

# Curriculum Vitae - Bogdan Teodor Udrea

## Education

- Ph. D., Mathematics**    University of Iowa, July 2012.  
*Thesis Title:* Applications of deformation rigidity theory in von Neumann algebras.  
*Advisor:* Paul Muhly; *co-advisor:* Ionut Chifan.
- M.S., Mathematics**    SNSB, Bucharest, June 2004.
- M.S., Philosophy**    University of Bucharest, June 2004.
- M.S., Mathematics**    University of Bucharest, February 2004.
- B.S., Mathematics**    University of Bucharest, February 2001.

## Research Interests

Classification and structural properties for group and group measure space von Neumann algebras and generalized  $q$ -Gaussian von Neumann algebras with coefficients.

## Employment

- 2015 - 2018    **Visiting Assistant Professor**  
Department of Mathematics, University of Iowa.
- 2012 - 2015    **J. L. Doob Research Assistant Professor**  
Department of Mathematics, University of Illinois at Urbana-Champaign.
- 2006 - 2012    **Graduate Teaching Assistant**  
Department of Mathematics, University of Iowa.
- 2005 -        **Researcher**  
IMAR, Bucharest.
- 2003 - 2005    **Junior Researcher**  
IMAR, Bucharest.

## Research Publications and Preprints

1. Ionut Chifan and Bogdan Udrea,  $W^*$ -rigidity results for von Neumann algebras arising from wreath products of rigid groups, preprint arXiv:1804.04558
2. Marius Junge and Bogdan Udrea, Generalized  $q$ -Gaussian von Neumann algebras with coefficients, III. Unique prime factorization results., to appear in **Rev. Roumaine Math. Pures Appl.**

3. Marius Junge and Bogdan Udrea, *Generalized  $q$ -Gaussian von Neumann algebras with coefficients, II. Absence of central sequences.*, to appear in **Mathematical Reports**.
4. Marius Junge and Bogdan Udrea, *Generalized  $q$ -Gaussian von Neumann algebras with coefficients, I. Relative strong solidity.*, to appear in **Analysis and PDE**.
5. Marius Junge, Stephen Longfield and Bogdan Udrea, *Some classification results for generalized  $q$ -gaussian algebras*, to appear in **Documenta Mathematica**.
6. Ionut Chifan, Thomas Sinclair and Bogdan Udrea, *Inner amenability for groups and central sequences in factors*, **Ergodic Theory and Dynamical Systems**, 36 (2016), no.4, 1106-1129.
7. Ionut Chifan, Thomas Sinclair and Bogdan Udrea, *On the structural theory of type  $II_1$  factors of negatively curved groups, II. Actions by product groups.*, **Advances in Mathematics**, 245 (2013), 208-236.
8. Bogdan Udrea, *Applications of deformation rigidity theory in von Neumann algebras*, Ph.D. Thesis, University of Iowa 2012.
9. Bogdan Udrea, *A proof of a result of Sakai*, **Mathematical Reports**, 7 (57) 2005, no.4, 355-357.

## Teaching Experience

### University of Iowa:

1. Instructor for MATH:2550 (Engineering Math III: Matrix Algebra) and MATH:1850 (Single Variable Calculus) (Spring 2018)
2. Instructor for MATH:2850 (Multivariable Calculus) and MATH:1440 (Math for Biological Sciences) (Fall 2017)
3. Instructor for MATH:1860 (Single Variable Calculus II) (Spring 2017)
4. Instructor for MATH:2560 (Engineering Math IV: Differential Equations) (Fall 2016).
5. Instructor for MATH:4040 (Matrix Theory) and MATH:4210 (Foundations of Analysis) (Spring 2016).
6. Instructor for MATH:2850 (Multivariable Calculus) (Fall 2015).
7. Instructor for the Qualifying Exam Preparation Seminar (Summer 2011).
8. TA for Introduction to Analysis II (graduate course) (Spring 2011, Spring 2010).
9. TA for Introduction to Analysis I (graduate course) (Fall 2011, Fall 2010).
10. TA for Calculus II (Summer 2009, Summer 2008).
11. TA for Calculus for the Biological Sciences (Fall 2009, Summer 2008).
12. TA for Engineering Math: Single Variable Calculus (Spring 2009, Fall 2008, Spring 2008, Fall 2007).

### University of Illinois at Urbana-Champaign:

1. Instructor for MATH 286 (Introduction to Differential Equations Plus) (Fall 2012 / Fall 2013 / Fall 2014 / Spring 2015).
2. Instructor for MATH 285 (Introduction to Differential Equations) (Spring 2013 / Spring 2014).

## Selected Presentations

1. The structural properties of the generalized  $q$ -gaussian von Neumann algebras with coefficients (plenary speaker), GPOTS, University of Illinois at Urbana-Champaign, Urbana, May 2016.
2. Generalized  $q$ -gaussian von Neumann algebras with coefficients and their structural properties (invited talk), AMS Sectional Meeting, University of Memphis, Memphis, October 2015.
3. Generalized  $q$ -gaussian von Neumann algebras with coefficients and their structural properties (invited speaker), ECOAS 2015, University of Iowa, Iowa City, October 2015.
4. Some rigidity results for generalized  $q$ -gaussian algebras, Wabash miniconference, IUPUI Indianapolis, September 2014.
5. Some rigidity results for generalized  $q$ -gaussian algebras (invited talk), AMS Joint Meetings, University of Wisconsin, Eau Claire, September 2014.
6. Some rigidity results for generalized  $q$ -gaussian algebras (invited talk), Operator Theory Seminar, University of Iowa, Iowa City, May 2014.
7. Some rigidity results for generalized  $q$ -gaussian algebras (invited talk), Analysis Seminar, Purdue University, West Lafayette, April 2014.
8. Inner amenability for groups and central sequences in factors (invited talk), AMS Joint Meetings, Baltimore, January 2014.
9. Inner amenability for groups and central sequences in factors, Wabash miniconference, IUPUI, Indianapolis, September 2013.
10. New examples of von Neumann algebras with unique Cartan subalgebra and  $W^*$ -superrigidity (invited talk), Analysis Seminar, UIUC, November 2011.
11. New examples of von Neumann algebras with unique Cartan subalgebra, Wabash Conference, IUPUI, Indianapolis, September 2011.
12. New examples of von Neumann algebras with unique Cartan subalgebra, GPOTS, Arizona State University, Tempe, May 2011.

## Research Visits

Hausdorff Institute for Mathematical Research, Bonn, June 2016.

Last updated: July 18, 2018