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JOB HISTORY AND EDUCATION:

- Texas A&M University: **Associate Professor**, 2009–present, **Assistant Professor**, 2005–2009.
- University of California, Riverside: **Assistant Professor**, 2002–2005.
- University of California, Berkeley: **NSF postdoctoral fellow**, 2000–2002.
- Mathematical Sciences Research Institute: **Postdoctoral fellow**, Spring 2001.
- University of California, Berkeley: **Ph.D. in Mathematics**, May 2000, under the supervision of Dan-Virgil Voiculescu; **M.A. in Statistics**, May 1997.
- California Institute of Technology: B.S. with honors (Mathematics), June 1994.

GRANTS AND FELLOWSHIPS:

- NSF **grant DMS-0900935** (PI), 2009–2012.
- NSF grant DMS-0855328 and IMA Participating Institutions conference grant (co-PI with Ken Dykema, David Kerr, and Roger Smith) for the Seventh ECOAS, 2009.
- NSF **grant DMS-0400860** (PI), 2004–2008.
- NSF postdoctoral fellowship, 2000–2004.
- Fannie and John Hertz Foundation Fellowship, 1994–1999.

RESEARCH INTERESTS:

- Functional analysis, operator algebras, free probability theory.
- Probability theory, stochastic processes.
- Combinatorics, orthogonal polynomials, umbral calculus.

PUBLICATIONS:

1. Free evolution on algebras with two states II, arXiv:1204.0289 [math.OA].
2. A characterization of ultraspherical polynomials, arXiv:1108.0914 [math.CA].
3. Convolution powers in the operator-valued framework (with Serban T. Belinschi, Maxime Fevrier, and Alexandru Nica), accepted for publication by the Transactions of the A.M.S. arXiv:1107.2894 [math.OA].
4. Quantum free Yang-Mills on the plane (with Ambar N. Sengupta), *Journal of Geometry and Physics* **62** (2012) 330-343.
5. Generators of some non-commutative stochastic processes, arXiv:1104.1381 [math.OA].

6. Semigroups of distributions with linear Jacobi parameters (with Wojciech Młotkowski), accepted for publication by the Journal of Theoretical Probability. arXiv:1001.1540 [math.CO].

7. Two-state free Brownian motions,
Journal of Functional Analysis **260** (2011) 541–565.

8. Bochner-Pearson-type characterization of the free Meixner class,
Advances in Applied Mathematics **46** (2011) 25–45 (special issue in honor of Dennis Stanton).

9. Free infinite divisibility for q-Gaussians (with Serban Teodor Belinschi, Marek Bożejko, and Franz Lehner), *Mathematical Research Letters* **17** (2010) 905–916.

10. Product-type non-commutative polynomial states,
Noncommutative Harmonic Analysis with Applications to Probability II, Banach Center Publications, vol. 89, Polish Acad. Sci. Inst. Math., Warsaw, 2010, pp. 45–59.

11. Free evolution on algebras with two states,
Journal für die reine und angewandte Mathematik **638** (2010) 75–101.

12. Appell polynomials and their relatives III. Conditionally free theory,
Illinois Journal of Mathematics **53** (2009) 39–66.

13. Appell polynomials and their relatives II. Boolean theory,
Indiana University Mathematics Journal **58** (2009) 929–968.

14. Monic non-commutative orthogonal polynomials,
Proceedings of the American Mathematical Society **136** (2008) 2395–2405.

15. Orthogonal polynomials with a resolvent-type generating function,
Transactions of the American Mathematical Society **360** (2008) 4125–4143.

16. Free Meixner states,
Communications in Mathematical Physics **276** (2007) 863–899.

17. Zimmermann type cancellation in the free Faà di Bruno algebra (with Edward G. Effros and Mihai Popa), *Journal of Functional Analysis* **237** (2006) 76–104.

18. Linearization coefficients for orthogonal polynomials using stochastic processes, *Annals of Probability* **33** (2005) 114–136.

19. q-Lévy processes,
Journal für die reine und angewandte Mathematik **576** (2004) 181-207.

