Rozália Sz. Madarász

Curriculum Vitae – 2018.

Education and Degrees

- University education: Mathematics, Faculty of Science, University of Novi Sad, 1980-1984.
- B.S., Faculty of Science, Novi Sad, Yugoslavia, 1984.
- M.S., Faculty of Science, Novi Sad, Yugoslavia, 1986.
    M. S. Thesis: *Relacione algebre*
- Ph. D., Faculty of Science, Novi Sad, Yugoslavia, 1989.
    Ph. D. Thesis: *Univerzalno-algebarski prilozi algebarskoj logici*

Positions Held

- since 1999: Full Professor, Faculty of Science, Novi Sad
- 1995-1999: Associate Professor, Faculty of Science, Novi Sad
- 1990-1995: Assistant Professor, Faculty of Science, Novi Sad
- 1985-1990: Assistant, Faculty of Science, Novi Sad

Teaching Experience

- **Currently conducted courses:**
    1. Advanced Mathematical Logic
    2. School practice
- **Previously,** she has been teaching at the University of Novi Sad : Mathematical Logic and Set Theory, Mathematical logic in Computer science, Elementary Algebra, Theory of Algorithms, Theory of Automata and Formal Languages, Mathematics (for students of Geography), Mathematics I (for students of Technology), Foundations of Mathematics, Universal Algebra

- **University textbooks** (in Serbian)
    1. Madarasz R., Crvenković S., *Uvod u teoriju automata i formalnih jezika*, Univ. u Novom Sadu, Novi Sad, 1995.

2. Bošnjak I., Budimac Z., Ivanović M., Jerinić Lj., Madarasz R., Nedeljkov M., Racković M., Teofanov N., Tepavčević A., *Zbirka zadataka iz matematike*, Institut za matematiku, Novi Sad, Novi Sad, 1995.

3. Crvenković S., Dolinka I., Madarasz R.*, Odabrane teme opšte algebre*, Univ. u Novom Sadu, 1998.

4. Madarasz R, *Opšta teorija algebri, Prvi deo: Skupovi i mreže*, PMF Banja Luka, 2005.

5. Crvenković S., Madarasz R., Mudrinski N., *Zbirka zadataka iz teorije automata*, PMF Novi Sad, 2005.

6. Madarasz, R., Od skupova do univerzalnih algebri, PMF Novi Sad, 2006.

7. P. Đapić, R. Madarasz, P. Marković, Zbirka zadataka iz Univerzalne algebre, PMF u Novom Sadu, Novi Sad, 2014.

Research Interest

Universal algebra, Algebraic Logic, Theoretical Computer Science, Power Structures, Fuzzy structures, Mathematics and Music, Teaching of mathematics

Theses

MADARAS, R. (1989) *Univerzalno algebarski prilozi algebarskoj logici*. (PhD Thesis), Prirodno-matematički fakultet u Novom Sadu

MADARAS, R. (1986) *Relacione algebre*. (Master Thesis), Prirodno-matematički fakultet u Novom Sadu

Monographs

MADARÁSZ, R. and CRVENKOVIĆ, S. (1992) *Relacione Algebre*. Beograd: Matematički Institut SANU

Publications in journals

BOŠNJAK, I. and MADARÁSZ, R. (2018)

Some globally determined classes of graphs, *Czechoslovak Mathematical Journal*, Vol. 68, No. 3, pp. 633-646.

BOŠNJAK, I. and MADARÁSZ, R. (2016)

Compatibility of fuzzy power relations, *Fuzzy Sets and Systems*, 298 , pp. 44–55.

BOŠNJAK, I. and MADARÁSZ, R. (2015) On the composition of fuzzy power relations. *Fuzzy Sets and Systems,* 271, pp. 81-87.

BRADIĆ, M. and MADARÁSZ, R. (2014) Construction of finite L-groups. *Fuzzy Sets and Systems*, 247, pp. 151-164

BOŠNJAK, I. and MADARÁSZ, R. (2013) Retraction closure property. *Algebra Universalis*, 69 (3), pp. 279-285

BOŠNJAK, I. and MADARÁSZ, R. (2009) Remarks on the lattices of fuzzy subsets of a groupoid. *Fuzzy Sets and Systems*, 160 (20), pp. 3007-3012

BOŠNJAK, I., MADARÁSZ, R. and VOJVODIĆ, G. (2009) Algebras of fuzzy sets. *Fuzzy Sets and Systems*, 160 (20), pp. 2979-2988

