

## Curriculum Vita

**William T. Ross** - Professor of Mathematics - University of Richmond

### Contact

- Department of Mathematics and Computer Science, University of Richmond, Virginia, 23173
- [wross@richmond.edu](mailto:wross@richmond.edu)
- [http://mathcs.richmond.edu/faculty/Ross\\_William.html](http://mathcs.richmond.edu/faculty/Ross_William.html)

### Personal

- Born: June 29, 1964 in New York City
- Raised in New York City and Yonkers, NY
- Attended Yonkers public and parochial schools
- Attended Stepinac High School, White Plains, NY

### Education

- Ph.D. (Mathematics) University of Virginia, 1991
- M.S. (Mathematics) University of Virginia, 1988
- B.S. (Mathematics) Fordham University, 1986

### Professional Positions

- 2005 – present: Professor of Mathematics, University of Richmond
- 1998 - 2005: Associate Professor of Mathematics, University of Richmond
- 1992 - 1998: Assistant Professor of Mathematics, University of Richmond
- 1991 - 1992: Visiting Assistant Professor of Mathematics, Lafayette College

### Teaching Experience

- Courses taught: calculus (all levels), linear algebra, differential equations, real analysis, complex analysis, abstract algebra, statistics
- Independent Study Courses: harmonic analysis; advanced topics courses in complex analysis, real analysis, abstract algebra, linear algebra, and operator theory
- Special seminars and colloquia organized
  - Cool Math Seminar – weekly undergraduate mathematics seminar, Spring 2004, Fall 2005
  - Harmonic analysis seminar – weekly seminar on modern harmonic function theory, Fall 1996, Fall 2002
  - Problems for the Millennium colloquium series – a course organized around the Clay Mathematics Institute Millennium Problems, Spring 2001

- Teaching awards
  - 2005 - Nominated for SCHEV Teaching Award
  - 2004 - Nominated for the Outstanding Mentor Award
  - 2001 - Nominated for the SCHEV Teaching Award
  - 1998 - Distinguished Educator Award
  - 1993 - Nominated by the University of Richmond to Project Kaleidoscope, a national organization that promotes excellence in teaching science
  - 1991 - Award for excellence in teaching mathematics (University of Virginia)
  
- Honor Thesis Students
  - Tim Ferguson (2006) - *Boundary values of Laplace transforms*
  - Radek Stefanski (2004) - *Factorization of polynomials in several variables*
  - Ron Walker (1998) - *Two problems in harmonic function theory*
  - Andrew Pitts (1998) - *The Dirichlet problem and its physical applications*
  - Michael Nimchek (1996) - *Banach spaces of analytic functions*
  - Konstantin Kulev (1996) - *Ideals of the Lipschitz classes*

## Publications

- Books
  1. (with J. A. Cima and A. Matheson) *The Cauchy transform*, Surveys and Monographs, Vol. 125, American Mathematical Society, 2006.
  2. (with H. S. Shapiro) *Generalized analytic continuation*, University Lecture Series, Vol. 25, American Mathematical Society, 2002.
  3. (with J. A. Cima) *The backward shift on the Hardy space*, Surveys and Monographs, Vol. 79, American Mathematical Society, 2000.
  
- Research papers
  1. (with. J. Cima and W. Wogen), 'Truncated Toeplitz operators on finite dimensional spaces', to appear, *Operators and Matrices*.
  2. (with W. Wogen), 'Common cyclic vectors for unitary operators', to appear, *Journal of Operator Theory*.
  3. 'Indestructible Blaschke products', *Contemporary Mathematics*, **454** (2008), 119-133.
  4. (with A. Matheson), 'An observation about Frostman shifts', *Computational Methods and Function Theory*, **7** (2007), 111 - 126.
  5. 'The classical Dirichlet space', *Contemporary Mathematics*, **393** (2006), 171 - 197.
  6. 'The backward shift on  $H_p$ ', *Operator Theory, Advances and Applications*, **158** (2005), 191 - 211.
  7. (with J. A. Cima and A. Matheson), 'The Cauchy transform', *Operator Theory: Advances and Applications*, **156** (2005), 79 - 111.

