

# Curriculum Vitae

## Marius Vladoiu

### Personal Data

*Full name:* Vladoiu Grigore Marius

*Date of birth:* 16.11.1977

*Place of birth:* Târgu-Jiu, Romania

*Marital status:* Married

*Current Position:* University of Bucharest, Faculty of Mathematics and Computer Science, Str. Academiei 14, Bucharest, 010014, Romania

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### Research Interests

Combinatorial commutative algebra, algebraic combinatorics, computer algebra, matroid theory, graph theory.

### Education

Oct. 2002 – Apr. 2004 Ph. D. in Mathematics, Faculty of Mathematics and Computer Science, Univ. of Bucharest, thesis: Combinatorial and Computational Methods in Commutative Algebra, Advisor: Prof. Dorin Popescu.

2000 - 2002 M. Sc. in Mathematics, Faculty of Mathematics and Computer Science, Univ. of Bucharest, thesis: Sequentially Cohen-Macaulay Modules with Applications to Castelnuovo–Mumford Regularity, Advisor: Prof. Dorin Popescu.

1996 - 2000 B. Sc. in Mathematics, Faculty of Mathematics and Computer Science, Univ. of Bucharest, thesis: Gröbner Bases, Advisor: Prof. Ion D. Ion.

### Employment

Oct. 2008 - present Senior Lecturer, University of Bucharest

Feb. 2004 - Oct. 2008 Assistant Professor, University of Bucharest

Apr. 2002 - Feb. 2004 Teaching Assistant, University of Bucharest

## Awards

National Mathematical Olympiad: Second Prize (1990), Honorable Mention (1993), Third Prize (1995), Third Prize (1996).

International Contest in Mathematics "Gheorghe Țițeica": Third Prize (1991), Special Prize (1992), First Prize (1993), Honorable Mention (1994), Special Prize (1995), Second Prize (1996).

## Research Stages Abroad

University Aristotle of Thessaloniki, Thessaloniki, Greece (financed from the Romanian Grant TE\_46, Nr. 83/2010), one month, Oct. 2011 – November 2011,

University Duisburg–Essen, Essen, Germany (financed from the Romanian Grant TE\_46, Nr. 83/2010), August 2011,

University of Ioannina, Ioannina, Greece (financed from the Romanian Grant TE\_46, Nr. 83/2010), June 2011,

School of Mathematical Sciences, Lahore, Pakistan, postdoctoral fellowship, Oct. 2010 – Febr. 2011,

University of Ioannina, Ioannina, Greece, Erasmus fellowship, one week, Jun. 2009,

School of Mathematical Sciences, Lahore, Pakistan, postdoctoral fellowship, Jan. 2009 – Mar. 2009,

University Duisburg–Essen, Essen, Germany (partially financed from the Romanian Grant grant PNII-IDEI-PCE no. 51/28.09.2007), Dec. 2008,

School of Mathematical Sciences, Lahore, Pakistan, postdoctoral fellowship, Jan. 2008 – Feb. 2008,

University Duisburg–Essen, Essen, Germany (partially financed from the Romanian Grant grant PNII-IDEI-PCE no. 51/28.09.2007), Oct. 2007 – Nov. 2007,

School of Mathematical Sciences, Lahore (Pakistan), postdoctoral fellowships mar. 2006, Oct.2006 – Mar. 2007,

University Duisburg–Essen, Essen, Germany, May 2005 – Jul. 2005,

Universita degli Studi di Genova, Genova, Italy (Italian Government Research Fellowship, host - Professor Aldo Conca) Apr. 2004 – Oct. 2004,

University Essen, Essen, Germany (Humboldt Research Fellowship, Stability Pact for South - Eastern Europe, host - professor Juergen Herzog) Oct. 2002 – Dec. 2002,

University Essen, Essen, Germany (Humboldt Research Fellowship, Stability Pact for South - Eastern Europe, host - professor Juergen Herzog) Jan. 2002 – Mar. 2002,

University of Kaiserslautern, Kaiserslautern, Germany, Oct. 2001 – Nov. 2001.

### **Invited Talks**

CIMPA Research School on Local Analytic Geometry, Pakistan, Feb. 4–13, 2012;

University Aristotle of Thessaloniki, Thessaloniki, Greece, 3rd Nov. 2011;  
“MONICA Conference”: Conference MONomial Ideals, Computations and Applications, Cantabria, Spain, July 11–13, 2011;

5th World Conference on 21st Century Mathematics 2011, Lahore, Pakistan, Feb. 9–13, 2011;

National School of Algebra, Bucharest, Romania, Sept. 2011, Sept. 2010;  
University of Ioannina, Ioannina, Greece, June 2009;

CIMPA School on Combinatorial and Computational Aspects of Commutative Algebra, Lahore, Pakistan, Feb. 21–29, 2009;

P.R.A.G.M.A.T.I.C. Summer School, Catania, Italy, 13 Jul. – 3 Aug., 2008;

University Duisburg–Essen, Essen, Germany, Nov. 2007;

Workshop on Combinatorics and Commutative Algebra II, Thessaloniki, Greece, Sept. 2007;

Homological and Combinatorial Aspects in Commutative Algebra, Buşteni, Romania, June 2007;

National School of Algebra, Constanţa, Romania, Sept. 2006, Sept. 2005;

Conference on Algebra and Graph Theory, Lahore, Pakistan, Mar. 2006;

University of Osnabrück, Germany, June 2005;

University Duisburg–Essen, Essen, Germany, July 2005, May 2005;

”Workshop on Cohen-Macaulay Rings and Related Structure”, Constanţa, Romania, Mar. 2005;

Universita degli Studi di Genova, Italy, May 2004;

University Essen, Essen, Germany, Nov. 2002;

National School of Algebra, Eforie-Nord, Romania, Sept. 2003, Sept. 2002, June 2002.

