



# Benjamin P. Russo

## Contact Information

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Department of Mathematics  
Whitman Hall 180-I  
Farmingdale State College SUNY

## Education/ Employment

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|---|---------------------------|
| <b>Assistant Professor</b><br><i>Farmingdale State College SUNY</i>                   | September 2018 - Present  |
| <b>Visiting Assistant Professor</b><br><i>University of Connecticut</i>               | August 2016 - August 2018 |
| <b>Ph.D in Mathematics</b><br><i>University of Florida, Advisor: Scott McCullough</i> | May 2016                  |
| <b>M.S. in Mathematics</b><br><i>University of Florida</i>                            | May 2012                  |
| <b>B.S. in Mathematics and Physics</b><br><i>University of Florida</i>                | May 2010                  |

## Publications

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### The 3-isometric Lifting Theorem

*Integral Equations and Operator Theory*, Volume 84, no. 1, 69–87, with Scott McCullough

### Lifting Commuting 3-Isometric Tuples

*Operators and Matrices*, Volume 11, no. 2, 397–433.

### The Mittag Leffler Reproducing Kernel Hilbert Spaces of Entire and Analytic Functions

*Journal of Mathematical Analysis and Applications*, Volume 463, Issue 2, 576–592, with Joel Rosenfeld and Warren Dixon

## Accepted

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### Occupation Kernels and Densely Defined Liouville Operators for System Identification

*2019 IEEE Conference on Decision and Control Proceedings*, with Joel Rosenfeld, Rushikesh Kamalapurkar, and Taylor T Johnson

## In Submission (\* indicates an arXiv link)

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### Motion Tomography via Occupation Kernels

with Rushikesh Kamalapurkar, Dongsik Chang, and Joel Rosenfeld

### The Occupation Kernel Method for Nonlinear System Identification\*

with Joel Rosenfeld, Rushikesh Kamalapurkar, and Taylor T Johnson

### Non-commutative disintegrations: existence and uniqueness in finite dimensions\*

with Arthur Parzygnat

### A non-commutative Bayes' theorem\*

with Arthur Parzygnat

## Invited Talks

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**AMS Special Session on Operators, Function Spaces, and Models** (January 2016)

*Sub-Jordan Operator Tuples*

**IWOTA Special Session on Multivariable Operator Theory** (July 2016)

*Sub-Jordan Operator Tuples*

**Graduate Mathematics Association**, University of Florida (February 2016)

*Dilations and Completely Positive Maps*

**SIGMA Seminar**, University of Connecticut (October 2016)

*Dilations and Completely Positive Maps*

**AMS Sectional Meeting Special Session**, Indiana University (April 2017)

*A Generalization of the Fock Space*

**AMS Special Session on Operators on Function Spaces, JMM** (January 2018)

*A Generalization of the Fock Space*

**AMS Special Session**, University of Delaware (September 2018)

*$C^*$ -algebras and the Category of Stochastic Maps*

**WINRS Special Session**, University of Virginia (September 2018)

*Fractional Derivatives and the Segal Bargmann Space*

**AMS Special Session on Multivariable Operator Theory, JMM** (January 2019)

*$C^*$ -algebras and the Category of Stochastic Maps*

**IWOTA Special Session on Free-Analysis and Free Probability** (July 2019)

*$C^*$ -algebras and the Category of Stochastic Maps*

**AMS Special Session on Recent Progress in Operator Theory** (November 2019)

*Occupation Kernels and Liouville Operators*

**American Control Conference Workshop** (June 2020)

*Motion Tomography via Occupation Kernels*

## Talks

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**Graduate Mathematics Association**, University of Florida (September 2014)