20. Appell polynomials and their relatives,
International Mathematics Research Notices **2004** n. 65, 3469–3531.

21. Free martingale polynomials,
Journal of Functional Analysis **201** (2003) 228–261.

22. Itô formula for free stochastic integrals,
Journal of Functional Analysis **188** (2002) 292–315.

23. Free stochastic measures via noncrossing partitions II,
Pacific Journal of Mathematics **207** (2002) 13–30.

24. Partition-dependent stochastic measures and q-deformed cumulants,
Documenta Mathematica. **6** (2001) 343–384.

25. Free stochastic measures via noncrossing partitions,
Advances in Mathematics **155** (2000) 154–179.

26. The linearization of the central limit operator in free probability theory, *Probability Theory and Related Fields* **115** (1999) 401–416.

ORGANIZER:

- Research In Teams on Subordination Problems Related to Free Probability (with Serban Belinschi, Maxime Fevrier, and Alexandru Nica). BIRS, Banff, August 2010.
- Concentration Week on Orthogonal Polynomials in Probability Theory (with Jinho Baik and Roland Speicher, as part of the Workshop in Analysis and Probability). Texas A&M University, July 2010.
- Seventh East Coast Operator Algebras Symposium (with Ken Dykema, David Kerr, and Roger Smith). Texas A&M University, October 2009.
- Educational Concentration Week on Free Probability Theory (with Ken Dykema, as part of the Workshop in Analysis and Probability). Texas A&M University, July 2007.
- Free Probability seminar. Texas A&M University, 2005–present.

TEACHING EXPERIENCE:

- **Lower-division courses:** Calculus for Social Sciences, First-Year Calculus, Engineering Mathematics (*summer 1999, fall 2002, spring 2005, fall 2007, fall 2008, fall 2010, spring 2012*), Calculus of Several Variables (*winter 2005, fall 2011*).
- **Upper-division courses:** Differential Equations (*spring 2003, spring 2009, fall 2009*), Linear Algebra, Topics in Applied Mathematics, Linear Algebra II (*fall 2001, spring 2006, fall 2006 (2), spring 2008, fall 2008, fall 2009, spring 2010*), Introduction to Complex Variables (*spring 2003*), Probability and Mathematical Statistics (*fall 2003*), Numerical Analysis (*fall 2001*), Advanced Calculus, Principles of Analysis (*spring 2005, spring 2007, fall 2010*).
- **Graduate courses:** Methods and Applications of Partial Differential Equations (*fall 2005*), Real Variables (*spring 2004, fall 2004, fall 2011, spring 2012*), Stochastic Processes (*spring 2004*).

OUTREACH:

- Towers of Hanoi, presentation to the Brazos Valley Math Teachers' Circle, and to 6–8th grade students participating in the Texas A&M SEE-Math, June 2010.
- Can we integrate $x^2 e^{-x^2/2}$?, presentation to a group of MCTP and REU students at Texas A&M, June 2010.

SERVICE:

- Member of the Honors committee (2009-present), Undergraduate committee (2011-present).
- Member of a Ph.D. committee (2008-present).
- Reviewer for Mathematical Reviews (41 reviews); referee (38 reports); NSERC grant proposal reviewer.
- Member of the Scientific committee, Workshop on Non-commutative Harmonic Analysis, Banach center, Będlewo, Poland, 2010.

LONG TERM VISITS:

- KTH (Royal Institute of Technology). May 2011.
- Erwin Schrödinger Institute. *Bialgebras in Free Probability*. Spring 2011.
- Institut Henri Poincaré, Centre Emile Borel. *Free Probability and Operator Spaces*. Fall 1999.

SEMINAR TALKS:

2011 University of Texas, San Antonio, *Colloquium*.
University of Wrocław, Poland, *Non-commutative/Discrete Harmonic Analysis Seminar*.
Université Paul Sabatier, France, *Random Matrices Seminar*.

2010 Massachusetts Institute of Technology, *Probability Seminar*.
Louisiana State University, *Probability Seminar*.
Rice University, *Geometry-Analysis Seminar*.

2009 University of Saskatchewan, Canada, *Colloquium*.
University of California, Berkeley, *Probabilistic Operator Algebra Seminar*.

2008 Ben Gurion University of the Negev, Israel, *Colloquium*.

2007 University of Waterloo, Canada, *Analysis Seminar*.

2005 Georgia Institute of Technology, *Colloquium*.
University of Central Florida, *Colloquium*.
University of Texas at Austin, *Colloquium*.
Texas A&M University, *Colloquium*.
Oklahoma State University, *Colloquium*.
University of Houston, *Colloquium*.
Lehigh University, *Colloquium* and *Teaching Presentation*.