## **Other Participations to International Conferences**

Sinaia(Romania) (2002), Trieste(Italy) (2004), Lahore(Pakistan) (2007), Kaiserslautern(Germany) (2007).

## **Teaching Activities**

### **a) Fac. of Mathematics and Computer Sc., Univ. of Bucharest:**

– Tutorials in: Algebra (1st year, 2nd year), Number Theory, Galois Theory, Computational Algebra and Geometry, Cryptography and Codes Theory, Local Algebra and Singularities, Combinatorics in Commutative Algebra, Mathematical Logic, Geometry (1st year), Didactics.

– Courses on: Computational Algebra and Geometry (2004–2005, 2010–2011, 2011–2012), Galois Theory (2005–2006, 2006–2007, 2007–2008, 2008–2009, 2009–2010, 2010–2011, 2011–2012) Algebra 2nd year (2007–2008), Algebra 1st year (2008–2009, 2009–2010, 2010–2011, 2011–2012), Geometry 1st year (2008–2009), Number Theory (2009–2010, 2010–2011, 2011–2012), Computational Algebra with Applications in Graph Theory (2008–2009).

### **b) School of Mathematical Sciences, Lahore(Pakistan):**

– Computational Algebra with Applications to Combinatorics (oct. 2006 – feb. 2007);

– Computational Algebra (oct. 2010 – febr. 2011).

## **Other Information**

Member of the Board of the Romanian National Mathematical Olympiad, since 2007;

Co-organizer of the National School of Algebra, Bucharest, Romania, Sept. 2011, Sept. 2010;

Co-organizer of the Conference "Commutative Algebra and Related Topics", dedicated to the 60-th anniversary of Prof. Dr. Dorin Popescu, Constanța, Mar. 29–31, 2007.

Co-organizer of the National School of Algebra, "Algorithmic and Combinatorial Methods in Commutative Algebra", Constanța, Romania, Sept. 2005.

## Participation to Grants

– member of the research team of the Grant CNCS, PN-II-ID-PCE-2011-3-1023 (Jan. 2012 – Dec. 2014), “Algorithmic and theoretical methods for studying monomial and binomial ideals with applications in combinatorics, commutative algebra and graph theory”, director Prof. Dr. Dorin Popescu;

– director of the Grant CNCSIS TE\_46/2010, Nr. 83/2010 (Aug. 2010 – July 2013), “Algebraic Modeling of some Combinatorial Objects and Computational Applications”;

– member of the research team of the Grant CNCSIS PNII ID\_542/2008 (Jan. 2009 – Dec. 2011), “Algorithms and Combinatorics in Algebra and Geometry”, director Prof. Dr. Dorin Popescu.

– member of the research team of the Grant CNCSIS ID-PCE nr. 51/28.09.2007 (2007–2010), “Combinatorial, Homological and Arithmetical Methods in the Study of Polynomial Ideals”, director Prof. Dr. Iustin Coandă.

– member of the research team of the Grant CNCSIS 1055 nr. 2916/31GR/2006 (2006–2009), “Cryptography, Algorithms and Utilizations of Computer Software in Algebra and Geometry”, director Prof. Dr. Dorin Popescu.

– member of the research team of the Grant CNCSIS 33549/2002 (2002–2004), “Commutative Algebra and Galois Theory”, director Prof. Dr. Paltin Ionescu.

## List of Publications

### Articles:

1. J. Herzog, D. Popescu, M. Vladioiu – *Stanley depth and size of a monomial ideal*, **Proc. Amer. Math. Soc.** 140 (2012), 493–504.
2. J. Herzog, M. Vladioiu, X. Zheng – *How to compute the Stanley depth of a monomial ideal*, **J. Algebra** 322 (2009), 3151–3169.
3. M. Vladioiu – *Equidimensional and unmixed ideals of Veronese type*, **Comm. in Algebra** 36(9), 2008, 3378–3392.
4. D. Popescu, M. Vladioiu – *Strong Lefschetz property on algebras of embedding dimension three*, **Bull. Math. Soc. Sci. Math. Roumanie (N.S.)** 49(97)(2006), no.1, 75–86.

5. M. Vladoiu – *Discrete Polymatroids*, **An. Șt. Univ. Ovidius Constanța**, Vol. 14(2)(2006), 89–112.
6. J. Herzog, T. Hibi, M. Vladoiu – *Ideals of fiber type and polymatroids*, **Osaka J. Math.** 42 (2005), 807–829.
7. J. Herzog, D. Popescu, M. Vladoiu – *On the Ext-modules of ideals of Borel type*, **Contemp. Math.** 331 (2003), 171–186.
8. M. Becheanu, M. Vladoiu – *Irreducibility criteria via Jordan matrices*, preprint 2011.
9. J. Herzog, A. Rauf, M. Vladoiu – *The stable set of associated prime ideals of a polymatroidal ideal*, arXiv:1109.5834v2, 2011, submitted to J. Alg. Combin.
10. H. Charalambous, A. Thoma, M. Vladoiu – *On the Universal Markov Basis and the generalized Lawrence liftings*, in preparation.

#### **Monographs:**

I have written one chapter (out of six) for a monograph in Romanian, Linear Algebra, that should be submitted until the end of December 2011, addressed to students from the technical universities:

G. Bercu, L. Dăuș, L.A. Pletea, L. Popa, M. Vladoiu, C. Voica – Linear Algebra (in Romanian), to be submitted in December 2011.