

PROF. DR. MIODRAG M. SPALEVIĆ

Born June 6, 1961 (Peć – Kosovo, ex-YU)

Married (Zora), five children (Nemanja (1993), Stefan (1994), Vidana (1996), Simona (1999), Nikola (2003))

Position:

Full Professor, Department of Mathematics, Faculty of Mechanical Engineering, University of Beograd, Belgrade, SERBIA; Additional work at the Mathematical Grammar School (Mathematical Gymnasium) in Belgrade (a school with the High National Distinction status); PhD studies of mathematics at Faculty of Science, Kragujevac; Engaged as external member of Department of Mathematics (University of Athens (Greece)) for the selection and promotion of faculty members on positions in the areas of Numerical analysis, Numerical approximation theory and Numerical integration (quadrature and cubature)

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Editorial activities, Refereeing:

Managing Editor of the *Kragujevac Journal of Mathematics* (2000–2006); Editor-in-Chief of the *Kragujevac Journal of Mathematics* (2006-2008); Member of Editorial Board of the *Kragujevac Journal of Mathematics* (2000–); Secretary and member of Editorial Board of the *Kragujevac Journal of Science* (2000-2007); Editor of the *Journal of Pure and Applied Mathematics: Advances and Applications (Allahabad (INDIA))*; Editor of the *Electronic Transactions on Numerical Analysis – ETNA (Kent State University, USA)* (2018-); Guest editor of the *FILOMAT* (2018), *AADM* (2019), *Journal of Computational and Applied Mathematics (Elsevier)* (2023), *Mathematics (MDPI)* (2023-2024); Editor of the *FILOMAT* (2018-); Editor of the *Publications de L’Institut Mathématique (Beograd)* (2019-); Associate Editor of the *Frontiers in Applied Mathematics and Statistics – Mathematics of Computation and Data Science* (2023-); Associate Editor of the *Archives of Applied Mathematics* (2023-); Editor of the *Turkish Journal of Science* (2023-)

Refereeing for *Mathematics of Computation*, *SIAM Review*, *SIAM Journal on Numerical Analysis*, *IMA Journal on Numerical Analysis*, *Numerische Mathematik*, *Journal of Computational and Applied Mathematics*, *Applied Mathematics and Computation*, *Applied Mathematics Letters*, *BIT Numerical Mathematics*, *Numerical Algorithms*, *Applied Numerical Mathematics*, *Mathematics (MDPI)*, *ETNA Electronic Transactions on Numerical Analysis*, *Linear Algebra and its Applications*, *Computer Physics Communications*, *Mathematical Problems in Engineering*, *Journal of the Franklin Institute*, *Iranian Journal of Science and Technology. Transaction A: Science*, *Numerical Functional Analysis and Optimization*, *Appl. Anal. Discrete Math*, *FILOMAT*, *Journal of Ineq. and Appl.*, *Mathematics*,

Kragujevac Journal of Mathematics, Matematički vesnik, Publications de L'Institut Mathématique, The teaching of mathematics (SMS), Alexandria Engineering Journal.

Reviewer for *Mathematical Reviews* (AMS), *Zentralblatt für Mathematik* (AMS Subject Classification: 41, 65).

Research interests:

My research interests are in applied and numerical analysis, approximation theory and algorithms, especially in the theory of quadrature formulas of Gaussian type with multiple nodes and corresponding orthogonal polynomials. My recent work is based on positive Gaussian quadrature formulas and on quadrature formulas with multiple nodes for Fourier coefficients.

MSc and PhD theses:

- [1] **M. M. Spalević**, *S-orthogonal polynomials and Turán quadratures*, **MSc thesis**, Faculty of Philosophy, Niš, 1994 (Thesis advisor: G.V. Milovanović; full time member of Serbian Academy of Sciences and Arts)
- [2] **M. M. Spalević**, *Numerical integration and some types of orthogonal polynomials*, **PhD thesis**, Faculty of Science, Kragujevac, 1997 (Thesis advisor: G.V. Milovanović; full time member of Serbian Academy of Sciences and Arts)

Selected papers in refereed journals (I have published more than 90 papers; more than 70 on SCI list):

