Curriculum Vitae

I. Personal data

Name:	Gabriela Eugenia Olteanu
Date and place of birth:	May 5, 1977, Baia Mare, Romania
Address:	Babeş–Bolyai University, Cluj–Napoca
	Faculty of Economics and Business Administation
	Department of Statistics–Forecasts–Mathematics
	Str. Teodor Mihali 58–60, 400591, Cluj–Napoca, Romania
	Office: 230, Phone: +40 264 418652, Fax: +40 264 412570
E-mail address:	gabriela.olteanu@econ.ubbcluj.ro, golteanu@gmail.com
Personal homepage:	`http://math.ubbcluj.ro/~olteanu`
Position:	Assoc. professor (Conferenţiar)

II. Academic training

2009–2010 : *Postdoctoral studies*
Free University of Brussels, Belgium, Department of Mathematics
2004–2007 : *Ph.D. in Mathematics*
University of Murcia, Spain, Department of Mathematics
Doctorate program awarded with "Mención de Calidad" by the
Spanish Ministry of Education and Sciences
2004–2005: *DEA in Mathematics*
University of Murcia, Spain, Department of Mathematics
2000–2001: *M.Sc. in Algebra and Geometry*
Babeş–Bolyai University of Cluj–Napoca, Romania and
l'Institut National Polytechnique de Grenoble, France
1996–2000: *B.Sc. in Mathematics*
Babeş–Bolyai University of Cluj–Napoca, Romania
Faculty of Mathematics and Computer Science

III. Academic degrees

2007: *Ph.D. Degree in Mathematics* with European mention
Department of Mathematics, University of Murcia, Spain
Ph.D. Thesis: *Wedderburn Decomposition of Group Algebras.*
A Computational Approach with Applications to Schur Groups and Units
Supervisers: Prof. Dr. Ángel del Río Mateos and
Prof. Dr. Juan Jacobo Simón Pinero
2005: *DEA Degree in Mathematics*
Department of Mathematics, University of Murcia, Spain
Dissertation: *El Teorema de Brauer–Witt*, published in
Publicaciones del Departamento de Matemáticas, Número 52, (2005)
Supervisers: Prof. Dr. Ángel del Río Mateos and
Prof. Dr. Juan Jacobo Simón Pinero
2001: *M.Sc. Degree in Algebra and Geometry*
Faculty of Mathematics and Computer Science
Babeş–Bolyai University of Cluj–Napoca, Romania
Master dissertation: *Yoneda's lemma in sketch theory*
Supervisers: Prof. Dr. Ioan Purdea, Prof. Dr. Dominique Duval and
Prof. Dr. Catherine Oriat

2000: *B.Sc. Degree in Mathematics*
Faculty of Mathematics and Computer Science
Babeş–Bolyai University of Cluj–Napoca, Romania
Diploma dissertation: *Projective modules and injective modules*
Superviser: Prof. Dr. Ioan Purdea

IV. Positions

2012 onwards : *Associate professor* (Conferenţiar dr.)
Babeş–Bolyai University, Faculty of Economics and Business Administation
2009–2012 : *Assistant professor* (Lector dr.)
Babeş–Bolyai University, Faculty of Economics and Business Administation
2008–2009: *Assistant professor* (Lector dr.)
North University of Baia Mare, Faculty of Sciences
2004–2008 : *Teaching assistant* (Asistent drd.)
North University of Baia Mare, Faculty of Sciences
2002–2004: *Tutor* (Preparator drd.)
North University of Baia Mare, Faculty of Sciences

V. Didactic activity

– The courses *Mathematics Applied in Economics* and *Financial and Actuarial Mathematics*, Faculty of Economics and Business Administation, Babeş–Bolyai University, Cluj–Napoca.

– The course *Algebra I* and seminars on *Algebraic structures, Linear algebra, Arithmetics, Mathematics and statistics, Numerical methods, Mathematics for engineerings*, at the Department of Mathematics and Computer Science, North University Baia Mare and Faculty of Mathematics and Computer Science, Babeş–Bolyai University, Cluj–Napoca.