BOŠNJAK, I. and MADARÁSZ, R. (2007) Some results on complex algebras of subalgebras. *Novi Sad Journal of Mathematics - NSJOM*, 37 (2), pp. 231-240

BOŠNJAK, I. and MADARÁSZ, R. (2003) On power structures. *Algebra and Discrete Mathematics* (2), pp. 14-35

BOŠNJAK, I. and MADARÁSZ, R. (2002) On some classes of good quotient relations. *Novi Sad Journal of Mathematics - NSJOM*, 32 (2), pp. 131-140

BOŠNJAK, I. and MADARÁSZ, R. (2001) Power algebras and generalized quotient algebras. *Algebra Universalis*, 45, pp. 179-189

MADARÁSZ, R. and TASIĆ, B. (2001) On Partially Ordered Monoid generated by Class Operators I, R, H, S, P. *Order*, 18, pp. 49-60

MADARÁSZ, R., MAŠULOVIĆ, D. and TASIĆ, B. (2001) Strong retracts of unary algebras. *Czechoslovak Mathematical Journal*, 51, pp. 205-212

BOŠNJAK, I. and MADARÁSZ, R. (1999) Good quotient relations and power algebras. *Novi Sad Journal of Mathematics - NSJOM*, 29 (2), pp. 71-84

PINUS, A. and MADARÁSZ, R. (1997) On generic multi-algebras. *Prirodno-matematički fakultet - Univerzitet u Novom Sadu, Zbornik radova Faculty of Science - University of Novi Sad Review of Research*, 27 (2), pp. 77-82

MADARÁSZ, R. (1995) On the partial algebras of weak congruences. *Prirodno-matematički fakultet - Univerzitet u Novom Sadu, Zbornik radova Faculty of Science - University of Novi Sad Review of Research*, 25 (1), pp. 89-97

MADARÁSZ, R. (1995) Remarks on power structures. *Algebra Universalis*, 34, pp. 179-184

CRVENKOVIĆ, S. and MADARÁSZ, R. (1994) On dynamic algebras. *Theoretical Computer Science*, 134, pp. 79-86

MADARÁSZ, R. (1994) Generalized factor algebras. *Matematichki Bilten. Bulletin Mathématique de la Société des Mathématiciens de la République de Macédoine*, 18, pp. 29-38

CRVENKOVIĆ, S. and MADARÁSZ, R. (1993) On Kleene algebras. *Theoretical Computer Science*, 108, pp. 17-24

ČUPONA, G. and MADARÁSZ, R. (1993) Free poly-algebras. *Prirodno-matematički fakultet - Univerzitet u Novom Sadu, Zbornik radova Faculty of Science - University of Novi Sad Review of Research*, 23 (2), pp. 245-261

MADARÁSZ, R. (1992) Some results on axiomatizability. *Prirodno-matematički fakultet - Univerzitet u Novom Sadu, Zbornik radova Faculty of Science - University of Novi Sad Review of Research*, 22 (1), pp. 119-132

CRVENKOVIĆ, S. and MADARÁSZ, R. (1991) A non-axiomatizability result in algebraic logic. *Algebra Universalis*, 28, pp. 487-494

ČUPONA, G. and MADARÁSZ, R. (1991) On poly-algebras. *Prirodno-matematički fakultet - Univerzitet u Novom Sadu, Zbornik radova Faculty of Science - University of Novi Sad Review of Research*, 21 (2), pp. 141-156

CRVENKOVIĆ, S. and MADARÁSZ, R. (1989) On a problem of partial algebras. *Prirodno-matematički fakultet - Univerzitet u Novom Sadu, Zbornik radova Faculty of Science - University of Novi Sad Review of Research*, 17 (2), pp. 39-55

STOJAKOVIĆ, Z. and MADARAS, R. (1986) On tetrahedral quadruple systems. *Utilitas Mathematica*, 29, pp. 19-26

MADARAS, R. and MIHAJLOVIĆ, V. (1984) Some remarks on pn-sequences of algebras. *Prirodno-matematički fakultet - Univerzitet u Novom Sadu, Zbornik radova Faculty of Science - University of Novi Sad Review of Research*, 14 (2), pp. 223-232

Publications in Proceedings of conferences

MADARÁSZ, R. and BOŠNJAK, I. (2014) On fuzzy power algebras and compatible

fuzzy relations. In:*35th Linz Seminar on Fuzzy Set Theory, Linz, 2014*. Linz, pp. 89-90