- [1] G. V. Milovanović and **M. M. Spalević**, *Construction of Chakalov–Popoviciu's Type Quadrature Formulae*, **Rend. Circ. Mat. Palermo** 52 (1998) 625–636.
- [2] **M. M. Spalević**, *Bessel's inequality in terms of a basis of V_k* , **Acta Sci. Math. (Szeged)** 65 (1999), 169–177.
- [3] **M. M. Spalević**, *Product of Turán Quadratures for Cube, Simplex, Surface of the Sphere, \bar{E}_n^r , $E_n^{r^2}$* , **J. Comput. Appl. Math.** 106 (1999) 99–115.
- [4] **M. M. Spalević**, *Quadrature formulae of Radau and Lobatto type connected to s-orthogonal polynomials*, **Zh. Vychisl. Mat. Mat. Fiz.** 42 (2002), 615–626.
- [5] **M. M. Spalević**, *Remainder term in Chakalov–Popoviciu quadratures of Radau and Lobatto type and influence function*, **Publ. Inst. Math. (Beograd)** (N.S.) 70 (84) (2001), 79–93.
- [6] G. V. Milovanović and **M. M. Spalević**, *Quadrature formulae connected to σ -orthogonal polynomials*, **J. Comput. Appl. Math.** 140 (2002), 619–637.
- [7] **M. M. Spalević**, *Calculation of Chakalov–Popoviciu's quadratures of Radau and Lobatto type*, **ANZIAM J.** 3 (43) (2002), 429–447.
- [8] G. V. Milovanović and **M. M. Spalević**, *Error bounds for Gauss–Turán quadrature formulas of analytic functions*, **Math. Comp.** 72 (2003), 1855–1872.

- [9] G. V. Milovanović, **M. M. Spalević** and A. S. Cvetković, *Calculation of Gaussian quadratures with multiple nodes*, **Math. Comput. Modelling** 39 (2004), 325–347.
- [10] G. V. Milovanović and **M. M. Spalević**, *Error analysis in some Gauss-Turán-Radau and Gauss-Turán-Lobatto quadratures for analytic functions*, **J. Comput. Appl. Math.** 164–165 (2004), 569–586.
- [11] G. V. Milovanović and **M. M. Spalević**, *An error expansion for some Gauss-Turán quadratures and L^1 -estimates of the remainder term*, **BIT Numerical Mathematics** (2005) 45: 117–136.
- [12] G. V. Milovanović and **M. M. Spalević**, *Bounds of the error of Gauss-Turán-type quadratures*, **J. Comput. Appl. Math.** 178 (2005), 333–346.
- [13] G. V. Milovanović and **M. M. Spalević**, *Quadrature rules with multiple nodes for evaluating integrals with strong singularities*, **J. Comput. Appl. Math.** 189 (2006), 689–702.
- [14] G. V. Milovanović and **M. M. Spalević**, *Gauss-Turán quadratures of Kronrod Type for generalized Chebyshev weight functions*, **Calcolo** 43 (2006), 171–195.
- [15] G. V. Milovanović and **M. M. Spalević**, *A note on the bounds of the error of Gauss-Turán-type quadratures*, **J. Comput. Appl. Math.** 200 (2007), 276–282.
- [16] G.V. Milovanović and **M.M. Spalević**, *On monotony of the error in Gauss-Turán quadratures for analytic functions*, **ANZIAM J.** 48 (2007), 567–581.
- [17] **M. M. Spalević**, *On generalized averaged Gaussian formulas*, **Math. Comp.** 76 (2007), 1483–1492.
- [18] **M. M. Spalević**, *A note on generalized averaged Gaussian formulas*, **Numer. Algorithms** 76 (2007), 253–264.
- [19] G.V. Milovanović, **M.M. Spalević**, and M.S. Pranić, *Maximum of the modulus of kernels in Gauss-Turán quadratures*, **Math. Comp.** 77 (2008), 985–994.
- [20] G.V. Milovanović, **M.M. Spalević** and M.S. Pranić, *On the remainder term of Gauss-Radau quadratures for analytic functions*, **J. Comput. Appl. Math.** 218 (2008), 281–289.
- [21] G.V. Milovanović, **M.M. Spalević**, and M.S. Pranić, *Error estimates for Gauss-Turán quadratures and their Kronrod extensions*, **IMA J. Numer. Anal.** 29 (2009), 486–507.
- [22] G.V. Milovanović, **M.M. Spalević**, and M.S. Pranić, *Error estimates for Gaussian quadratures of analytic functions*, **J. Comput. Appl. Math.** 233 (2009), 802–807.
- [23] G.V. Milovanović, **M.M. Spalević**, and M.S. Pranić, *Bounds of the error of Gauss-Turán-type quadratures, II*, **Appl. Numer. Math.** 60 (2010), 1–9.
- [24] **M.M. Spalević** and M.S. Pranić, *Error bounds of certain Gaussian quadrature formulae*, **J. Comput. Appl. Math.** 234 (2010), 1049–1057.