VI. Scientific activity

Fields of interest: Group algebras, Representations of finite groups,
Units of group rings, Schur groups, Computational algebra
Publications: 20 articles from which 11 ISI articles
4 books

VII. Study and research abroad

2001 Feb–Jul: École Nationale Supérieure d'Informatique et Mathématiques
Appliqués (ENSIMAG) de l'Institut National Polytechnique de
Grenoble (INPG), France, Erasmus-Socrates fellowship.
2001 Mar–Jul: Laboratoire Logiciels, SystSmes, Réseaux (LSR), INP Grenoble,
France, research work.
2003 Feb–Jul: Universidad de Murcia, Departamento de Matemáticas, Murcia,
Spain, research work.
2005 Aug–Sep: Babeş–Bolyai University of Cluj–Napoca, Romania,
research visit supported by Fundación Séneca of Murcia, Spain.
2006 Jul–Aug: University of Regina, Canada,
research visit supported by Fundación Séneca of Murcia, Spain.
2007 May–Jul: Vrije Universiteit Brussel, Belgium,
research visit supported by Fundación Séneca of Murcia, Spain.

2004–2008:   Universidad de Murcia, Departamento de Matemáticas, Spain,
              Ph.D. grant of Fundación Séneca of Murcia, Spain.

2009–2010:   Vrije Universiteit Brussel, Belgium,
              Postdoctoral studies grant of Fundación Séneca of Murcia, Spain.

VIII. Courses and conferences

1. *Algebra Symposium*, Cluj–Napoca, Romania, November 23–24, 2001.

2. *Interuniversity Mathematics Summer School*, Perugia, Italy, July–August, 2002.

3. *Third International Conference on Applied Mathematics (ICAM 3)*, Baia Mare – Borşa, Romania, October 10–13, 2002.

4. *Advanced Course in Polynomial Identity Rings*, Centre de Recerca Matemàtica, Barcelona, Spain, July 1–10, 2003.

5. *International Conference on Algebras, Modules and Rings*, Lisbon, Portugal, July 14–18, 2003.

6. *Ring Theory Meeting*, Oviedo, Spain, February 5–6, 2004.

7. *Representation Theory and its Applications*, a satellite conference to the Fourth European Congress of Mathematics, Uppsala, Sweden, June 22–27, 2004.

8. *Fourth European Congress of Mathematics*, Stockholm, Sweden, June 27–July 2, 2004.

9. *Algèbre non commutative artinienne, représentations et cohomologies*, Luminy, France, September 13–17, 2004.

10. *Reunión de Grupos de Investigación de Teoría de Anillos*, Almería, Spain, October 22, 2004.

11. *Groups and Group Rings XI*, Bedlewo, Poland, June 4–11, 2005.

12. *Perspectives on rings and algebras*, Murcia, Spain, June 29–July 1, 2006.

13. *Workshop on Graph Algebras*, Málaga, Spain, July 3–8, 2006.

14. *International Congress of Mathematicians*, Madrid, Spain, August 22–30, 2006.

15. *NonCommutative Algebra Conference*, Granada, Spain, August 31–September 6, 2006.

16. *EACA X, Tenth Meeting on Computer Algebra and Applications*, Sevilla, Spain, September 7–9, 2006.

17. *Advanced Course on Group–Based Cryptography*, Centre de Recerca Matemàtica, Barcelona, Spain, May 28–June 2, 2007.

18. *International Conference on algebraic and combinatorial methods in concrete classes of algebras and groups*, Alden–Biesen, Belgium, September 2–7, 2007.

19. *International Conference on Noncommutative Rings and Geometry* in honour of Freddy Van Oystaeyen on the occasion of his 60th birthday, Almería, Spain, September 18–22, 2007.

20. Mini–Workshop: *Arithmetik von Gruppenringen*, Mathematisches Forschungsinstitut Oberwolfach, Germany, November 25–December 1, 2007.

21. *Categorical Methods for Rings and Modules*, Dedicated to José Luis Gómez Pardo on his 60th birthday, Murcia, Spain, December 3–6, 2007.