MADARÁSZ, R. and BRADIĆ, M. (2013) L-groups and systems of inequalities in residuated lattices. In:*Arbeitstagung Allgemeine Algebra, Luxemburg, 2013*. Luxemburg

MADARÁSZ, R. and BOŠNJAK, I. (2012) Retraction Closure Property and Entropicity. In:*Arbeitstagung Allgemeine Algebra, Dresden, 2012*. Dresden

MADARÁSZ, R., BOŠNJAK, I. and BRADIĆ, M. (2012) Algebras of Fuzzy Sets. In:*Eleventh International Conference Fuzzy Sets Theory and Applications, Lipotvsky Jan, 2012*. Liptovsky Jan

MADARÁSZ, R. and BOŠNJAK, I. (2011) Vagueness, fuzzy logics and mathematics. In:*15th General Meeting of European Women in Mathematics, Barcelona, 2011*. Barcelona

CRVENKOVIĆ, S., DOLINKA, I. and MADARÁSZ, R. (2002) Some results of the Novi Sad school inspired by Andreka and Nemeti. In:*International conference "Logic, Algebra, Relativity" honoring the 60th birthday of Istvan Nemeti, 2002*

MADARÁSZ, R. and BOŠNJAK, I. (2002) On Power Structures. In:*International Conference "Universal Algebra and Lattice Theory", 2002*

BOŠNJAK, I. and MADARÁSZ, R. (1999) Power algebras and ordered sets of good quotient relations. In:*Conference on Ordered Sets, Varsava, Poljska, 1999*

TASIĆ, B. and MADARÁSZ, R. (1999) On some semigroups of operators. In:*Conference on Algebra honoring the 70th birthday of Ervin Fried, 1999*

BOŠNJAK, I. and MADARÁSZ, R. (1998) Some new results on generalized quotient algebras. In:*VIII International Conference "Algebra & Logic", 1998*

MADARÁSZ, R. and BOŠNJAK, I. (1998) Some new results on power algebras. In:*Conference on Lattices, Oredered Sets and Universal Algebra, Szeged, 1998*. Szeged

MADARÁSZ, R., MAŠULOVIĆ, D. and TASIĆ, B. (1998) On retracts and inflations of universal algebras. In:*VIII International Conference "Algebra & Logic", 1998*

TASIĆ, B. and MADARÁSZ, R. (1998) On Operator of Retracts. In:*Summer School on General Algebra and Ordered Sets, Milonov, 1998*. Milonov

TASIĆ, B. and MADARÁSZ, R. (1998) On strong retracts of algebras. In:*XIII Conference on Applied Mathematics - PRIM '98 : abstracts, Igalo, 1998*. Novi Sad: Institut za matematiku

VAŠ, L. and MADARÁSZ, R. (1995) A note about multi-algebras, power algebras and identities. In:*Zbornik radova IX Conference on Applied Math, 1995*. Novi Sad, pp. 147-153

DELIĆ, D. and MADARAS, R. (1994) O jednom neodlučivom problemu. In:*Sažeci : IX Seminar primenjene matematike - PRIM '94, Budva, 1994*. Novi Sad: Institut za matematiku

MADARAS, R. and VAŠ, L. (1994) O faktor algebrama. In:*Sažeci : IX Seminar primenjene matematike - PRIM '94, Budva, 1994*. Novi Sad: Institut za matematiku

VAŠ, L. and MADARAS, R. (1994) Identiteti i poli-algebre. In:*Sažeci : IX Seminar primenjene matematike - PRIM '94, Budva, 1994*. Novi Sad: Institut za matematiku

MADARÁSZ, R. and ČUPONA, G. (1993) Free poly-algebras. In:*Conference on Lattices, Ordered Sets and Universal algebra, Szeged, 1993*. Szeged

MADARÁSZ, R. and CRVENKOVIĆ, S. (1991) On Kleene algebras. In:*Conference on Universal Algebra, Kunčice, 1991*. Kunčice

CRVENKOVIĆ, S. and MADARÁSZ, R. (1990) On equational base for Kleene relation algebras. In:*Proceedings of International Conference on Words, Languages, Combinatorics, Kyoto, Japan, 1990*. Kyoto, pp. 64-72

MADARAS, R. (1989) Univerzalno-algebarski prilozi algebarskoj logici. In:*Poliadične strukture i primene, Skopje, 1989*. Skopje