- [25] **M.M. Spalević** and M.S. Pranić, *The remainder term of Gauss-Turán quadratures for analytic functions*, (2010), 253–266. Approximation and Computation: In Honor of Gradimir V. Milovanović, Springer Optimization and Its Applications 42, W. Gautschi et al. (eds.), DOI 10.1007/978-1-4419-6594-3 16, Springer Science+Business Media, New York, LLC 2011.
- [26] **M.M. Spalević**, M.S. Pranić, A.V. Pejčev, *Maximum of the modulus of kernels of Gaussian quadrature formulae for one class of Bernstein-Szegő weight functions*, **Appl. Math. Comput.** 218 (2012), 5746–5756.
- [27] **M.M. Spalević**, *Error estimates of anti-Gaussian quadrature formulae*, **J. Comput. Appl. Math.** 236 (2012), 3542–3555.
- [28] A.V. Pejčev and **M.M. Spalević**, *On the remainder term of Gauss-Radau quadrature with Chebyshev weight of the third kind for analytic functions*, **Appl. Math. Comput.** 219 (2012), 2760–2765.
- [29] A.V. Pejčev and **M.M. Spalević**, *Error bounds for Gaussian quadrature formulae with Bernstein-Szegő weights that are rational modifications of Chebyshev weight functions of the second kind*, **IMA J. Numer. Anal.** 32 (2012), 1733–1754.
- [30] **M.M. Spalević**, *Error bounds of Gaussian quadrature formulae for one class of Bernstein-Szegő weights*, **Math. Comp.** 82 (2013) 1037–1056.
- [31] **M.M. Spalević**, *Error bounds of Gaussian quadratures for one class of Bernstein-Szegő weight functions*, **The Third Mathematical Conference of Republic of Srpska**, Trebinje, June 7 and 8, 2013, pgs. 161–176.
- [32] G.V. Milovanović, A.V. Pejčev and **M.M. Spalević**, *A note on an error bound of Gauss-Turán quadrature with the Chebyshev weight function of the first kind*, **Filomat** 27 (2013) 1037–1042.
- [33] A.V. Pejčev and **M.M. Spalević**, *Error bounds of Micchelli-Rivlin quadrature formula for analytic functions*, **J. Approx. Theory**, 169 (2013) 23–34.
- [34] A.V. Pejčev and **M.M. Spalević**, *Error bounds of the Micchelli-Sharma quadrature formula for analytic functions*, **J. Comput. Appl. Math.**, 259 (2014) 48–56.
- [35] A.S. Cvetković, **M.M. Spalević**, *Estimating the error of Gauss-Turán quadrature formulas by using their extensions*, **Electron. Trans. Numer. Anal.**, 41 (2014) 1–12.
- [36] G.V. Milovanović and **M.M. Spalević**, *Kronrod extensions with multiple nodes of quadrature formulas for Fourier coefficients*, **Math. Comp.**, 83 (2014), 1207–1231.
- [37] **M.M. Spalević**, *Error bounds and estimates for Gauss-Turán quadrature formulae of analytic functions*, **SIAM J. Numer. Anal.**, 52 (2014) 443–467.
- [38] A.V. Pejčev, **M.M. Spalević**, *The error bounds of Gauss-Radau quadrature formulae with Bernstein-Szegő weight functions*, **Numer. Math.**, 133 (2016) 177–201.

