

Ivana Vojnović

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<https://matematika.pmf.uns.ac.rs/en/about-us/people/ivana-vojnovic/>

Work experience

- April 2023 – Present **Associate Professor**
University of Novi Sad, Faculty of Sciences
Department of Mathematics and Informatics
- 2018 – 2023 **Assistant Professor**
University of Novi Sad, Faculty of Sciences
Department of Mathematics and Informatics
- January 2018-June 2018 **Post-doctoral research associate**
University of Zagreb, Faculty of Science
Department of Mathematics
- 2014 – 2018 **Teaching Assistant**
University of Novi Sad, Faculty of Sciences
Department of Mathematics and Informatics
- 2012 – 2014 **Research Associate**
University of Novi Sad, Faculty of Sciences
Department of Mathematics and Informatics

Education

- 11/2011 – 07/2017 **Doctor of Philosophy in Mathematics** – Novi Sad, Serbia
Doctoral Thesis: *Microlocal defect distributions and applications*
University of Novi Sad, Faculty of Sciences
Thesis (in Serbian): <https://nardus.mpn.gov.rs/bitstream/handle/123456789/8363/Disertacija11047.pdf?sequence=6&isAllowed=y>
- 2010 – 2011 **Master of Science in Mathematics** – Novi Sad, Serbia
Master Thesis: *Generalized Solutions to Conservation Laws*
University of Novi Sad, Faculty of Sciences

2006 – 2010 **Bachelor of Science in Mathematics** – Novi Sad, Serbia
University of Novi Sad, Faculty of Sciences

Publications

- 2022 **Generalised solutions to linear and non-linear Schrödinger-type equations with point defect: Colombeau and non-Colombeau regimes**
Dugandžija N., Michelangeli A., Vojnović I.
arXiv:2209.0720
- 2022 **On the reflexivity properties of Banach bundles and Banach modules**
Lučić M., Pasqualetto E., Vojnović I.
arXiv:2205.11608
- 2022 **Singular solution of the Hartree equation with a delta potential**
Dugandžija N., Vojnović I.
Monatsh Math, <https://doi.org/10.1007/s00605-022-01804>
- 2022 **Basic calculus of pseudodifferential operators with nonsmooth symbols**
Ivec I., Vojnović I.
J. Pseudo-Differ. Oper. Appl.
- 2021 **H-distributions on Hörmander spaces**
Ivec I., Vojnović I.
J. Math. Anal. Appl.
- 2020 **Defect distributions applied to differential equations with power function type coefficients**
Pilipović S., Vojnović I.
J. Pseudo-Differ. Oper. Appl.
- 2019 **Continuity of pseudodifferential operators on mixed-norm Lebesgue spaces**
Antonić N., Ivec I., Vojnović I.
Monatshefte für Mathematik
- 2018 **Defect distributions related to weakly convergent sequences in Bessel type spaces $H_{\Lambda}^{-s,p}$**
Aleksić J., Pilipović S., Vojnović I.
Mediterranean Journal of Mathematics
- 2018 **H-distributions with unbounded multipliers**
Aleksić J., Pilipović S., Vojnović I.
J. Pseudo-Differ. Oper. Appl.

- 2016 **H-distributions via Sobolev spaces**
Aleksić J., Pilipović S., Vojnović I.
Mediterranean Journal of Mathematics
- 2014 **A note on convergence in the spaces of L^p - distributions**
Aleksić J., Pilipović S., Vojnović I.
Novi Sad J. Math.

Books and book chapters

- 2022 **Nonlinear Schrödinger Equation with Singularities**
Dugandžija, N., Vojnović, I.
In: Georgiev, V., Michelangeli, A., Scandone, R. (eds) Qualitative Properties of Dispersive PDEs. INdAM 2021. Springer INdAM Series, vol 52. Springer, Singapore
- 2022 **Introduction to advanced topics of functional analysis (in Serbian)**
Vojnović I.
<https://www.pmf.uns.ac.rs/studije/epublikacije/matinf/vojnovicuvodnaprednetemefunkcionalneanalize.pdf>

Research projects

- 2022 – 2024 **Frames and operator theory**
PI: Ivana Vojnović
Bilateral project Republic of Austria - Serbia
- 2021 – 2023 **Mathematical modeling of within-host dynamics and pharmacological aspects of SARS-CoV2 infection**
PI: Dora Seleši
Bilateral project Republic of Hungary-Serbia
- 2012 – 2019 **Methods of Functional and Harmonic Analysis and PDE with Singularities**
PI: Stevan Pilipović
Serbian National Research Project number 174024
- 2018 – 2022 **Microlocal defect tools in partial differential equations**
PI: Nenad Antonić
Project funded by Croatian science foundation (HRZZ), <http://riemann.math.hr/MiTPDE/index.html>

1.1.2018 – **Weak convergence methods and applications**
30.6.2018. PI: Nenad Antić
Project funded by Croatian science foundation (HRZZ), <http://riemann.math.hr/WeConMApp/>

2016 – 2017 **Microlocal analysis, partial differential equations and applications to heterogeneous materials**
PI: Stevan Pilipović
Bilateral project Croatia-Serbia, MZOS/MNTR

