CURRICULUM VITAE

I. Personal data.

Name: George Ciprian MODOI.

Nationality: Romanian.

Sex: Male.

Birthdate: 07 December 1972.

Birthplace: Lupeni, Hunedoara, Romania.

Marital status: married, two children.

Addresses:

• *Office:* "Babeş-Bolyai" University, Faculty of Mathematics and Computer Science, Department of Mathematics, 1, M. Kogălniceanu, 400084, Cluj-Napoca, Romania;

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II. Education.

1) 1986-1991: High-School of Computer Science, Petroşani, Hunedoara.

1) 1991-1995: Faculty of Mathematics and Computer Science, specialization Computer Science - "Babeş-Bolyai" University, Cluj-Napoca, Romania.

3) 1995-1996: Master Degree in Algebra - "Babeş-Bolyai" University, Cluj-Napoca Romania.

4) 1993-1997: Faculty of History and Philosophy, specialization Philosophy - "Babeş-Bolyai", University, Cluj-Napoca, Romania.

5) 1996-2003: Ph.D. in Mathematics, specialization Algebra, "Babeş-Bolyai" University, Cluj-Napoca, under the supervision of Prof. Dr. Ioan Purdea;

the title of the thesis: *Equivalences of categories of modules and applications* (Romanian).

6) 2018: Habilitation in Mathematics, "Babeş-Bolyai" University, Cluj-Napoca. The title of the thesis: *Some contributions to Brown representability problem.*

III. Work places.

1) 1996–1997: Teacher at the "Lucian Blaga" High-school, Cluj-Napoca.

2) 1997–1998: Teacher at the "Tiberiu Popoviciu" High-school, Cluj-Napoca.

3) 1998–2000: Teacher at the "Alexandru Borza" High-school, Cluj-Napoca.

4) 2000–2004: Assistant Professor, "Babeş-Bolyai" University, Cluj-Napoca, Faculty of Mathematics and Computer Science.

5) 2004–2016: Lecturer, "Babeş-Bolyai" University, Cluj-Napoca, Faculty of Mathematics and Computer Science.

6) since 2016: Associate Professor, "Babeş-Bolyai" University, Cluj-Napoca, Faculty of Mathematics and Computer Science.

IV. Foreign languages.

1) German - good.

2) English - good.

3) French - medium.

V. Publications.

a) Papers

1. A. Marcus, C. Modoi, *Groups of homomorphisms graded by G-sets*, Italian J. Pure Appl. Math., 8(2000).

2. S. Breaz, C. Modoi, *Colimits in the category of A-solvable modules*, Mathematica(Cluj), 42(65), 2000, 121-128.

3. S. Breaz, C. Modoi, *Abelian groups such that the class of adstatic modules is closed under submodules*, Mathematica(Cluj), 43(66), 2001, 145–149.

4. C. Modoi, *Graded Gabriel topologies*, Proc. Algebra Symposium, (Cluj-Napoca, Romania, nov. 2001), Cluj-Napoca, 2002, 139–148.

5. S. Breaz, C. Modoi, *On a quotient category*, Stud. Univ. Math. "Babes-Bolyai", XLVII, (2002), 17–29.

6. C. Modoi, *Equivalences induced by adjoint functors*, Communications in Algebra, 31 (2003), 2327–2355.

7. A. Marcus, C. Modoi, *Graded endomorphism rings and equivalences*, Communications in Algebra, 31 (2003), 3219–3249.

8. C. Modoi, *Modules over triangulated categories and localizations*, Stud. Univ. Math. "Babes-Bolyai", XLIX, (2004), 49–53.

9. C. Modoi, *Compactly generated smashing subcategories*, Mathematica(Cluj), 46(69), no. 2 (2004), 181–186.

10. S. Breaz, C. Modoi, *A reformulation of Brown Representability Theorem*, Mathematica(Cluj), 51(74), 2009, 129–133.

11. S. Breaz, C. Modoi, F. Pop, *Natural equivalences and dualities*, International Conference in Modules and Representation Theory, Cluj University Press, 2009.