22. *Internacional Conference on Modules and Representation Theory*, Cluj–Napoca, Romania, July 7–12, 2008.

23. *Duality and Involutions in Representation Theory*, Maynooth, Ireland, August 19–22, 2008.

24. *The Sixth International Conference on Applied Mathematics (ICAM 6)*, Baia Mare, Romania, September 18–21, 2008.

25. 2nd *Joint Conference of the Belgian Mathematical Society and the London Mathematical Society*, Leuven, Belgium, December 4–5, 2009.

26. *Quantitative methods in economics*, Cluj–Napoca, Romania, November 12–13, 2010.

27. *The Seventh Congress of Romanian Mathematicians*, Braşov, Romania, June 29–July 5, 2011.

28. *Some Trends in Algebra*, Prague, Czech Republic, September 6–10, 2011.

29. *Group Rings and related topics*, Stuttgart, Germany, June 25–29, 2012.

30. *International Conference on Representations of Algebras (ICRA 2012)*, Bielefeld, Germany, August 13–17, 2012.

IX. Talks

1. *Le lemme de Yoneda dans la theorie des esquisses*, Institut National Polytechnique de Grenoble, Grenoble, France, June 12, 2001.

2. *Le lemme de Yoneda pour les esquisses projectives*, Algebra Symposium, Cluj–Napoca, Romania, November 23–24, 2001.

3. *Une esquisse des graphes a composition*, Third International Conference on Applied Mathematics (ICAM 3), Baia Mare – Borşa, Romania, October 10–13, 2002.

4. *The Brauer–Witt Theorem*, Seminario de Álgebra Rey Pastor, Departamento de Matemáticas, University of Murcia, Spain, November 25, 2005.

5. *Computing the Wedderburn decomposition of group algebras by the Brauer–Witt theorem*, Vrije Universiteit Brussel, Brussels, Belgium, May 5, 2006. (invited conference)

6. *Computing the Wedderburn decomposition of group algebras by the Brauer–Witt theorem*, NonCommutative Algebra Conference, Granada, Spain, August 31–September 6, 2006.

7. *Ring ismomorphism of cyclic cyclotomic algebras*, Vrije Universiteit Brussel, Brussels, Belgium, May 25, 2007. (invited conference)

8. *Wedderburn decomposition of group algebras and Schur groups*, Mini–Workshop: Arithmetik von Gruppenringen, Mathematisches Forschungsinstitut Oberwolfach, Germany, November 25–December 1, 2007. (invited conference)

9. *The subgroup of the Schur group generated by cyclic cyclotomic algebras*, Categorical Methods for Rings and Modules, dedicated to José Luis Gómez Pardo on his 60th birthday, Murcia, Spania, December 3–6, 2007.

10. *Ring ismomorphism of cyclic cyclotomic algebras*, Internacional Conference on Modules and Representation Theory, Cluj–Napoca, Romania, July 7–12, 2008.

11. *Ring ismomorphism of cyclic cyclotomic algebras*, Duality and Involutions in Representation Theory, Maynooth, Ireland, August 19–22, 2008.

12. *Examples of implementation in the computer system GAP*, The Sixth International Conference on Applied Mathematics (ICAM 6), Baia Mare, Romania, September 18–21, 2008.

13. *A computational approach for the Wedderburn decomposition of group algebras*, Vrije Universiteit Brussel, Brussels, Belgium, April 3, 2009.

14. *Decompostions of semisimple group algebras*, Quantitative methods in economics, Cluj–Napoca, Romania, November 12–13, 2010.

15. *Idempotents in rational group algebras*, The Seventh Congress of Romanian Mathematicians, Braşov, Romania, June 29–July 5, 2011.

16. *Idempotents in rational group algebras*, Some Trends in Algebra, Prague, Czech Republic, September 6–10, 2011.

17. *Idempotents in group algebras*, Group Rings and related topics, Stuttgart, Germany, June 25–29, 2012.

18. *Constructing idempotents in group algebras*, International Conference on Representations of Algebras (ICRA 2012), Bielefeld, Germany, August 13–17, 2012.