MADARÁSZ, R. and CRVENKOVIĆ, S. (1988) Word Problems. In:*Conference on Universal Algebra, Karlovy Vary, 1988*. Karlovy Vary

CRVENKOVIĆ, S. and MADARÁSZ, R. (1987) On semigroup-relation algebras. In:*Proceedings of Algebra and Logic Conference Sarajevo, Sarajevo, 1987*. Sarajevo, pp. 17-28

CRVENKOVIĆ, S. and MADARÁSZ, R. (1986) On the word problem. In:*Summer School on General Algebra and Ordered Sets, Solenice, 1986*. Solenice

CRVENKOVIĆ, S. and MADARÁSZ, R. (1986) Semigroup relation algebras. In:*Arbeitstagung Allgemeine Algebra, Salzburg, 1986*. Salzburg

MADARÁSZ, R. and CRVENKOVIĆ, S. (1986) On relation algebras. In:*Summer School on General Algebra and Ordered Sets, Solenice, 1986*. Solenice

MADARÁSZ, R. and CRVENKOVIĆ, S. (1986) On some decidability questions. In:*Arbeitstagung Allgemeine Algebra, Darmstadt, 1986*. Darmstadt

Publications - Teaching of mathematics

1.. Korać N., R. Sz. Madarasz, *Udžbenici matematike za prvi razred*, u monografiji "Kvalitet udžbenika za mlađi školski uzrast", Institut za psihologiju Filozofskog fakulteta u Beogradu, Beograd, 2007, 133-149.

2. Madarasz, R., Z. Lužanin, *Udžbenici za treći razred osnovne škole - iz ugla matematike*, u monografiji "Kvalitet udžbenika za mlađi školski uzrast", Institut za psihologiju Filozofskog fakulteta u Beogradu, Beograd, 2007, 171-187.

3. R. Madarasz, *Matematika i muzika*, Tangenta, 2010, 61, No 1, 1-10.

4.. R. Madarasz, *Problemi nastave matematike i „kula od slonovače",* Nastava matematike, 2011, LVI, No 3-4, 12-17.

Grants

- 2011-2017: Grant No. 174 018 of the Ministry of Education and Science, Republic of Serbia, "Algebarske, logičke i kombinatorne metode sa primenama u teorijskom računarstvu"

- 2005-2010: Grant No. 144 011 of the Ministry of Science, Technology and Development of Republic of Serbia, "Algebarske strukture i metode za procesiranje informacija"

- 2001-2005: Grant No. 1227 of the Ministry of Science, Technology and Development of Republic of Serbia, "Algebraic and Combinatorial Methods in Information and Communication Tecnnologies"

- 1985-2000: Grants of the Ministry of Science of Republic of Serbia, "Mathematical Structures and Applications - Algebraic Structures and Applications"

Conferences and Workshops Organized

1. Conference *Algebra and Logic*, Novi Sad, 1998, Member of the Organizing Committee

2. *Novi Sad Algebraic Conference,* 2003 (NSAC'03), Member of the Organizing Committee

3. *Novi Sad Algebraic Conference* 2005 (NSAC'05), Member of the Organizing Committee

4. *Dani Logike u Novom Sadu*, Novi Sad, 2005, President of the Organizing Committee

5. *Matematika, Psihologija, Pedagogija*, Novi Sad, 2006, President of the Organizing Committee

6. *Dani Logike u Novom Sadu*, Novi Sad, 2007, President of the Organizing Committee

7. *Okrugli sto "Matematika – od školskog predmeta do nauke"*, Novi Sad, 2011.

8. *Manifestacija "Dani matematike u Novom Sadu"*, Novi Sad, December 2016, President of the Organizing Committee

9. *Manifestacija "Prolecni Festival Matematike"*, Novi Sad, April 2017, President of th Organizing Committee

10. „94 Workshop on General Algebra + Novi Sad Algebraic Conference 2017", Jun 2017, member of Scientific Committee

Seminar lectures:

1. Universal Algebra Seminar, Institute of Mathematics, University of Novi Sad, 1983-1989,

2. Mathematical Logic Seminar, Mathematical Institute of the Serbian Academy of Science and Art, Beograd, four lectures together with Sinisa Crvenkovic, 1989.

