

Catherine Bénéteau

Education

1993-1999	University at Albany (SUNY)	Ph.D.	Mathematics
1991-1993	McGill University		

- Associate Professor** at the University of South Florida, 2010 – 2017.
- Assistant Professor** at the University of South Florida, 2006 – 2010.
- Associate Professor** at Seton Hall University, 2005 – 2006.
- Assistant Professor** at Seton Hall University, 1999-2005.
- Instructor** at the Center for Talented Youth in Lancaster, PA (Summer 1999).
- Instructor/Graduate Assistant** at the University at Albany (1993-1999).
- Instructor/Graduate Assistant** at McGill University (1991-1993).

Publications

Mathematics Research Articles

1. *A Natural Extension of a Nonsingular Endomorphism of a Measure Space*, C. Bénéteau, Rocky Mountain Journal of Mathematics, **26** (1996), 1261-1273.
2. *Jensen Type Inequalities and Radial Null Sets*, C. Bénéteau and B. Korenblum, Analysis, **21** (2001), 99-105.
3. *Some Coefficient Estimates for H^p Functions*, C. Bénéteau and B. Korenblum, Complex Analysis -19. 5. Extremal problems for analytic functions in Bergman spaces, D. Aharonov, C. Bénéteau, D. Khavinson, and H. S. Shapiro, *Operator Theory: Advances and Applications*, **158** (2005),59-86.
6. *The Isoperimetric Inequality via Approximation Theory and Free Boundary Problems*, C. Bénéteau and D. Khavinson, Computational Methods and Function Theory **6** (2006), No. 2, 253-274.
7. *A survey of certain extremal problems for non-vanishing analytic functions*, C. Bénéteau and D. Khavinson, Complex and Harmonic Analysis, DES Tech Publications (2007), 45-61.
8. *Extremal Problems in the Fock Space*, C. Bénéteau, B. Carswell, and S. Kouchekian,

Computational Methods and Function Theory, *Comput. Methods Funct. Theory* **10** (2010), no. 1, 189-206.

9. *A Survey of Linear Extremal Problems in Analytic Function Spaces*, C. Bénéteau and D. Khavinson, *Complex Analysis and Potential Theory*, CRM Proc. Lecture Notes **55** (2012), 33-46.

10. *Selected Problems in Classical Function Theory*, C. Bénéteau and D. Khavinson, Centre de Recherches Mathématiques, CRM Proceedings and Lecture Notes, *Contemp. Math.* **638** (2015), 255-265.

11. *Cyclicity in Dirichlet-type Spaces and Extremal Polynomials*, C. Bénéteau, A. Condori, C. Liaw, D. Seco, and A. Sola, *J. Anal. Math.* **126** (2015), 259-286.

12. *Cyclicity in Dirichlet-type Spaces and Extremal Polynomials II: Functions on the Bidisk*, C. Bénéteau, A. Condori, C. Liaw, D. Seco, and A. Sola, *Pacific J. Math.* **276** (2015), no. 1, 35-58.

13. *Cyclic Polynomials in two variables*, C. Bénéteau, G. Knese, L. Ko inski, C. Liaw, D. Seco, and A. Sola, *Trans. Amer. Math. Soc.*, **368** (2016), 8737-8754.

14. *Orthogonal Polynomials, Reproducing Kernels, and Zeros of Optimal Approximants*, C. Bénéteau, D. Khavinson, C. Liaw, D. Seco, A. Sola, *J. London Math. Soc.*, **94** (2016), no. 3, 726-746.

15. *Remarks on Inner Functions and Optimal Approximants*, C. Bénéteau, M. Fleeman, D. Khavinson, D. Seco, A. Sola, to appear in *Canad. Mat. Bull.*

16. *A free boundary problem associated with the isoperimetric inequality*, A. Abanov, C. Bénéteau, D. Khavinson, R. Teodorescu, to appear in *J. Anal. Math.*

17. *Zeros of optimal polynomial approximants: Jacobi matrices and Jentzsch-type theorems*, C. Bénéteau, D. Khavinson, C. Liaw, D. Seco, B. Simanek, to appear in *Rev. Mat. Iberoamericana*.

Education Research Articles

18. *Statistics, Technology, and the Social Sciences: a Successful Interdisciplinary Project*, with June Rohrbach, *Focus Magazine*, **24**, no.1 (2004), 9-10.

19. *Discrete Wavelet Transformations and Undergraduate Education*, C. Bénéteau and P.J. Van Fleet, *Notices of the American Mathematical Society*, **58** (2011), no. 5, 656-666.

20. *Voices of Mathematicians and Mathematics Teacher Educators Collaborating on Courses for Prospective Secondary Teachers*, D. Thompson, C. Bénéteau, G. Kersaint, S. Bleiler, *National Council of Teachers of Mathematics 2012 Yearbook*, (2012), 229-241.

21. *Promoting Mathematical Reasoning through Critiquing Student Work*, C. Bénéteau, S. Bleiler, D. Thompson,

16. **Association for Women in Mathematics and National Science Foundation Travel Grant,**
\$1200, for travel expenses to participate in the “Tag der Funktionen4.1 (e)3.26ce F5A.4 6c 0 T1.5()Tj /TT1 1 Tc 0

- ™ Served on a career advice panel for graduate students and postdocs at Washington University in St Louis, May 2005.
- ™ *Extremal problems for non-vanishing functions in Bergman space*, Southeastern Analysis Meeting, April 2005.
- ™ *Extremal problems in Hardy and Bergman spaces*, University of Arkansas, March 2005.
- ™ *Anything still to be discovered about power series? The Bohr phenomenon!* Bucknell University, September 2004.
- ™ *The Bohr Phenomenon and Extremal Problems in Hardy Spaces*, Complex Function Theory Days, Bar-Ilan University, Israel, June 2004.
- ™ *Extremal Problems in Hardy and Bergman Spaces*, First Joint International Meeting of the AMS, RSME, Seville, Spain, June 2003. *Ex phenomenon!*

- programming (via Mathematica) as a problem solving tool.
 - ✚ Created, with a team of teachers from Hillsborough County and university faculty from the University of South Florida, a professional development course on “number sense” for elementary school teachers (through Project A.C.E.).
 - ✚ At the University at Albany, designed course Maple laboratory manual to incorporate the use of Maple in the classroom.
 - ✚ Created a statistics course at Seton Hall University for social science majors, integrating a daily use of SPSS software in the classroom. This course is now the primary statistics
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16. *Student Paper Session*, Undergraduate Research Conference, Rutgers University, March 27, 2004.

Referee for the journals: *Complex Analysis and Operator Theory*, *Complex Variables and Elliptic*

Professional Memberships

I am a member of CITRUS (Center for the Improvement of Teaching & Research in Undergraduate STEM Education) at the University of South Florida, the American Mathematical Society, the Association for Women in Mathematics, the Mathematical Association of America, the National Council of Teachers of Mathematics, and PKAL (Project Kaleidoscope). I have been a Project NExT (New Experiences in Teaching) fellow since 1999.