

Samir Karasuljić

Biography and Bibliography

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Education

- 2011–2016 **PhD (Mathematics)**, *Faculty of Natural Sciences and Mathematics*, Tuzla, Bosnia and Herzegovina.
- 2005–2009 **MSc (Mathematics)**, *Faculty of Natural Sciences and Mathematics*, Tuzla, Bosnia and Herzegovina.
- 1998–2003 **High school teacher of Mathematics and Physics**, *Faculty of Natural Sciences and Mathematics*, Tuzla, Bosnia and Herzegovina.

Work Experience

- 2022– **Associate Professor**, *Faculty of Natural Sciences and Mathematics, University of Tuzla*, Tuzla, Bosnia and Herzegovina.
Numerical and computational mathematics, Basic Mathematics
- 2017–2022 **Assistant Professor**, *Faculty of Natural Sciences and Mathematics, University of Tuzla*, Tuzla, Bosnia and Herzegovina.
Numerical and computational mathematics, Basic Mathematics
- 2014–2017 **Teaching Assistant**, *Faculty of Natural Sciences and Mathematics, University of Tuzla*, Tuzla, Bosnia and Herzegovina.
Numerical and computational mathematics, Basic Mathematics
- 2003–2014 **High School Teacher of Mathematics**, *Gymnasium "Meša Selimović"*, Tuzla, Bosnia and Herzegovina.

Papers

- 2021 V.D.Liseikin, **S. Karasuljić**, A. V. Mukhortov, V. I. Paasonen, "On a Comprehensive Grid for Solving Problems Having Exponential or Power of First Type Layers", *Numerical Geometry, Grid Generation and Scientific Computing. Lecture Notes in Computational Science and Engineering*, vol 143. Springer, Cham. https://doi.org/10.1007/978-3-030-76798-3_14.

- 2020 **S. Karasuljić**, H. Ljevaković, "On Construction of a Global Numerical Solution for a Semilinear Singularly–Perturbed Reaction Diffusion Boundary Value Problem", *Bulletin Mathématique de la Société des Mathématiciens de la République Macédoine* No 44, Vol 2 (2020), pp. 131–148.
- 2020 V. D. Liseikin, **S. Karasuljić**, "Numerical Analysis of Grid–Clustering Rules for Problems with Power–Type of Kind 1 Boundary Layers", *Computational Technologies* 25(1) (2020), pp. 49–65.
- 2019 **S. Karasuljić**, H. Zarin and E. Duvnjaković, "A class of difference schemes uniformly convergent on a modified Bakhvalov mesh", *Journal of Modern Methods in Numerical Mathematics* 10:(1-2) (2019), pp. 16-35 .
- 2018 **S. Karasuljić**, E. Duvnjaković and E. Memić, "Uniformly Convergent Difference Scheme for a Semilinear Reaction-Diffusion Problem on a Shishkin Mesh", *Advances in Mathematics: Scientific Journal* 7.(1) (2018), pp. 23-38.
- 2017 **S. Karasuljić**, E. Duvnjaković, V. Pasic and E. Baraković, "Construction of a global solution for the one dimensional singularly-perturbed boundary value problem", *Journal of Modern Methods in Numerical Mathematics* 8.(1-2) (2017), pp. 52-65.
- 2015 **S. Karasuljić**, E. Duvnjaković and H. Zarin, "Uniformly Convergent Difference Scheme for a Semilinear Reaction-Diffusion Problem", *Advances in Mathematics: Scientific Journal* 4.2 (2015), pp. 139-159.
- 2015 E. Duvnjaković, **S. Karasuljić**, V. Pašić and H. Zarin, "A Uniformly Convergent Difference Scheme on a Modified Shishkin Mesh for the Singularly Perturbed Reaction-Diffusion Boundary Value Problem", *Journal of Modern Methods in Numerical Mathematics* 6.1 (2015), pp. 28-43.
- 2011 E. Duvnjaković, **S. Karasuljić**, "Difference Scheme for Semilinear Reaction-Diffusion Problems on a Mesh of Bakhvalov Type", *Mathematica Balkanica* 25.5 (2011), pp. 499-504 .
- 2010 E. Duvnjaković, N. Okičić, **S. Karasuljić**, "Difference Scheme for Semilinear Reaction-diffusion Problem", *14th International Research/Expert Conference Trends in the Development of Machinery and Associated Technology TMT 2010, 7. Mediterranean Cruise.* (2010), pp. 793-796.

