

CURRICULUM VITAE

ALEXANDRU BUIUM

1. PERSONAL INFORMATION

Born in 1955, Bucharest, Romania
US citizen

2. MATHEMATICS EDUCATION

M.S. from the University of Bucharest, Romania, 1980.
Ph.D. from the University of Bucharest, Romania, 1983.

3. TENURED POSITIONS

2021- present Distinguished Professor, University of New Mexico, Albuquerque.
1999-2021: Professor, University of New Mexico, Albuquerque, USA.
1998-1999: Professor, University of Illinois, Urbana-Champaign, USA.
1997-1998: Professor, University of New Mexico, Albuquerque, USA.
1995-1997: Associate Professor, University of New Mexico, Albuquerque, USA.
1990-1995: Senior Researcher at the Institute of Mathematics of the Romanian Academy, Bucharest, Romania.
1983-1989: Researcher at the National Institute for Scientific and Technical Research, Bucharest, Romania.

4. VISITING POSITIONS

June and July 2021, Visiting scientist, Max Planck Institut, Bonn, Germany (declined due to the corona outbreak).
June and July 2020, Visiting scientist, Max Planck Institut, Bonn, Germany (declined due to the corona outbreak).
June and July 2019, Visiting scientist, Max Planck Institut, Bonn, Germany.
April and May 2018, Visiting scientist, Institut des Hautes Études Scientifiques, Bures sur Yvette, France.
June and July 2017, Visiting scientist, Max Planck Institut, Bonn, Germany.
July 2016, Visiting scientist, Institute of Mathematics of the Romanian Academy, Bucharest, Romania.
June and July 2015: Visiting scientist, Max Planck Institut, Bonn, Germany.
July 2014: Visiting researcher, Institute of Mathematics of the Romanian Academy, Bucharest, Romania (partially supported by the Romanian National Authority for Scientific Research, CNCS - UEFISCDI, project number PN-II-ID-PCE-2012-4-0201).

June 2014: Visiting scientist, Institut des Hautes Études Scientifiques, Bures sur Yvette, France.

June 2013: Mathematical Science Research Visitor, Australian National University, Canberra.

October 2012: Visiting scientist, Hausdorff Institute of Mathematics, University of Bonn, Germany.

June and July 2012: Visiting scientist, Max Planck Institut, Bonn, Germany.

March and April 2011: Visiting scientist, Institut des Hautes Études Scientifiques, Bures sur Yvette, France.

June and July 2010: Visiting scientist, Max Planck Institut, Bonn, Germany.

July 2009: Visiting Professor, University Paris Sud, Orsay, France.

1994-1995: Visiting scientist, Max Planck Institut, Bonn, Germany.

1993-1994: Member, Institute for Advanced Study, Princeton, USA.

January-June 1993: Visiting scientist, Humboldt Fellow, Max Planck Institut, Bonn, Germany.

1992: Visiting scientist, Humboldt Fellow, University of Essen, Germany.

Fall 1991: Visiting scientist, University of Paris VII, Paris, France.

Spring 1991: Visiting Professor, Columbia University, New York, USA.

5. AWARDS AND FELLOWSHIPS

Titeica Prize of the Romanian Academy of Science (1987)

Humboldt Fellow (1992/93)

Member of the Institute for Advanced Study, Princeton (1993/94)

Fellow of the AMS (class of 2016)

6. PI ON GRANTS

NSF Grant DMS 9500331, 1995-1998: Differential algebra and diophantine geometry (University of New Mexico).

NSF Grant DMS 9730183/9996078, 1998-2001: Arithmetic analogue of differential algebraic geometry (University of New Mexico and University of Illinois).

NSF Grant DMS 0096946, 2001-2004: Fermat adeles and differential modular forms (University of New Mexico), \$ 144,000.

NSF Grant DMS 0552314, 2006-2009: Fermat quotients, correspondences, and uniformization (University of New Mexico), \$ 112, 100.

NSF Grant DMS 0852591, 2009-2012: Arithmetic Differential Equations (University of New Mexico), \$ 140,980.

NSF Grant DMS 0852591 (extension), 2012-2013: Arithmetic Differential Equations (University of New Mexico).

Simons Foundation, Collaboration Grant for Mathematicians, award number 311773, 2014-2019: Arithmetic Differential Geometry (University of New Mexico), \$35,000.

Simons Foundation, Collaboration Grant for Mathematicians, award number 615356, 2019-2024: Arithmetic analogues of Riemannian and symplectic geometry (University of New Mexico), \$42,000.

7. CO-PI ON GRANTS

GIG NSF Grant, 1997-2002: Center for Arithmetical Algebraic Geometry (University of Arizona).