2004 California Institute of Technology, *Analysis seminar*.
Queen's University, Canada, *Seminar on Functional Analysis and Random Matrices*.
University of Cincinnati, *Probability Seminar*.
Pennsylvania State University, *Geometric Functional Analysis Seminar*.
University of Pennsylvania, *Combinatorics Seminar*.
University of Connecticut, *Analysis and Probability Seminar*.

2003 University of California, Los Angeles, *Functional Analysis Seminar*.
Texas A&M University, *Linear Analysis* and *Algebra and Combinatorics Seminar*.
University of Illinois, Urbana-Champaign, *Analysis Seminar*.
University of California, San Diego, *Probability Seminar*.
Massachusetts Institute of Technology, *Combinatorics Seminar*.
University of Pennsylvania, *Analysis Seminar*.
Boston University, *Probability Seminar*.

2002 University of California, Berkeley, *Probabilistic Operator Algebras Seminar*.
University of California, Riverside, *Colloquium*.

2001 University of California, Davis, *Analysis / Mathematical Physics Seminar*.

1999 Goethe-Universität, Germany, *Mathematical Physics Seminar*.

Various seminars, UC Berkeley (1995–2002), UC Riverside (2002–2005), TAMU (2005–present).

INVITED CONFERENCE TALKS:

2011 – *West Coast Operator Algebra Seminar*, University of New Mexico, October.
– *Bialgebras in Free Probability*, Erwin Schrödinger Institute, Vienna, Austria, February and April.

2010 – *Free Probability and Large N Limit, II*, UCLA, Los Angeles, February.

2009 – *CMS special session on Operator Algebras*, Windsor, Canada, December.

- *Workshop on Orthogonal Polynomials, Hankel and Jacobi matrices*, University of Copenhagen, Denmark, August.
- *Workshop on Non-commutative Harmonic Analysis with Applications to Probability*, Banach center, Będlewo, Poland, August.

2008
- *Workshop on Non-commutative Harmonic Analysis with Applications to Probability*, Banach center, Będlewo, Poland, August.
- *Foundations of Computational Mathematics, Workshop on Special Functions and Orthogonal Polynomials*, City University of Hong Kong, June.
- *AMS Special Session on C^*-algebras, subfactors and free probability*, Claremont McKenna College, May.
- *Free Probability, Extensions, and Applications*, BIRS, Banff, Canada, January.

2007
- *Workshop on Noncommutative Dynamics and Applications*, Fields Institute, Canada, July.
- *Free Probability and Large N Limit*, UC Berkeley, March.

2006
- *CMS special session on Probabilistic Methods in Analysis and Algebra*, University of Toronto, Canada, December.
- *AMS special session on Noncommutative Dynamical Systems*, University of Utah, October.
- *Workshop on stochastic eigen-analysis and its applications*, MIT, July.

2005
- *Free Probability Theory*, Oberwolfach, Germany, March.

2004
- *Free Probability Theory*, BIRS, Banff, Canada, October.
- *Workshop in Linear Analysis and Probability*, Texas A&M University, August.

2003
- *Extended Probabilistic Operator Algebra Seminar*, UC Berkeley, August.
- *Quantum Probability and Infinite Dimensional Analysis*, Greifswald, Germany, June.
- *AMS special session on Special Functions and q-Series*, Baltimore, January.

2002
- *Workshop on Entropy in Operator Algebras*, IPAM, Los Angeles, July.
- *AMS conference on Advances in Quantum Dynamics*, Mount Holyoke College, June.
- *AMS special session on Stochastic Processes and Functional Analysis (in honor of M. M. Rao)*, San Diego, January.

2001
- *CMS symposium on Free Probability*, York University, Canada, December.
- *Workshop on Free Probability and Random Matrices*, University of Toronto, Canada, December.
- *Free Probability and Non-commutative Banach Spaces*, MSRI, Berkeley, January.

2000
- *AMS special session on Operator Algebras*, San Francisco SU, October.
- *AMS special session on Subfactors and Free Probability Theory*, UC Santa Barbara, March.

1999
- *Free Probability and Operator Spaces*, IHP-CEB, Paris, France.

1998
- *West Coast Operator Algebra Seminar*, CSU San Bernardino, October.
- *Free Probability and Applications*, CIRM, Lumini, France, January.

LANGUAGES:

- Speak: Russian, French; understand: Spanish.