12. G. C. Modoi, *On perfectly generating projective classes in triangulated categories*, Communications in Algebra, 38 (2010), 995–1011.

13. G.C. Modoi, *Localizations and colocalizations and non-additive star-objects*, Semigroup Forum, 81 (2010), 510–523.

14. G. C. Modoi, *Generalized lax epimorphism in the additive case*, J. Pure Appl. Algebra, 215, issue 4, (2010), 697–704.

15. G. C. Modoi, *A representability theorem for some huge abelian categories*, Homology, Homotopy and Applications, 14, issue 2 (2012), 23–36.

16. G. C. Modoi, J. Stovicek, *Brown representability often fails for homotopy category of modules*, J. K-Theory, 9 (2012), 151–160.

17. G. C. Modoi, *The dual of Brown representability for homotopy categories of complexes*, J. Algebra, 392 (2013), 115–124.

18. G. C. Modoi, *The dual of the homotopy category of projective modules*

satisfies Brown representability, B. Lond. Math. Soc., 46 (2014), issue 4, 765–770.

19. G. C. Modoi, *Constructing cogenerators in triangulated categories and Brown representability*, J. Pure Appl. Algebra, 219 (2015), 8, 3214–3224.

20. S. Breaz, G. C. Modoi, *Nil-clean companion matrices*, Linear Alg. and Its Appl., 489 (2016), 50-60.

21. G. C. Modoi, *The dual of Brown representability for some derived categories*, Ark. Math. 54 (2016), 485–498.

22. G. C. Modoi, *Reasonable triangulated categories have filtered enhancements*, Proc. Amer. Math. Soc. 147 (2019), 2761–2773.

23. G. C. Modoi, *Constructing large self–small modules*, Stud. Univ. Math. "Babes-Bolyai", 64 (2019), 3–10.

24. S. Breaz, G. C. Modoi, *Equivalences induced by infinitely generated silting modules*, Alg. Rep. Theory, 23 (2020), 2113–2129.

25. S. Breaz, G. C. Modoi, *Ideal cotorsion theories in triangulated categories*, J. Algebra, 567 (2021), 475–532.

26. G. C. Modoi, *Weight structures cogenerated by weak cocompact objects*, Appl. Categ. Struct. 30 (2022), 921–936.

27. S. Breaz, A. Marcus, G. C. Modoi, *Support τ-tilting modules and semibricks over group graded algebras*, J. Alg. 637 (2024), 90–111.

28. S. Breaz, G. C. Modoi, *Derived equivalences induced by good silting complexes*, in *Functor Categories Model Theory, Algebraic Analysis and Constructive Methods*, A. Martsinkovsky eds., Springer Verlag, 2024, 1–22.

29. S. Breaz, M. Hrbek, G. C. Modoi, *Silting, cosilting, and extensions of commutative rings*, Math. Proc. Camb. Phil. Soc., doi:10.1017/S0305004125101503.

30. G. C. Modoi, *Brown–Adams representability for triangulated categories with locally coherent cohomology*, preprint, arXiv:2405.06475[math.CT].

b) Books

1. Gr. Calugăreanu, S. Breaz, G. C. Modoi, C. Pelea, D. Vălcan, *Exercises*

in Abelian Group Theory, Kluwer Academic Publishers, 2003.

2. G. C. Modoi, *Echivalenţe de categorii cu aplicaţii în teoria modulelor* (Romanian), Editura EFES, Cluj-Napoca, 2006.

3. G. C. Modoi, *Contributions to Brown Representability Problem*, Casa Cărţii de Ştiinţă, Cluj-Napoca, 2022.

VI. Academic activities

- External examiner of the PhD Thesis *Structural and categorical description of classes of abelian groups*, defended by Josef Dvořák at the Charles University, Prague, 2021.

- Examiner of the PhD Thesis *Identităţi în inele* (*Identities in rings*), defended by Andrada Cîmpean at the Babeş–Bolyai University, Cluj, 2020.

- Reviewer for MathSciNet

- Reviewer for Zentralblatt MATH

- Referee for various journals (Compositio Mathematica, Selecta Mathematica, Journal of Algebra, Communications in Algebra, Results in Mathematics etc.)