8. MASTERS STUDENTS

Marshall Brandenburg (defended 2020)

Patrick Lank (defended 2020)

Phung Tran (expected to defend 2021)

9. PAST PHD STUDENTS

Christine Hurlburt (defended 1999; current position: unknown)

Mugurel Barcau (defended 2001; current position: Institute of Mathematics of the Romanian Academy)

Ken Zimmerman (defended 2003; current position: unknown)

Derek Martinez (defended 2004; current position: lecturer, University of New Mexico, Albuquerque)

Andrey Glubokov (defended 2005; current position: unknown)

Arnab Saha (defended 2012; topic: “Arithmetic jet spaces and modular forms”, current position: Indian Statistical Institute, Bangalore)

Taylor Dupuy (defended 2013; current position: Assistant Professor, University of Vermont)

Cristina Toropu (defended 2014; topic: “ABC for function fields”; current position: unknown)

Alfonso Heras (defended 2014; topic: “Differential Subgroups of GL_n ”; current position: instructor, SIPI-Southwestern Indian Polytechnic Institute, New Mexico)

Erik Medina (defended 2016; topic: “Lifts of Frobenius on Arithmetic Jet Spaces of Schemes”; current position: instructor, Gavilan College, Gilroy, California)

10. CURRENT PHD STUDENTS

Malik Barrett (expected to defend 2021)

11. UNDERGRADUATE HONORS THESES

Andrew Herring (2013)

Sam Mundy (2015)

12. SOME INVITED TALKS BEFORE 2000

Kolchin memorial lecture, Columbia University (1993)

Colloquium, Harvard University (1996)

Plenary address, AMS meeting, Tucson (1998)

13. INVITED TALKS AFTER 2000

Colloquium, University of Pennsylvania (2004)
 Conference on Galois groups, Luminy, France (2004)
 Conference on differential equations, Edinburgh (2006)
 Colloquium, University of Arizona, Tucson (2006)
 Southern California Number Theory Day, UC San Diego (2008)
 Conference in honor of B. Malgrange, Luminy, France (2008)
 Colloquium, CRM, Université de Montréal (2009)
 Number Theory seminar, Mc Gill (2009)
 SAGA, University of Paris 11, Orsay (2009)
 Number Theory seminar, University of Paris 7 (2009)
 Minicourse, Conference on Frobenius lifts, Leiden (2009)
 Colloquium, University of Wyoming (2009)
 Colloquium, University of Pittsburgh (2009)
 AMS special session in honor of Andy Magid, San Francisco (2010)
 Conference on Galois groups, Luminy, France (2010)
 Oberseminar, Max Planck Institut, Bonn (2010)
 Number Theory Seminar, Max Planck Institut, Bonn (2010)
 Seminar, École Normale Supérieure, Paris (2011).
 Seminar, Université Paris 6 (2011).
 Colloquium, Université Lyon, France (2011).
 Conference, Segovia/El Escorial, Spain (2011).
 Colloquium, University of Houston (2011).
 Bicentennial Galois Conference, IHES, Bures sur Yvette, France (2011).
 AMS special session in memory of J. Kovacic, Boston (2012).
 Conference on complex and p-adic dynamics, Brown University (2012)
 Colloquium, University of Arizona (2012)
 Model theory conference, Bonn (2012)
 Number theory seminar, Max Planck Institut, Bonn (2012)
 Geometry and physics seminar, Max Planck Institut, Bonn (2012)
 Colloquium, University of Nice, France (2012)
 Conference on Witt vectors, UNM, Albuquerque (2012)
 New York Number Theory Seminar, Columbia/CUNY/NYU (2012)
 Kolchin Seminar, CUNY, New York (2012)
 AMS special session on Witt vectors, San Diego (2013)
 Seminar, Hausdorff Institute of Mathematics, Bonn (2013)
 AMS Special session on arithmetic dynamics, Univ. of Colorado, Boulder (2013)
 Conference, Centre de Recherche Mathématique, Univ. de Montréal (2013)
 Colloquium, Australian National University, Canberra (2013)
 Kolchin seminar, CUNY, New York (2014)
 Workshop in logic, MSRI, Berkeley (2014)
 Colloquium, University of Strasbourg (2014)
 Number theory seminar, University Paris 6 (2014)
 Colloquium, Institute of Mathematics of the Romanian Academy (2014)
 Conference on Functional Transcendence, Oxford (2014)
 Colloquium, University of Notre Dame (2014)
 Joint (Math and Philosophy) Logic seminar, University of Notre Dame (2014)
 Southern California Number Theory Seminar, UC San Diego (2015)

Conference on Algebraic and Arithmetic Differentiation, UC Berkeley (2015)
Number theory seminar, Humboldt University, Berlin (2015)
Algebra, Geometry, and Physics Seminar, Max Planck Inst., Bonn (2015)
Colloquium, University of Rochester (2015)
Number theory seminar, University of Rochester (2015)
Algebraic geometry seminar, University of Chicago (2015)
Special session, AMS meeting Seattle (2016)
Conference in memoriam Accola, Boston University (2016)
Colloquium, SUNY Binghamton (2016)
Workshop on Differential Algebra, CUNY (2016)
Algebraic Geometry Conference. IMAR, Bucharest (2016)
Number Theory Workshop, IMAR, Bucharest (2016)
Southwest Local Algebra Meeting, University of New Mexico (2017)
Algebra, Geometry, and Physics Seminar, Max Planck Inst., Bonn (2017)
Seminar on Diophantine Problems, University Paris VI, Paris (2018)
Conference on Witt vectors and absolute geometry, University of Vermont (2018)
Colloquium, University of Arkansas (2018)
Algebra seminar, University of Arkansas (2018)
Workshop on Diophantine Geometry, UQAM, Montreal (2019)
Algebra, Geometry and Physics Seminar, Max Planck Inst., Bonn (2019)
Number Theory Seminar, Max Planck Inst., Bonn (2019)
Upstate New York Online Number Theory Colloquium (online 2020)
AMS Special session on Algebraic and Diophantine Geometry (online 2021)
Algebra Seminar, University of West Ontario (online 2021)
Number theory conference in honor of A. Zaharescu (Univ of Illinois and IMAR,
online 2021)