X. Publications

ISI Articles

1. G. Olteanu, *Computing the Wedderburn decomposition of group algebras by the Brauer–Witt theorem*, Math. Comp. **76** (2007), no. 258, 1073–1087. MR2291851 (2008b:16036), Zbl 1117.20004

2. G. Olteanu and Á. del Río, *Group algebras of Kleinian type and Groups of units*, J. Algebra **318** (2007), no. 2, 856–870. MR2371975 (2008j:16078), Zbl 1138.16014

3. S. Crivei, G. Olteanu, *GAP algorithms for finite abelian groups and applications*, Carpath. J. Math. **24** (2008), no. 3, 310–316. Zbl pre06008574

4. A. Herman, G. Olteanu, Á. del Río, *The Schur group of an abelian number field*, J. Pure Appl. Algebra **213** (2009), no. 1, 22–33. MR2462982 (2009i:16029), Zbl 1166.16010

5. G. Olteanu, Á. del Río, *An algorithm to compute the Wedderburn decomposition of semisimple group algebras implemented in the GAP package* `wedderga`, J. Symbolic Comput. **44** (2009), no. 5, 507–516. MR2499925, Zbl 1172.20014

6. A. Herman, G. Olteanu, Á. del Río, *Ring isomorphism of cyclic cyclotomic algebras*, Algebr. Represent. Theory **12** (2009), no. 2–5, 365–370. MR2501191 (2010b:16052), Zbl 1186.16015

7. A. Herman, G. Olteanu, Á. del Río, *The gap between the Schur group and the subgroup generated by cyclic cyclotomic algebras*, Israel J. Math. **176** (2010), 401–418. MR2653200, Zbl 05728355

8. E. Jespers, G. Olteanu, Á. del Río, *Rational group algebras of finite groups: from idempotents to units of integral group rings*, Algebr. Represent. Theory **15** (2012), no. 2, 359–377. DOI 10.1007/s10468-010-9244-4.

9. I. Van Gelder, G. Olteanu, *Finite group algebras of nilpotent groups: a complete set of orthogonal primitive idempotents*, Finite Fields Appl. **17** (2011), no. 2, 157–165. doi:10.1016/j.ffa.2010.10.005. MR2774206, Zbl 05868429

10. S. Crivei, M.T. Koşan, H. Inankıl, G. Olteanu, *Correspondences for coclosed submodules*, to appear in Comm. Algebra (2012). arXiv:1203.0729.

11. E. Jespers, G. Olteanu, Á. del Río, I. Van Gelder, *Central units of integral group rings*, to appear in Proc. Amer. Math. Soc. (2012). arXiv:1203.5232. (http://www.ams.org/cgi-bin/mstrack/accepted_papers?jrnl=proc)

Other articles

12. G. Olteanu, *Le lemme de Yoneda pour les esquisses projectives*, Proceedings of the Algebra Symposium (Cluj–Napoca, Romania, November 23–24, 2001), EFES Publishing House, Cluj–Napoca, (2002), 149–164.

13. G. Olteanu, *Une esquisse des graphes a composition*, Proceedings of the 3rd International Conference on Applied Mathematics (Borşa, 2002). Bul. Stiint. al Univ. Baia Mare Ser. B Fasc. Mat.-Inform. **18** (2002), no. 2, 285–290. MR2015954

14. G. Olteanu, *El teorema de Brauer–Witt*, Publicaciones del Departamento de Matemáticas, Universidad de Murcia, Número **52** (2005), 1–73.

15. O. Broche Cristo, A. Konovalov, A. Olivieri, G. Olteanu, Á. del Río, *Wedderga – Wedderburn Decomposition of Group Algebras*, Actas del Décimo Encuentro de Álgebra Computacional y Aplicaciones, Sevilla, (2006), 65–67.