3. Mathematical Society of Vojvodina, Kikinda, *Algebraic Logic and Undecidable Problems,* 1990.

4. Mathematical Society of Vojvodina, Novi Sad, *On relation algebras,* 1993.

5. Seminar " *Foundations of Mathematics*" for undergraduate students of Mathematics, Institute of Mathematics, University of Novi Sad, supervising, 1986-1991.

6. Seminar "*Multudisciplinary Themes in Mathematics*" for undergraduate students of Mathematics, Institute of Mathematics, University of Novi Sad, supervising, 1993-94

7. Seminar "*A Short Course in Set Theory*", Institute of Mathematics, University of Novi Sad, supervising, 7 lectures, 2001/2002.

8. "Šta računari ne mogu", Popularna predavanja iz matematike, Gimnazija "J.J. Zmaj", 2008.

 Theses Supervised (on the Department of Mathematics and Informatics, PMF, University of Novi Sad)

- **Supervising of undergraduated student dissertations**
  1. D. Mašulović, *Zakoni na monounarnim algebrama*, 1990.
  2. L. Vaš, *O nekim identitetima*, 1990.
  3. D. Delić, *Prezentacije grupa*, Institute of Mathematics, 1990.
- **Supevising B. Sc. Thesis**
  1. Zorica Borčić, *Snaga formalnih sistema*, 2009.

2. Angyal Andor, *O beskonačnim kardinalima*, 2010.

3. Barna Ágnes, *Paradoksi u matematici,* 2012.

4. Milena Mirčov, *Uticaj nastave matematike na razvijanje sposobnosti logičkog zaključivanja,* 2012.

5. Tatjana Đurin, *Kompozicije rasplinutih relacija i relacijske jednačine,* 2014.

- **Supervising M. Sc. Thesis**
    1. Boža Tasić, *O retraktima algebarskih struktura*, 1999.

    2. Dragan Matić: *Genetički algoritmi i muzika*, 2009.

    3. Jelena Čolić, *Neke klase maskimalnih hiperklonova,* 2012.

    4. Marijana Lazić, *Stepene strukture i multialgebre,* 2012.

    5. Samir Zahirović, *Dobre faktor relacije i stepene structure,* 2013.

    6. Ivan Prokić, *Funkcionalno guste relacione algebre* (oktobar 2014)

    7. Sonja Iličić: *Podalgebre automatski predstavljivih algebri*, master rad, oktobar 2015.

    8. Tijana Vlahović: *Uloga i značaj matematičkih takmičenja u osnovnoj školi,* master rad, oktobar 2016.

    9. Marijana Čotrić: *Ćelijski automati i L-sistemi,* master rad, oktobar 2016.

    10. Sonja Medojević: *Kejlijevi grafovi grupa*, master rad, 2018.

    11. Irena Miščević: *Iskazne logike zasnovane na BL-algebrama*, master rad, 2018.

    12. Monika Mariaš: *Algebarska ispitivanja nekih kvantnih struktura*, master rad, 2018.

    13. Kristina Fruža: *Lukasiewiczeve viševrednosne logike i MV algebre*, master rad, 2018.

- **Supervising Ph. D. Thesis**
    1. Ivica Bošnjak, *O algebrama kompleksa*, University of Novi Sad, 2002.

Advisor for PhD students

1. Milanka Bradić
2. Samir Zahirović

Other

- Referee for "Novi Sad Journal for Mathematics"
- Referee for "Algebra Universalis"

- Reviewer of "Mathematical Reviews"
- Predsednik Izbornog Veća Departmana za matematiku i informatiku, 2006-2009.
- Rukovodilac studijskog programa M1, 2008-2014
- Rukovodilac master studijskog programa MP, 2014-2018.
- Rukovodilac integrisanog studijskog programa M5 Master profesor matematike, 2018-
- Član Nastavno-Naučnog Veća PMF u Novom Sadu, 2009-2012.
- Koautor 2 akreditovana seminara ZUOV Ministarstva za obrazovanje, 2009-2011.
- Član Veća DMI, 2012-
- Šef Katedre za Matematičku Logiku i Diskretnu Matematiku, 2012-
- Predsednik Društva matematičara Novog Sada, 2016 -

Personal Data

- Date of birth: September 28, 1961
- Place of birth: Kikinda, Yugoslavia
- Marital status: Married, 3 children
- Citizenship: Serbian
- Languages:
    1. Mother tongue: Hungarian
    2. Active knowledge: Serbian, English
    3. Reading knowledge of other Slavic languages
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