8. (with S. Richter and C. Sundberg) 'Zeros of functions with finite Dirichlet integral', *Proceedings of the American Mathematical Society*, **132** (2004), 2361 - 2365.
9. (with W. R. Wogen), 'Common cyclic vectors for normal operators', *Indiana University Mathematics Journal*, **53** (2004), 1537 - 1550.
10. (with J. A. Cima and A. Matheson) 'The backward shift on the space of Cauchy transforms', *Proceedings of the American Mathematical Society*, **132** (2004), 745 - 754.
11. (with H. S. Shapiro) 'Prolongations and cyclic vectors', *Computational Methods and Function Theory*, **3** (2003), 453 - 483.
12. (with A. Aleman and S. Richter) 'Pseudo-continuations and the backward shift', *Indiana University Mathematics Journal*, **47** (1998), 223 - 276.
13. (with A. Aleman) 'The backward shift on weighted Bergman spaces', *Michigan Mathematics Journal*, **43** (1996), 291 - 319.
14. (with A. Aleman and S. Richter) 'Bergman spaces on disconnected domains', *Canadian Journal of Mathematics*, **48** (1996), 225 - 243.
15. 'Invariant subspaces of the harmonic Dirichlet space with large codimension', *Proceedings of the American Mathematical Society*, **124** (1996), 1841 - 1846.
16. 'Invariant subspaces of Bergman spaces on slit domains', *Bulletin of the London Mathematical Society*, **26** (1994), 472 - 482.
17. 'Analytic Besov spaces and invariant subspaces of Bergman spaces', *Indiana University Mathematics Journal*, **43** (1994), 1297 - 1319.
18. 'An invariant subspace problem for  $p = 1$  Bergman spaces on slit domains', *Integral Equations and Operator Theory*, **20** (1994), 243 - 248.
19. (with S. Richter and C. Sundberg) 'Hyperinvariant subspaces of the harmonic Dirichlet space', *Journal für die reine und angewandte Mathematik*, **448** (1994), 1 - 26.
20. (with J. A. Ball) 'Weak-star limits of polynomials and their derivatives', *Contributions to Operator Theory and its Applications*, (I. Gohberg et al eds.), *Operator Theory: Advances and Applications*, Vol. 62, Birkhauser-Verlag, Basel, 1993, 165 - 176.
21. 'The commutant of a certain compression', *Proceedings of the American Mathematical Society*, **118** (1993), 831 - 837.
22. 'Analytic continuation in Bergman spaces and the compression of certain Toeplitz operators', *Indiana University Mathematics Journal*, **40** (1991), 1363 - 1386.

- Unpublished

- (with A. Aleman and S. Richter) 'Cyclic vectors for crescent domains', University of Richmond Technical Report #97-02.
- Advanced Topics in Calculus (Lecture Notes for a 4<sup>th</sup> semester Calculus course)

Sponsored Research

- National Science Foundation (Modern Analysis Program): *Virginia Operator Theory and Complex Analysis Meeting* (2004 - 2007)

- National Science Foundation (Modern Analysis Program): Research grants, 1993 - 1996, 1996 - 1998, 1998 - 2001, 2001 - 2003.

### International Presentations

Peoples Friendship University, Moscow, Russia; Lund University, Sweden; Aristotle University, Thessaloniki, Greece; El Escorial, Spain; Mathematisches Forschungsinstitut Oberwolfach, Germany; Trinity College, Dublin, Ireland; Centre International de Rencontres Mathématiques, Marseille, France; Polish Academy of Sciences, Krakow, Poland; University of Southern Denmark, Odense, Denmark; Norwegian University of Science and Technology, Norway; FernUniversität in Hagen, Germany.

### US Presentations

Pomona College, University of New Hampshire; Fordham University; Washington and Lee; University of Virginia; University of Alabama; SUNY Albany; Furman University; UC-Santa Barbara; University of South Alabama; University of North Carolina; Washington University, St. Louis; Virginia Tech; University of Tennessee; University of Florida; East Carolina University; Bucknell University; Memphis State University; Georgia Tech; Mount Holyoke College; Kansas State University; College of William and Mary; George Mason University.

### Conferences and Sessions Organized

- *Southeastern Analysis Meeting*: University of Richmond, March 2007.
- Special session (with R. Mortini - Metz, France, and E. Albrecht - des Saarlandes, Germany) in *Function spaces and their operators*, at a joint meeting of the American, German, and Austrian mathematical societies, Mainz, Germany, June 2005.
- Special Session (with Nathan Feldman - Washington and Lee University) in *Linear operators on function spaces*, at an American Mathematical Society meeting at the University of North Carolina, Chapel Hill, October 2003.
- *VOTCAM* (Virginia Operator Theory and Complex Analysis Meeting): A regularly running (since 1992) conference held at various Virginia universities for mathematicians and graduate students interested in operator theory/complex analysis. Supported by NSF (2001 - 2007) .
- *Southeastern Analysis Meeting*: University of Richmond, March 1996.
- Special Session (with Paul Bourdon - Washington and Lee University) in *Operators on Banach spaces of analytic functions*, at an American Mathematical Society meeting at the University of Richmond, November 1994.

### Professional Service

- Member of the American Mathematical Society
- Reviewer for Mathematical Reviews
- Referee for *Mathematische Annalen*, *Journal of Operator Theory*, *Journal of Mathematical Analysis and Applications*, *Integral Equations and Operator Theory*, *Proceedings of the American Mathematical Society*, *Journal of Functional Analysis*,

Questiones Mathematicae, Rocky Mountain Journal of Mathematics, Computational Methods and Function Theory, Houston Journal of Mathematics, Asian Journal of Mathematics. Australian Journal of Mathematics, Czechoslovak Mathematics Journal.

- Reviewer and panel member for the National Science Foundation

### **University Service**

- Mathematics Coordinator
- Hiring Committee
- Nominating Committee
- Undergraduate Student Symposium
- University Faculty Council
- Faculty Senate of Virginia
- University Scholars
- Colloquium chair
- Calculus text review committee
- UR's Goldwater Scholarship representative
- Phi-Beta-Kappa selection committee
- Distinguished Educator Award selection committee
- First-year and major advising