- [39] M.M. Spalević, A.S. Cvetković, *Estimating the error of Gaussian quadratures with simple and multiple nodes by using their extensions with multiple nodes*, **BIT Numerical Mathematics**, 56 (2016) 357–374.
- [40] Lj.V. Mihić, A.V. Pejčev, M.M. Spalević, *Error bounds for Gauss-Lobatto quadrature formula with multiple end points with Chebyshev weight function of the third and the fourth kind*, **Filomat**, 30:1 (2016) 231–239.
- [41] L. Reichel, M.M. Spalević, T. Tang, *Generalized averaged Gaussian quadrature rules for the approximation of matrix functionals*, **BIT Numerical Mathematics**, 56 (2016) 1045–1067.
- [42] D.Lj. Djukić, L. Reichel, M.M. Spalević, *Truncated generalized averaged Gauss quadrature rules*, **J. Comput. Appl. Math.**, 308 (2016) 408–418.
- [43] D.Lj. Djukić, L. Reichel, M.M. Spalević, J.D. Tomanović, *Internality of the averaged Gaussian quadratures and their truncated variants with Bernstein-Szegő weight functions*, **Electron. Trans. Numer. Anal.**, 45 (2016) 405–419.
- [44] M.M. Spalević, *On generalized averaged Gaussian formulas. II*, **Math. Comp.**, 86 (2017) 1877–1885.
- [45] N. Eshghi, L. Reichel, M.M. Spalević, *Enhanced matrix function approximation*, **Electron. Trans. Numer. Anal.**, 47 (2017) 197–205.
- [46] B. de la Calle Ysern, M.M. Spalević, *Modified Stieltjes polynomials and Gauss-Kronrod quadrature rules*, **Numer. Math.**, 138 (2018) 1–35.
- [47] D.Lj. Djukić, A.V. Pejčev, M.M. Spalević, *The error bounds of Gauss-Kronrod quadrature formulae with Bernstein-Szegő weight functions*, **Numer. Algor.**, 77 (2018) 1003–1028.
- [48] R.M. Mutavdžić, A.V. Pejčev, M.M. Spalević, *Error bounds for Kronrod extension of generalizations of Micchelli-Rivlin quadrature formula for analytic functions*, **Electron. Trans. Numer. Anal.**, 50 (2018) 20–35.
- [49] D. Jandrić, M.M. Spalević, J.D. Tomanović, *Error estimates for certain cubature formulae*, **Filomat**, 32:20 (2018) 6893–6902.
- [50] Lj.V. Mihić, A.V. Pejčev, M.M. Spalević, *Error estimations of Turán formulas with Gori-Micchelli and generalized Chebyshev weight functions*, **Filomat**, 32:20 (2018) 6927–6936.
- [51] G.V. Milovanović, R. Orive, M.M. Spalević, *Quadratures with multiple nodes for Fourier-Chebyshev coefficients*, **IMA J. Numer. Anal.**, 39:1 (2019) 271–296.
- [52] A.V. Pejčev, M.M. Spalević, *Error bounds of a quadrature formula with multiple nodes for the Fourier-Chebyshev coefficients for analytic functions*, **Sci. China Math.**, 62 (2019) 1657–1668.
- [53] D.Lj. Djukić, L. Reichel, M.M. Spalević, J.D. Tomanović, *Internality of generalized averaged Gaussian quadrature rules and their truncated variants for modified Chebyshev measures of the second kind*, **J. Comput. Appl. Math.**, 345 (2019) 70–85.

