

CURRICULUM VITAE

Maryam Bajalan, Ph.D.

Recognised Postdoctoral Researcher (R2)

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1. Personal Data

- **Name:** Maryam Bajalan
- **Gender:** Female
- **Date of Birth:** 2000-07-10
- **Nationality:** Iranian
- **Residence:** Sofia, Bulgaria
- **Personal Email:** maryam.bajalan@gmail.com
- **Tel/Viber:** +999 800 000 000
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2. Education

1. **Ph.D. in Pure Mathematics:** Malayer University, Malayer, Iran (September 2016- November 2021)
 - **Dissertation Title:** On codes over product of finite chain rings
2. **M.Sc. in Pure Mathematics:** Alzahra University, Tehran, Iran (September 2006- March 2009)
 - **Research:** Local rotundity structure of generalized Orlicz-Lorentz sequence spaces
3. **B.Sc. in Pure Mathematics:** Bu-Ali Sina University, Hamedan, Iran (September 2001- October 2004)

3. Academic/Research Positions

1. **Recognised Postdoctoral Researcher (R2):** Institute of Mathematics and Informatics, Bulgarian Academy of Sciences (January 2023- Present)
2. **University Lecturer:** Khajeh Nasir Toosi University, Tehran, Iran (July 2022- September 2022)
3. **University Lecturer:** Malayer University, Malayer, Iran (November 2021- September 2022)
 - **Graduate Student Advising:** (December 2021 - September 2022)
4. **Visiting Researcher:** Valladolid University, Valladolid, Spain (December 2020- June 2021)
5. **University Lecturer:** Malayer University, Malayer, Iran (January 2010- September 2016)
6. **University Lecturer:** Allameh Tabatabai University, Tehran, Iran (January 2010- July 2010)

‡ Courses Taught at Undergraduate Level:

- Real Analysis, Coding Theory, Calculus, Engineering Mathematics, Differential Equations

4. Specialization

1. **Main Field:** Pure Mathematics
 - Algebra, Mainly Ring theory
2. **More Specific Fields:**
 - Algebraic Coding Theory over Finite Commutative Rings, Mainly Polycyclic and Multivariable Codes

5. List of Publications

5.1. Peer-Reviewed Journal Papers

1. *On the structure of repeated-root polycyclic codes over local rings*
Maryam Bajalan, Edgar Martínez-Moro* (*=Corresponding author), Reza Sobhani, Steve Szabo, and Gülsüm Gözde Yılmazgüç
 Discrete Mathematics, 347(1), (2024) 113715
 DOI: [10.1016/j.disc.2023.113715](https://doi.org/10.1016/j.disc.2023.113715) — PDF (<https://arxiv.org/pdf/2208.00512.pdf>)
2. *Galois LCD codes over mixed alphabets*
Maryam Bajalan, Alexandre Fotue Tabue, Joël Kabore, and Edgar Martínez-Moro*
 Finite Fields and Their Applications, 85, (2023) 102125
 DOI: [10.1016/j.fa.2022.102125](https://doi.org/10.1016/j.fa.2022.102125) — PDF (<https://arxiv.org/pdf/2202.02843.pdf>)

3. *On codes over the product of finite chain rings*

Maryam Bajalan, Rashid Rezaei*, and Karim Samei

Sigma Journal of Engineering and Natural Sciences, 41(1), (2023) 145-155

DOI: [10.14744/sigma.2023.00014](https://doi.org/10.14744/sigma.2023.00014)

4. *A transform approach to polycyclic and serial codes over rings*

Maryam Bajalan, Edgar Martínez-Moro*, and Steve Szabo

Finite Fields and Their Applications, 80, (2022) 102014

DOI: [10.1016/j.fa.2022.102014](https://doi.org/10.1016/j.fa.2022.102014) — PDF (<https://arxiv.org/pdf/2105.05046.pdf>)