*My Love/Hate Relationship with the Cantor Set*

**Southeastern Analysis Meeting**, University of Georgia (March 2015)

*The Equivalence of Lifting and Factorization for 3-Isometric Tuples*

**Great Plains Operator Theory Symposium**, Purdue University (May 2016)

*The Equivalence of Lifting and Factorization for 3-Isometric Tuples*

**Southeastern Analysis Meeting**, University of South Florida (March 2016)

*Multivariate Lifting Theorems with an Application*

**Southeastern Analysis Meeting**, University of Tennessee (March 2017)

*A Generalization of the Fock Space*

**Hilbert Function Spaces**, Gargnano, Italy (May 2017)

*A Generalization of the Fock Space*

**UConn Math Club**, University of Connecticut (October 2017)

*The Game of Hex*

**Northeastern Analysis Meeting**, University of Albany (October 2017)

*A Generalization of the Fock Space*

**Southeastern Analysis Meeting**, University of Alabama (March 2019)

*$C^*$ -algebras and the Category of Stochastic Maps*

## Conferences Attended

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**Southeastern Analysis Meeting**, Virginia Tech (March 2013)  
**Southeastern Analysis Meeting**, Clemson University (March 2014)  
**Southeastern Analysis Meeting**, University of Georgia (March 2015)  
**Great Plains Operator Theory Seminar**, Purdue University (May 2015)  
**Southeastern Analysis Meeting**, University of South Florida (March 2016)  
**IWOTA**, Washington University in St. Louis (July 2016)  
**Southeastern Analysis Meeting**, University of Tennessee (March 2017)  
**AMS Sectional Meeting**, University of Indiana (April 2017)  
**Hilbert Function Spaces**, Gargnano, Italy (May 2017)  
**Northeastern Analysis Meeting**, University of Albany, (October 2017)  
**Joint Mathematics Meeting**, (January 2018)  
**AMS Sectional Meeting**, University of Delaware (September 2018)  
**WINRS**, University of Virginia (September 2018)  
**Joint Mathematics Meeting**, (January 2019)  
**Southeastern Analysis Meeting**, University of Alabama (March 2019)  
**AMS Sectional** University of Florida (November 2019)

## Referee Activity

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Operators and Matrices  
Annales de l'institut Fourier

## Undergraduate Research Mentoring

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**Periodic Cycles on the Riemann Sphere under Möbius Transformations**  
with Anthony Ercolano

## Teaching Experience

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### Courses taught at Farmingdale State College SUNY

MTH 107 - Introduction to Mathematical Ideas  
MTH 116 - College Algebra  
MTH 129 - Pre-Calculus  
MTH 130 - Calculus I with Applications  
MTH 150 - Calculus I  
MTH 151 - Calculus II  
MTH 322 - Advanced Mathematical Analysis  
MTH 354 - Principles of Real Analysis  
MTH 390 - Methods in Operations Research

### Courses taught at University of Connecticut

MATH 1070 - Mathematics for Business and Economics  
MATH 1131Q - Calculus I  
MATH 2210Q - Applied Linear Algebra  
MATH 2710 - Transition to Advanced Mathematics  
MATH 3210 - Abstract Linear Algebra  
MATH 3150 - Analysis I

### Courses taught at University of Florida

*Instructor*  
MGF 1106 - Mathematics for Liberal Arts Majors

MAC 2312 - Analytic Geometry and Calculus II  
MAP 2302 - Elementary Differential Equations

*AIM Instructor*

MAC 1105 - Basic College Algebra

*Online Instructor*

MAC 1147 - Pre-Calculus and Trigonometry

*Lecturer*

MAC2313 - Analytic Geometry and Calculus III

*Discussion Leader*

MAC 1140 - Pre-calculus Algebra

MAC 1105 - Basic College Algebra

MGF 1106 - Mathematics for Liberal Arts Majors

MAC 2311 - Analytic Geometry and Calculus I

MAC 2312 - Analytic Geometry and Calculus II

MAC 2313 - Analytic Geometry and Calculus III

## Course Development

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Online Course Development for MAC 2313 at UF  
Course Development for MTH 129 at Farmingdale

Spring 2015 - Summer 2015  
Spring 2018 - present

## Department Service

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Graduate Student Mentor  
Graduate Mathematics Association Webmaster  
Graduate Analysis Seminar Organizer  
Teaching Help Desk  
Hiring Committee  
Hiring Committee  
Head of the Masters Program Development Committee  
Seminar Organizer  
Undergraduate Seminar Organizer

Spring 2016  
Spring 2013 - Fall 2014  
Fall 2015  
Fall 2015  
Fall 2018  
Fall 2019  
Spring 2018 - present  
present  
present

## Grants, Awards and Recognition

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College of Liberal Arts and Sciences Travel Grant  
Neil White Teaching Award  
Letter of Recognition for Excellence in Teaching  
Provost Professional Development Grant

Spring 2016  
Spring 2017  
Summer 2018