- [54] G.V. Milovanović, M.S. Pranić, **M.M. Spalević**, *Quadrature with multiple nodes, power orthogonality, and moment-preserving spline approximation, part II*, **Appl. Anal. Discrete Math.**, 13 (2019) 1–27.
- [55] D.Lj. Djukić, L. Reichel, **M.M. Spalević**, *Internality of generalized averaged Gaussian quadratures and their truncated variants for measures induced by Chebyshev polynomials*, **Appl. Numer. Math.**, 142 (2019)190–205.
- [56] R.M. Mutavdžić, A.V. Pejčev, **M.M. Spalević**, *The error bounds of Gauss-Lobatto quadrature for weight functions of Bernstein-Szegő type*, **Appl. Anal. Discrete Math.**, 13 (2019), 733–745.
- [57] T.M. Rassias, **M.M. Spalević**, *Gradimir Milovanović – A Master in Approximation and Computation, part I*, **Appl. Anal. Discrete Math.**, 13 (2019) 643–648.
- [58] D.Lj. Djukić, R.M. Mutavdžić Djukić, A.V. Pejčev, **M.M. Spalević**, *Error estimates of Gaussian type quadrature formulae for analytic functions on ellipses - a survey of recent results*, **Electron. Trans. Numer. Anal.**, 53 (2020) 352–382.
- [59] R. Orive, J.C. Santos-León, **M.M. Spalević**, *Cubature formulae for the Gaussian weight. Some old and new rules.*, **Electron. Trans. Numer. Anal.**, 53 (2020) 426–438.
- [60] R. Orive, A.V. Pejčev, **M.M. Spalević**, *The error bounds of Gauss quadrature formula for the modified weight functions of Chebyshev type*, **Appl. Math. Comput.**, 369 (2020) 124806, 1–22. DOI: 10.1016/j.amc.2019.124806
- [61] **M.M. Spalević**, *A note on generalized averaged Gaussian formulas for a class of weight functions*, **Numer. Algor.**, 85 (2020) 977–993. DOI: 10.1007/s11075-019-00848-x
- [62] T.M. Rassias, **M.M. Spalević**, *Gradimir Milovanović – A Master in Approximation and Computation, part II*, **Appl. Anal. Discrete Math.**, 14 (2020) 528–559.
- [63] J.D. Tomanović, L. Reichel, **M.M. Spalević**, *Rational averaged Gauss quadrature rules*, **Filomat**, 34 (2020) 379–389.
- [64] L. Reichel, **M.M. Spalević**, *A new representation of generalized averaged Gauss quadrature rules*, **Appl. Numer. Math.**, 165 (2021) 614–619.
- [65] D.Lj. Djukić, R.M. Mutavdžić Djukić, L. Reichel, **M.M. Spalević**, *Internality of generalized averaged quadrature rules and truncated variants for modified Chebyshev measures of the first kind*, **J. Comput. Appl. Math.**, 398 (2021) 113696, 1–11. DOI: <https://doi.org/10.1016/j.cam.2021.113696>.
- [66] B. de la Calle Ysern, **M.M. Spalević**, *On the computation of Patterson-type quadrature rules*, **J. Comput. Appl. Math.**, 403C (2022) 113850, 1–15. DOI: <https://doi.org/10.1016/j.cam.2021.113850>
- [67] D.R. Jandrlić, A.V. Pejčev, **M.M. Spalević**, *Kronrod extension for Gauss-Radau and Gauss-Lobatto quadrature formulae*, **Filomat**, 36:3 (2022) 961–977.

- [68] L. Reichel, **M. M. Spalević**, *Generalized averaged Gaussian quadrature formulas: Properties and applications*, **J. Comput. Appl. Math.**, 410 (2022) 114232, 1–18.
DOI: <https://doi.org/10.1016/j.cam.2022.114232>
- [69] D.R. Jandrlić, Dj.M. Krtinić, Lj.V. Mihić, A.V. Pejčev, **M. M. Spalević**, *Error bounds of Gaussian quadrature formulae with Legendre weight function for analytic integrands*, **Electron. Trans. Numer. Anal.**, 55 (2022) 424–437.
DOI: [10.1553/etna_vol55s424](https://doi.org/10.1553/etna_vol55s424)
- [70] R. Orive, A.V. Pejčev, **M. M. Spalević**, Lj. Mihić, *On the Gauss-Kronrod quadrature formula for a modified weight function of Chebyshev type*, **Numer. Algor.**, 91 (2022) 1855–1877.
- [71] D.Lj. Djukić, R.M. Mutavdžić Djukić, L. Reichel, **M. M. Spalević**, *Internality of generalized averaged quadrature rules and truncated variants for modified Chebyshev measures of the third and fourth kind*, **Numer. Algor.**, 92 (2023) 523–544.
- [72] **M. M. Spalević**, *Modified anti-Gaussian quadrature formulae of Chebyshev type*, **Numer. Algor.**, 2023. DOI: <https://doi.org/10.1007/s11075-023-01611-z>
- [73] D.Lj. Djukić, R.M. Mutavdžić Djukić, L. Reichel, **M.M. Spalević**, *Optimal averaged Padé-type approximants*, **Electron. Trans. Numer. Anal.**, 59 (2023) 145–156.
- [74] D.Lj. Djukić, R.M. Mutavdžić Djukić, L. Reichel, **M.M. Spalević**, *Internality of averaged Gaussian quadrature rules for certain modification of Jacobi measures*, **Appl. Comput. Math. (Baku)**, 22 (2003) 426–442. DOI: [10.30546/1683-6154.22.4.2023.426](https://doi.org/10.30546/1683-6154.22.4.2023.426)
- [75] D.Lj. Djukić, R.M. Mutavdžić Djukić, L. Reichel, **M.M. Spalević**, *Weighted averaged Gaussian quadrature rules for modified Chebyshev measures*, **Appl. Numer. Math.**, 2023. DOI: <https://doi.org/10.1016/j.apnum.2023.05.014>
- [76] L. Reichel, **M. M. Spalević**, *Radau- and Lobatto-type averaged Gauss rules*, **J. Comput. Appl. Math.**, 437 (2024) 115477.
DOI: <https://doi.org/10.1016/j.cam.2023.115475>
- [77] D.Lj. Djukić, R.M. Mutavdžić Djukić, L. Reichel, and **M. M. Spalević**, *Decompositions of optimal averaged Gauss quadrature rules*, **J. Comput. Appl. Math.**, 438 (2024) Art. 115586.
- [78] D.R. Jandrlić, A.V. Pejčev, **M. M. Spalević**, *Error bound of Gaussian quadrature rules for certain Gegenbauer weight functions*, **J. Comput. Appl. Math.**, 440 (2024) Art. 115661. DOI: <https://doi.org/10.1016/j.cam.2023.115661>
- [79] L. Fermo, L. Reichel, G. Rodriguez, **M. M. Spalević**, *Averaged Nyström interpolants for the solution of Fredholm integral equations of the second kind*, **Appl. Math. Comput.**, 467 (2024) Art. 128482.
DOI: <https://doi.org/10.1016/j.amc.2023.128482>
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[80] H. Alqahtani, C. Borges, D.Lj. Djukić, R. M. Mutavdžić Djukić, L. Reichel, and **M.M. Spalević**, *Computation of pairs of related Gauss quadrature rules*, **Appl. Numer. Math.**, submitted.