VII. Memberships

- American Mathematical Society.

- Romanian Mathematical Society.

- Member of the Research Group in Algebra, Faculty of Mathematics and Computer Science, Babeş–Bolyai University, director Prof. dr. Andrei Marcuş.

VIII. Conferences and research seminars

a) Selected Talks

1. *Graded rings and graded equivalences*, research seminar, October 2001, Friedrich Schiller University, Jena, Germany.

2. *Brown Representability and Duality*, research seminar, May 2006, University Paris 7, Denis Diderot, France.

3. *When does a functor induce an abelian localization?*, Abelian Groups and Modules Over Commutative Rings, June 2007, University of Connecticut, Storrs, CT, USA.

4. *Cellular approximations in abelian categories*, research seminar, November 2007, Charles University, Prague, Czech Republic.

5. *A reformulation of Brown Representability Theorem and some consequences*, research seminar, October 2008, University of Paderborn, Germany.

6. *Brown representability via projective classes*, Some Trends in Algebra, September 2009, Prague, Czech Republic.

7. *Approximations in homotopy category and Brown representability*, research seminar, September 2010, University of Padova, Italy.

8. *A module theoretic translation of Brown representabilty for homotopy categories*, Classical Aspects of Ring Theory and Module Theory, July 2013, Bedlewo, Poland.

9. *Some applications of deconstructibility in triangulated categories*, Some Trends in Algebra, September 2013, Prague, Czech Republic.

10. *On a theorem of G. Bergman*, research seminar, October 2013, Charles Univ. Prague, Czech Republic.

11. *Salce's lemma in triangulated categories*, Algebraic Structures and Their Applications, June, 2014, Spineto (Siena), Italy.

12. *Ideal cotorsion pairs in triangulated categories I*, research seminar, November 2014, Charles Univ. Prague, Czech Republic.

13. *Derived equivalences induced by silting complexes*, ICRA 2017, July 2017, Syracuse, NY, USA.

14. *Co-t-structures cogenarated by week cocompact objects*, Two weeks of silting theory, July-August 2019, Stuttgart University, Germany.

15. *Constructing TTF triples in triangulated categories via approximations*, Rings, Modules and Approximations, January 2020, Prague, Czech Republic (speaker).

16. *Not necessarily compact approximability via silting theory*, Functor Cat-

egories, Model Theory, and Constructive Category Theory, July 2022, University of Almeria, Spain.

17. *Migration of silting-like properties via adjoint pairs*, online MALGA Seminar, Padova-Verona, February 2023
http://profs.sci.univr.it/ angeleri/seminario.html

b) Meetings co-organized

1. International Conference on "Modules and Representation Theory", Babes-Bolyai University Cluj-Napoca, July 7-12, 2008.

2. Algebra Symposium, Babeş–Bolyai University, May 2009.

3. Algebra Symposium, Babeş–Bolyai University, April 2013.

4. Trends in Representation Theory and Related Topics, Babeş–Bolyai University, September 2023.

XI. Grants

1. Junior researcher fellowship, Alexander von Humboldt Foundation, University of Jena, July–Nov., 2001.

2. Postdoctoral fellowship, l'Agence Universitaire de la Francophonie, University Paris 7, Feb.–Aug., 2006.

3. Grant CNCSIS, AT, code 30, director S. Breaz – research team member.

3. Grant CEEX 45/2005, director S. Crivei – research team member.

4. Grant PN2CD-ID-489, director S. Breaz – research team member.

5. Grant PN2-RU-TE-2011-3-0065, director S. Breaz – research team member.

6. Grant PN-II-ID-PCE-2012-4-0100, director A. Marcus – research team member.

7. Grant CNCS/CCCDI–UEFISCDI, project number PN-III-P4-ID-PCE-2020-0454, director S. Breaz – research team member.

8. Grant CNCS/CCCDI–UEFISCDI, project number PN-IV-P1-PCE-2023-

0060, director S. Breaz – research team member.

X. Domains of interest: abelian and triangulated categories, homological algebra, module categories, categorical logic, philosophy and foundations of mathematics.

November, 2025

George Ciprian Modoi