16. G. Olteanu, *Wedderburn decomposition of group algebras and Schur groups*, Mini-Workshop: Arithmetik von Gruppenringen, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach Rep. **4** (2007), no. 4, 3226–3227. MR2463649

17. S. Crivei, G. Olteanu, S. Şuteu-Szöllősi, *ELISA – A collection of GAP algorithms related to extending abelian groups*, Actas del Undécimo Encuentro de Álgebra Computacional y Aplicaciones, Granada, (2008), 63–66.

18. G. Olteanu, *Computation and applications of Schur indices*, Proceedings of the International Conference on Modules and Representation Theory (Cluj–Napoca, Romania, July 7–12, 2008), Cluj University Press, Cluj–Napoca, 2009, 149–157. MR2603210, Zbl 05639910

19. O. Broche Cristo, A. Konovalov, A. Olivieri, G. Olteanu and Á. del Río, User's manual of Wedderga — Wedderburn Decomposition of Group Algebras, Version 4.3.3 (2008), 48 pp. (http://www.gap-system.org/Packages/wedderga.html)

20. G. Olteanu, *Idempotents in group algebras*, Mathematica, **54 (77)** (2012), 185–198.

Preprints

21. E. Jespers, G. Olteanu, Á. del Río, I. Van Gelder, *Group rings of finite strongly monomial groups: central units and primitive idempotents*, submitted (2012).

Books

1. G. Olteanu, *Wedderburn decomposition of group algebras with applications*, EFES Publishing House, Cluj–Napoca, 2008, 165pp, ISBN 978–973–7677–98–3. MR2457575 (2009h:16032), Zbl 1165.16001

2. S. Crivei, G. Olteanu, *Algebraic aspects of public–key cryptography*, EFES Publishing House, Cluj–Napoca, 2008, 128pp, ISBN 978–606–526–012–2.

3. A.S. Mureşan, D.A. Filip, P. Curt, R.I. Lung, G. Olteanu, V. Radu, A. Roşca, M. Păcurar, P.T. Petru, G. Brendea, *Matematici aplicate în economie*, Mega Publishing House, Cluj–Napoca, 2011, 278pp, ISBN 978–606–543–171–3.

4. A.S. Mureşan, D.A. Filip, M. Mihoc, P. Curt, I. Râp, R.I. Lung, G. Olteanu, V. Radu, A. Roşca, M. Păcurar, P.T. Petru, G. Brendea, T. Coconeţ, D. Filip, F. Pop, K, Sipos, *Matematici aplicate în economie*, Mega Publishing House, Cluj–Napoca, 2012, 324pp, ISBN 978–606–543–253–6.

Ph.D. Thesis

G. Olteanu, *Wedderburn decomposition of group algebras. A computational approach with applications to and Schur groups and units*, University of Murcia, Spain, 2007.
Qualification: Sobresaliente "cum laude", with European Mention.
Awarded with "Premio Extraordinario de Doctorado" in Mathematics, year 2007–2008.

XI. Research projects

Director of research projects financed by CNCSIS (Romanian National Council of Academic Scientific Research):

1. *Group algebras and Ringel-Hall algebras*, PN–II–RU–2009–1, TE_303, 28.07.2010, financed by UEFISCDI, value 495000 lei.

Participation in research projects financed by CNCSIS:

1. *Algebras, modules, representations: applications to coding theory and cognitive systems* (CNCSIS–A 344(2004-2006)), coordinator Andrei Marcus.

2. *Equivalences of categories and applications* (CNCSIS–AT 51(2004)), coordinator Simion Breaz.

3. *Special classes of modules and implementations in the GAP system* (CNCSIS–AT 72(2006)), coordinator Septimiu Crivei.

4. *Generalizations of the injectivity and approximations in abelian categories* (CEEX–ET 47(2006–2007)), coordinator Septimiu Crivei.

5. *Equivalences of Categories in the Representation Theory of Finite Groups* (PN–II–ID–PCE–2007–1 project ID_532, contract no. 29/01.10.2007), coordinator Andrei Marcus.

Participation in international research projects:

1. *Propiedades aritméticas, categóricas y homológicas de anillos y álgebras* (BFM2003–07569, Ministerio de Educación y Ciencia), University of Murcia, coordinator Manuel Saorín Castaño.