I have participated more than 35 times in Conferences and Congresses in Serbia, ex-YU, Europe, so far. [Potenza, Italy (1996); Leuven, Belgium ICCAM (2000, 2002, 2004, 2006 (two lectures), 2010); Ghent, Belgium ICCAM (2008, 2012); Mataruška Banja, Serbia (1998); Cluj-Napoca, Romania (2002) - Plenary lecture; Copenhagen, Denmark (2003); Kragujevac, Serbia, PRIM (2006) - Plenary lecture; Linz, Austria, CAOTA (2011) - Invited lecture; S. Margherita di Pula, Sardinia, Italy, Scientific Computing (2011); An International Symposium on Orthogonality, Quadrature and Related Topics OrthoQuad 2014, Puerto de la Cruz, Tenerife, Spain, January 20-24, 2014; The 3rd (June 7-8, 2013), 4th (June 6-7, 2014), 5th (June 5-6, 2015 – Introductory lecture for the applied mathematics section) and 6th (May 21-22, 2016 – Introductory lecture for the applied mathematics section) Mathematical Conference of Republic of Srpska, Trebinje or Pale, Bosnia and Herzegovina; ACTA 2017: Approximation and Computation – Theory and Applications. Dedicated to Professor Walter Gautschi on the Occasion of his 90th Anniversary. Belgrade (Serbia), November 30 – December 2, 2017; SMAK – 14th Serbian Mathematical Congress, May 16–19, 2018, Kragujevac, Serbia; MICOPAM 2018: The Mediterranean International Conference of Pure&Applied Mathematics and Related Areas, October 26 – 29, 2018, Antalya, Turkey (Dedicated to Professor Gradimir V. Milovanović on the Occasion of his 70th Anniversary) - Invited lecture; Scientific conference dedicated to the 70th birthday of academician Gradimir V. Milovanović, November 13, 2018, SASA, Belgrade, Serbia - Plenary lecture; Recent Advances in Scientific Computation, Santa Margherita di Pula, Italy, May 27-29, 2019 (Organizing of Minisymposium “Gauss-type Quadrature Rules: Theory and Applications”, with Miroslav Pranić); The 9th International Congress on Industrial and Applied Mathematics (ICIAM 2019), Valencia, Spain, July, 15–19, 2019 (Organizing of Minisymposium “Orthogonal polynomials and quadrature: Theory, computation, and applications” with L. Reichel and M. Pranić); MNA2022: Mathematics, Numerics and Applications, Budva, June 1 – 3, 2022 – Opening ceremony talk; NMLSP 2022: Numerical Methods for Large Scale Problems, Belgrade, June 6 – 10, 2022 (Organizing of Minisymposium “Recent advances in numerical integration by Gaussian rules”, with M.R. Stanić); Functional Analysis, Approximation Theory and Numerical Analysis, Matera, Italy, July, 5–8, 2022 (Organizing of Minisymposium “Orthogonal Polynomials, Interpolation and Numerical Integration”, with S.E. Notaris and M.R. Stanić); 5th International Conference on Mathematical and Related Sciences (ICMRS 2022), October, 27–30, 2022, Antalya, Turkey - Keynote speaker; International Mathematical Conference Analysis, Approximations and Applications (AAA2023), June 21–24, 2023, Vrnjačka Banja, Serbia - Invited speaker of the special session dedicated to G.V. Milovanović; 6th International Conference on Mathematical and Related Sciences (ICMRS 2023), October, 20–22, 2023, Turkey [Online Meeting] (<https://icoles.net/>) - Keynote speaker; The conference ICOLES 2023 (<https://icoles.net/>); The next conference: COIA 2024 – The 9th International

