of neutral functional differential equations with weakly singular kernels.
- Applied the theoretical results mentioned above to a particular aerodynamic problem. Solved the parameter identification problem for the aerodynamic model.

Research Associate, National Commission of Atomic Energy, Buenos Aires, Argentina, 1990-1992.

- As part of a team, developed a nonlinear numerical code to control alignment of a robot arm for reactor maintenance. Wrote a computer program to validate control models for aircraft wing flutter using parameter identification.

PUBLICATIONS

T.L. Herdman, J. Turi, G. M. Cerezo, Y. Cao. "Singularity Expansion for a Class of Neutral Equations", *Journal of Integral Equations and Applications*, 2008.

G. M. Cerezo. "A Parameter Identification Problem Arising from a Two-Dimensional Airfoil Model," Proceedings of the First International Conference on Nonlinear Problems in Aviation and Aerospace, Daytona Beach, Florida, May 1996.

G. M. Cerezo, E. Fernandez, T.L. Herdman, J. Turi. "Parameter Identification Techniques for Singular Neutral Equations," Proceedings of the Fourth Pan-American Congress of Applied Mechanics, Universidad del Salvador, Buenos Aires, Argentina, January 3-6, 1995.

G. M. Cerezo, E. Fernandez, T.L. Herdman, J. Turi. "Collocation Techniques for Singular Equations," Proceedings of the 33rd IEEE Conference on Decision and Control (CDC), Orlando, Florida, December 14-16, 1994.

G. M. Cerezo, E. Fernandez. "Parameter Identification and Approximation for a Neutral Equation with Non-Atomic D Operator," Proceedings of the 4th Conf. on Information and Control (RPIC '91), Buenos Aires, Argentina, November 1991.

C. D'Attellis, G. Cerezo, et al. "Nonlinear Control via Dynamic Feedback for a Robot Arm," Proceedings of the 4th Conf. on Information and Control (RPIC'91), Buenos Aires, Argentina, November 1991. (In Spanish)

C. D'Attellis, G. Cerezo, et al. "Nonlinear Control for a Two-Link Robot Arm," Proceedings of the International Symposium of Artificial Intelligence and Robotics, Universidad Nacional de Lujan, Buenos Aires, Argentina, November 1990. (In Spanish)

RESEARCH LECTURES

"Population Dynamics of the Yellow Clam *Mesodesma Mactroides*: The Parameter Estimation Problem", Fourth Latin American Meeting on Mathematical Ecology, Valparaiso, Chile, August, 1998. (In Spanish, with G. Canziani)

"Modeling the Distributional Dynamics of a Clam Population along the Coasts of Argentina", AWM Workshop-SIAM, Toronto, Canada, July, 1998.

"A Parameter Identification Problem Arising from a Two-Dimensional Airfoil Model", Nonlinear Problems in Aviation and Aerospace, Daytona Beach, Florida, May, 1996.

"Numerical Approximation for the Solution Semigroup of a Singular Neutral Equation in the State Space C ", Volterra Centennial, Tempe, Arizona, May, 1996.

"Parameter Identification Techniques for Singular Neutral Equations", Pan-American Congress of Applied Mechanics, Buenos Aires, Argentina, January, 1995.

"Collocation Techniques for Singular Equations", 33rd IEEE Conf. on Decision and Control (CDC), Orlando, Florida, December, 1994.

"Parameter Identification and Approximation for a Neutral Equation with Non-Atomic D Operator" 4th Conf. on Information and Control, Buenos Aires, Argentina, November, 1991. (In Spanish)

SPECIAL TRAINING/HONORS AND AWARDS

- Attended "Active Learning Strategies" workshop, sponsored by the Center for Excellence in Undergraduate Teaching, Virginia Tech, November, 1999.
- Attended "Evaluating Web-Based Courses" workshop, sponsored by the Flashlight Program (TLT Group), Oct., 1999.
- Postdoctoral Fellowship, Scientific and Technical Research Council of Argentina (CONICET), 1998.
- Funded Participant in the Association for Women in Mathematics (AWM) Workshop, Math Biology Modeling Mini-symposium, held with the Society for Industrial and Applied Mathematics (SIAM) annual meeting, Toronto, 1998.

- Professor Ling Award, Dept. of Mathematics, Virginia Tech, 1996.
- Attended Industrial Mathematics Workshop on Environmental Modeling, Claremont, CA, 1993. Developed and wrote a numerical model to improve earthquake prediction methods.
- Recipient of “Thanks a Teacher” Award, Spring 2018. Received a letter from a Math 1226 student.