2015 **Methods of microlocal analysis for solving linear and nonlinear phenomena in transmission of signal**
PI: Stevan Pilipović
Short-term projects of particular interest for sustainable development in AP Vojvodina

Teaching experience

Fall 2022 **Metric and normed spaces - lectures**
The subject is in the curriculum of the Applied Mathematics study program - third year

2018 - 2023 **Numerical solving of PDEs - lectures and exercises**
The subject is in the curriculum of the Applied Mathematics master study program - first or second year of master studies

2019 - 2023 **Advanced chapters of functional analysis - lectures and exercises**
The subject is in the curriculum of the Theoretical Mathematics master study program - first or second year of master studies

2014 - 2023 **Partial differential equations - exercises**
The subject is in the curriculum of the Theoretical and Applied Mathematics master study programs - first or second year of master studies

2012 - 2019 **Probability, Real Analysis, Measure theory, Stochastic analysis, Analytic geometry, ODEs - exercises**

Conferences and seminar talks

July 2014 DANS – Days of Analysis in Novi Sad
Poster presentation

- April 2015 Seminar for analysis, Department of Mathematics "Giuseppe Peano", The University of Turin
Talk: H -distributions via Sobolev spaces
- June 2016 Congress of Mathematicians of Macedonia, International workshop on generalized functions and pseudo-differential operators, Ohrid
Short talk
- September 2016 International Conference on Generalised Functions 2016, Dubrovnik
Short talk
- October 2016 Applications of Generalized Functions in General Relativity, Stochastics and Mechanics, Novi Sad
Short talk
- December 2016 Workshop Young Women in Harmonic Analysis and PDE, Bonn
Poster presentation
- October 2017 Seminar for differential equations and numerical analysis, Faculty of Sciences Zagreb
Talk
- June 2018 International workshop on PDEs: analysis and modelling at the Department of Mathematics in Zagreb
Short talk
- September 2018 ApplMath18, Šibenik, Croatia
Short talk
- May 2019 Spring School on Analysis 2019, Paseky nad Jizerou, Czech Republic
Short talk
- July 2019 12th ISAAC Congress, Aveiro, Portugal
Short talk
- September 2019 6th Najman Conference, Croatia
Short talk
- October 2019 Congress of young mathematicians, Novi Sad
Short talk
- February 2020 International workshop Microlocal analysis and partial differential equations, Faculty of Sciences, University of Zagreb
Short talk

- December 2020 3rd BYMAT Conference
Short talk - online
- July 2021 Brijuni Applied Mathematics Workshop, Croatia
Short talk
- May 2022 12th International Conference Nonlinear Analysis Function Spaces and Applications, Prague, Czech Republic
Short talk
- June 2022 Analysis, PDEs and Applications, Dubrovnik, Croatia
Short talk
- September 2022 ApplMath 22, 11th Conference on Applied Mathematics and Scientific Computing, Brijuni, Croatia
Short talk
- September 2022 GF2022, International Conference on Generalized Functions, 2022, Vienna, Austria
Short talk
- October 2022 Oberwolfach Mini-Workshop "Zero-Range and Point-Like Singular Perturbations: For a Spillover to Analysis, PDE and Differential Geometry"
Talk
- March 2023 Seminar for Differential equations, Mathematical Institute, University of Wroclaw
Talk

Mentorship

- 2019 – Present **PhD advisor for Milica Lučić**
PhD thesis will study the properties of normed modules and bundles.
- 2022 **Master thesis advisor for Srdjan Jakovljević**
Master thesis: Finite volume methods for solving conservation laws
- 2021 **Master thesis advisor for Mirjana Čivčić**
Master thesis: Numerical solving of Helmholtz equation using finite element method
- 2020 **Master thesis advisor for Vesna Nestorović**
Master thesis: Application of elliptic pseudodifferential operators for proving regularity of solutions of differential equations

2019 **Master thesis advisor for Nikola Sarajlija**
Master thesis: Topological approach to distribution theory with applications to some partial differential equations
The best master thesis in mathematics in 2019 - award by Mathematical Institute in Belgrade

2018 **Master thesis advisor for Milica Lučić**
Master thesis: Weak topologies and applications

February 2019 **ECMI Modelling Week, Darmstadt, Germany**
I participated as an instructor to a group of students who worked on the problem of mathematical modelling of erythrocyte sedimentation.

Professional memberships

2019 – Present ISAAC (International Society for Analysis, its Applications and Computation)

2018 – Present European Women in Mathematics

2014 – Present Serbian mathematical sciences association

Study visits

March 2015 – Department of Mathematics "Giuseppe Peano", University of Turin
May 2015 Scientific host: Sandro Coriasco.

October 2010 – 4-months scholarship for doing research at the Department of Mathematics at the
January 2011 University of Vienna
Passed exams on Distribution theory and Partial differential equations.

Organisational activities

October 2017 International conference Applications of Generalized Functions in Harmonic Analysis, Mechanics, Stochastics and PDE , Novi Sad
Member of the organising committee.

June 2018 International workshop on PDEs: analysis and modelling at Department of Mathematics in Zagreb
Member of the organising committee.

August 2018 International Conference on Generalized Functions GF2018, Novi Sad, Serbia
Member of the organising committee.

April 2023 Harmonic analysis, spaces and operators, Novi Sad, Serbia
Member of the organising committee.