Conference on Control and Optimization with Industrial Applications, 27–29 August, 2024, Istanbul, Turkey (<http://coia-conf.org/en/view/index/>);]

Books, Chapters:

- [1] G.V. Milovanović, M.A. Kovačević, **M.M. Spalević**, *Numerical mathematics – A collection of solved problems*, 2003. [In Serbian]
- [2] **M.M. Spalević**, M.S. Pranić, *Numerical methods*, 2007. [In Serbian]
- [3] A.S. Cvetković, **M.M. Spalević**, *Numerical methods*, 2013. [In Serbian]
- [4] **Miodrag Spalević**, *Chapter 7: Interpolation and approximation*, In: Walter Gautschi, Volume 1: Selected Works with Commentaries, Contemporary Mathematicians, pp. 49–56, Springer Science + Business Media New York 2014. DOI 10.1007/978-1-4614-7034-2_7
- [5] G.V. Milovanović, **M.M. Spalević** and M.S. Pranić, *Quadrature formulae with multiple nodes*, World Scientific Publ. Co., Singapore – New Jersey – London – Hong Kong, 2022, 400 pp.; in preparation.
- [6] **M.M. Spalević**, A.S. Cvetković, I.D. Arandjelović, A.V. Pejčev, D.Lj. Djukić, J.D. Tomanović, *Višestruki, krivolinijski i površinski integrali i primene, teorija redova*, (2015) FME. [In Serbian]
- [7] **M.M. Spalević**, I.D. Arandjelović, D. Doder, A.V. Pejčev, D.Lj. Djukić, J.D. Tomanović, *Diferencijalne jednačine*, (2017) FME. [In Serbian]
- [8] **M.M. Spalević**, I.D. Arandjelović, A.V. Pejčev, D.Lj. Djukić, J.D. Tomanović, R.M. Mutavdžić Djukić, *Višestruki, krivolinijski i površinski integrali*, (2023) FME. [In Serbian]
- [9] H. Almutairi, D. Lj. Djukić, R. M. Mutavdžić Djukić, M. S. Pranić, L. Reichel, and **M.M. Spalević**, *Chapter: Enhanced averaged quadrature rules with application to error estimation* in the book entitled Analysis, Approximation, Optimization: Computation and Applications - In Honor of Gradimir V. Milovanović on the Occasion of his 75th Anniversary (edited by: M. Stanić, M. Albijanić, D. Djurčić, M. Spalević), Springer, to appear.

Supervising of MSc and PhD theses:

- [1] Miroslav S. Pranić, *Error bounds of Gauss-Turán quadratures for analytic functions*, MSc thesis, University of Kragujevac (2006)
- [2] Ljiljana Galjak, *Kronrod extensions of the quadratures Gaussian type with multiple nodes*, MSc thesis, University of Kragujevac (2007)
- [3] Miroslav S. Pranić, *Error bounds of some types Gaussian quadratures for analytic functions*, PhD thesis, University of Kragujevac (2007)
- [4] Aleksandar V. Pejčev, *Error estimates of Gaussian type quadrature formulae for analytic functions*, PhD thesis, University of Kragujevac (2013)
- [5] Dušan Lj. Djukić, *Internality of truncated averaged Gaussian quadratures and error estimate of Gauss-Kronrod quadratures*, PhD thesis, University of Kragujevac (2018)
- [6] Jelena D. Tomanović, *Averaged quadrature formulae with variants and applications*, PhD thesis, University of Kragujevac (2019)
- [7] Rada M. Mutavdžić, *Error estimates in standard quadratures and quadratures for Fourier coefficients of Gaussian type*, PhD thesis, University of Kragujevac (2020) [supervising with A. Pejčev]

[8] Velimir Ćorović, PhD thesis, University of Montenegro (Podgorica), in progress.