2. *Aspectos aritméticos, categóricos y homológicos de anillos y álgebras* (0482/PI/04, Fundación Séneca), University of Murcia, coordinator Manuel Saorín Castaño.

3. *Propiedades aritméticas, categóricas y homológicas de anillos y álgebras* (MTM2006–06865, Ministerio de Educación y Ciencia), University of Murcia, coordinator Manuel Saorín Castaño.

4. *Anillos de grupo, acciones parciales, códigos correctores y dinámica simbólica*, (MTM2009-07373, Ministerio de Ciencia e Inovación), University of Murcia, coordinator Ángel del Río Mateos.

XII. Foreign languages

English, French, Spanish.

XIII. Awards

"Premio Extraordinario de Doctorado" in Mathematics 2007–2008, University of Murcia, Spain, for the thesis *Wedderburn decomposition of group algebras. A computational approach with applications to and Schur groups and units*

XIV. Other activitities

Member of the *Romanian Mathematical Society* since 2002.

Member of the *American Mathematical Society* since 2009.

Editorial Secretary at the journal *Carpathian Journal of Mathematics* 2008–2009.

Reviewer for *Mathematical Reviews* since 2007.

Referee for *Mathematica*, *Carpathian Journal of Mathematics*, *Creative Mathematics and Informatics*, *Virgil Madgearu Review of Economic Studies and Research*.

XV. Citations

1. Paulhus, Jennifer, *Decomposing Jacobians of curves with extra automorphisms*, Acta Arith. **132** (2008), no. 3, 231–244. Citation of the article X.19. (RIS of the journal: 0.79)

2. A. Dooms, E. Jespers, A Konovalov, *From Farey symbols to generators for subgroups of finite index in integral group rings of finite groups*, J. K-Theory **6** (2010), 263–283. Citation of the article X.19. (RIS of the journal: 1.01).

3. A. Herman, A. Rahnamai Barghi, *Schur indices of association schemes*, J. Pure Appl. Algebra **215** (2011), 1015–1023. Citation of the article X.19. (RIS of the journal: 1.26).

4. Á. del Río, M. Ruíz Marín, P. Zalesski, *Subgroup separability in integral group rings*, J. Algebra **347** (2011), 60–68. Citation of the article X.19. (RIS of the journal: 1.07).

5. E. Jespers, M.M. Parmenter, *Construction of central units in integral group rings of finite groups*, Proc. Amer. Math. Soc., **140** (2012), no. 1, 99–107. Citation of the article X.1. (RIS of the journal: 1.07).

6. E. Jespers, Á. del Río, I. Van Gelder, *Writing units as product of Bass units*, Math. Comp (2012), 1–12, http://arxiv.org/abs/1111.3485v2. Citation of the article X.19. (RIS of the journal: 1.97).

7. François Garillot, Georges Gonthier, Assia Mahboubi, Laurence Rideau, *Packaging mathematical structures*, Lecture Notes in Computer Science, 2009, Volume 5674/2009, 327-342, DOI: 10.1007/978-3-642-03359-9_23. Citation of the article X.1.

8. G. Janssens, *Primitive Central Idempotents of Rational Group Algebras*, J. Algebra Appl. (2012), 4 pp. Citation of the article X.8.

9. A. Kiefer, E. Jespers, S. Orlando Juriaans, A. Calixto de Souza Filho, A. De Andrade E Silva, *Poincaré Bisectors in Hyperbolic Spaces*, arXiv:1205.1127. Citation of the article X.8. (RIS of the journal: 2.85)

10. J.R. Paulhus, *Elliptic factors in Jacobians of low genus curves*, Dissertation at University of Illinois at Urbana-Champaign, 2007. Citation of the article X.19.

11. I. Van Gelder, *Idempotenten in Groepringen*, Master Thesis at Vrije Universiteit Brussel, 2010. Citation of the article X.8 and of the article X.19.

12. J. Guaschi, D. Juan-Pineda, S. Millán-López, *The lower algebraic K-theory of the braid groups of the sphere*, arXiv:1209.4791. Citation of the article X.19.