Conferences

- 2020 V.D. Liseikin, **S. Karasuljić**, A.V. Mukhortov, V.I. Paasonen, "On a comprehensive grid for solving problems having exponential or power-of-first-type layers". *Numerical Geometry, Grid Generation and Scientific Computing, 10th International NUM-GRID conference celebrating the 130th anniversary of Boris Delaunay–Dorodnicyn Computing Center of the RAS, Moscow, Russia, (2020)*
- 2019 V.D. Liseikin, A.N. Kudryavtsev, V.I. Paasonen, **S. Karasuljić**, A.V. Mukhortov,, "On Rules for Grid Clustering in the Zones of Boundary and Interior Layers". *Mathematics and its Applications. International Conference in honor of the 90th birthday of Sergei K. Godunov, Novosirsk, Russia, (2019), pp. 275*
- 2015 **S. Karasuljić**, E. Duvnjaković, "Construction of the Difference Scheme for Semilinear Reaction-Diffusion Problem on a Bakhvalov Type Mesh ", *The Ninth Bosnian-Herzegovinian Mathematical Conference, Sarajevo, BiH. 2015.*
- 2012 E. Duvnjaković, **S. Karasuljić**, "Collocation Spline Method for Semilinear Reaction-Diffusion Problem on Shishkin Mesh", *2nd International Euroasian Conference on Mathematical Scientific and Applications, Sarajevo, BiH, 26-29. August 2013.*
- 2012 E. Duvnjaković, **S. Karasuljić**, "Class of Difference Schemes for Semilinear Reaction - Diffusion Problem on Shishkin Mesh", *MASSE, International Congress on Mathematics, MICOM 2012, Sarajevo, BiH, 19.09.-23.09.2012.*
- 2012 **S. Karasuljić**, E. Duvnjaković, "Difference Scheme for Semilinear Reaction-Diffusion Problem", *The Seventh Bosnian-Herzegovinian Mathematical Conference, Sarajevo, BiH, August, 16,2012.*
- 2011 E. Duvnjaković, **S. Karasuljić**, "Difference Scheme for Semilinear Reaction-Diffusion Problems on a Mesh of Bakhvalov type", *TEMPUS PROJECT, SEE Doctoral Year Evaluation Workshop, Skopje, Novembar, 10-12,2011.*
- 2011 E. Duvnjaković, **S. Karasuljić**, "Uniformly Convergent Difference Scheme for Semilinear Reaction-Diffusion Problem", *Conference on Applied Mathematics and Scientific Computing, Trogir, Croatia, June 13-17, 2011., pp. 25.*

Research Project

2017–2018 *Numerical solving of quasilinear singularly perturbation one-dimensional boundary problem, Federal Ministry of Science.*
Leader

Mentorship

2019–2020 Irma Zenunović, *Faculty of Natural Sciences and Mathematics*, University of Tuzla.
Graduate

2019–2020 Hidajeta Ljevaković, *Faculty of Natural Sciences and Mathematics*, University of Tuzla.
Graduate

Books

S.Karasuljić and S. Halilović. *Matematika 1.* Off-set Tuzla, 2021. ISBN: 978-9958-31-482-7 .

V.D. Liseikin, S.Karasuljić and V.I. Paasonen. *Numerical Grids and High-Order Schemes for Problems with Boundary and Interior Layers.* Novosibirsk State University, 2021. ISBN: 978-5-4437-1274-1 .