Visiting Scientist:

- Linz University (Austria) (WUS project – Individual mobility grant) [May 2004];
- University of Modena and Reggio Emilia (Italy) [January, February 2007];
- Universidad Politécnica de Madrid (Spain) [June, 2012];
- University of La Laguna, Tenerife (Spain) [September, 2014];
- Universidad Politécnica de Madrid (Spain) [September, 2016];
- Universidad Politécnica de Madrid (Spain) [September, 2017];
- University of La Laguna, Tenerife (Spain) [March, 2018];
- Kent State University, Department of Mathematical Sciences, Kent (Ohio, USA) [December, 2019];

Meetings organization:

[1] International workshop dedicated to the 55th Anniversary of Professor Gradimir V. Milovanović: *Applied Orthogonal Systems, Constructive Approximation and Numerical Method*, Kragujevac, Serbia and Montenegro, October 15, 2003.

[2] The first International Conference on Numerical and Applied Mathematics ICNAM-2006, dedicated to Professor Boško Jovanović on the occasion of his 60th birthday, Kragujevac, Serbia, September 27 – 30, 2006.

[3] Short conference: *Methods of numerical and nonlinear analysis with applications* (University of Belgrade, Faculty of Mechanical Engineering, Department of Mathematics, May 30, 2012)

[4] ACTA 2017: Approximation and Computation – Theory and Applications. Dedicated to Professor Walter Gautschi on the Occasion of his 90th Anniversary. Belgrade (Serbia), November 30 – December 2, 2017.

[5] Conference CTOA2018 (Faculty of Mechanical Engineering, University of Belgrade, May 29, 2018)

[6] NMLS 2022: Numerical Methods for Large Scale Problems. Dedicated to Professor Lothar Reichel on the Occasion of his 70th Anniversary. Belgrade, June 6 – 10, 2022.

Awards:

[1] Awarded by Serbian Ministry of Science and Environmental Protection, for the achieved results in research for the years 2002 and 2003.

[2] **Award of Endowment “Veselin Lučić” for the best scientific achievement in the year 2012/2013 on the University of Belgrade.**

Scientific projects:

– Participant in the Serbian scientific project # 04M03 “Methods and Models in Theoretical, Applied and Industrial Mathematics” (1998 - 2000);

– Participant in the Serbian scientific project # 2002 “Applied Orthogonal Systems, Constructive Approximation and Numerical Methods” (2002 – 2005) (Awarded by Serbian Ministry of Science and Environmental Protection, for the achieved results in research for the years 2002 and 2003);

– Participant in Project # IB7320-111079 SCOPES Joint Research Project “New Methods for Quadrature” (Swiss National Science Foundation), 2006-2008;

- **Leader** of the Serbian scientific project # 144005 “Approximation of linear operators” (2006 – 2010);
- **Leader** of the Serbian scientific project # 174002 “Methods of numerical and nonlinear analysis with applications” (2011 – 2019), and the researcher of A1, the top range in the Serbian scientific projects for basic researches in the period 2002 – 2018;
- Collaborator in the Spanish government scientific project “Difference Equations and Constructive Approximation: Theory and Applications” (2015–2017) [The details of the Spanish project are as follows. Name: “Difference Equations and Constructive Approximation: Theory and Applications”. Main Researcher: Maria Dolores Barrios Rolania, Technical University of Madrid. Number: MTM2014-54053-P]
- **Leader** of the sub-project “Methods of numerical and nonlinear analysis with applications” of the Serbian scientific project “Integrated research in the fields of macro, micro and nano mechanical engineering”, 2020 – 2023.

Other:

- Member of Mathematical Society of Serbia;
- Member of Board for mathematics, informatics and mechanics, at Serbian Ministry of Science (1999–2000; 2010–2016);
- Financial vice dean of Faculty of Science, Kragujevac, Serbia (2002–2006);
- Head of Department of Mathematics, Faculty of Mechanical Engineering, Belgrade (2010 – present)