5. *Some properties of the Cesaro-Musielak-Orlicz sequence spaces*

Maryam Bajalan and Daryoush Behmardi*

Far East Journal of Mathematical Sciences 49(1), (2011) 7-20

6. *Schur property of generalized Orlicz-Lorentz sequence spaces*

Maryam Bajalan and Daryoush Behmardi*

International Journal of Applied Mathematics 23(6), (2010) 1047-1051

5.2. Papers in Preparation

1. *(σ, δ) -polycyclic codes over the Ore extensions over rings*

Maryam Bajalan, Ivan Landjev, and Edgar Martínez-Moro

2. *On LCP codes over a mixed ring alphabet*

Alexandre Fotue Tabue, Javier de la Cruz, **Maryam Bajalan**, and Edgar Martínez-Moro

Submitted to Discrete Mathematics PDF (<https://arxiv.org/abs/2309.14217>)

3. *Self-orthogonal and quantum codes over chain rings*

Maryam Bajalan, Mina Moeini, and Bahattin Yildiz

Submitted to Jacodemath

5.3. Conference Papers

1. *On the p -rank of the incidence matrix of a projective Hjelmslev plane*

Maryam Bajalan, Ivan Landjev, and Assia Rousseva

19th EAI International Conference, CSECS June 28–29, 2023, Boston, MA, USA

Proceedings Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, Springer, Cham, 514, (2023) 30–39

DOI: [10.1007/978-3-031-44668-9_2](https://doi.org/10.1007/978-3-031-44668-9_2)

2. *Relative N -weight codes over the direct product of finite chain rings*

Maryam Bajalan and Mina Moini

52th Annual Iranian Mathematics Conference, Kerman University, Iran (2021)

6. Invited Talks (Recent 5 Years)

1. *Repeated-root polycyclic codes over rings*, National Seminar on Coding Theory, Hisariya, Bulgaria (2023)
2. *Polycyclic and multivariable codes over rings: extending the cyclic code*, Autonomous University of Barcelona, Barcelona, Spain (2023)
3. *Linear and cyclic codes over rings*, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, Sofia, Bulgaria (2023)
4. *Multivariable codes over rings*, Tehran University, Tehran, Iran (2020)
5. *On codes over product of finite chain rings*, Malayer University, Malayer, Iran (2020)
6. *Quantum error-correcting codes*, Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran (2019)

7. Awards and Honors

1. **Ranked 1st Among Ph.D. Students in Pure Mathematics:** Malayer University, Malayer, Iran (September 2016- November 2021)
2. **Visiting Research Scholarship:** Sponsored by the Ministry of Science, Research and Technology of Iran (December 2020- June 2021)
3. **Ph.D. Fellowship:** Malayer University, Malayer, Iran (September 2016- November 2021)
4. **Distinguished Lecturer Award for Undergraduate Teaching:** Malayer University, Malayer, Iran (September 2011- September 2015)

8. Editorial and Referee/Reviewer Service

1. **Layout Editor:** Journal of Algebra Combinatorics Discrete Structures and Applications (Jacodesmath)
Link (jacodesmath.com/index.php/jacodesmath/about/editorialTeam)
2. **Reviewer:**
 - Institute of Electrical and Electronics Engineers (IEEE)
Link (<https://www.webofscience.com/wos/author/record/JGD-5352-2023>)
 - Sigma Journal of Engineering and Natural Sciences

9. Language Skills

1. **Persian:** Native
2. **English:** Fluent
3. **Arabic:** Medium Proficiency
4. **Germany:** Beginner

10. References

1. **Professor Dr. Edgar Martinez-Moro**
 - Institute of Mathematics, University of Valladolid, Valladolid, Spain
 - E-mail: edgar.martinez@uva.es
 - Google Scholar Page: [Here](#)

2. Professor Dr. Steve Szabo

- Department of Mathematics and Statistics, Eastern Kentucky University, Kentucky, USA
- E-mail: steve.szabo@eku.edu
- Google Scholar Page: [Here](#)

3. Professor Dr. Ivan Landjev

- Department of Computer Science, New Bulgarian University, Sofia, Bulgaria
- E-mail: i.landjev@nbu.bg
- University Homepage: [Here](#)