ZORAN RAKIĆ was born on January 1, 1964. in Kutina, SR Croatia, SFR Yugoslavia.

Education. He finished elementary school in Zaprešić in 1979, and specialized mathematical high school (MIOC) in Zagreb in 1983. At the Faculty of Science and Mathematics of University of Zagreb graduated in mathematics, in 1988, where he defended his master's thesis entitled *Quantum Groups* in 1991. At the Faculty of Mathematics of the University of Belgrade, he defended his doctoral thesis in 1998 under the title *Ossermann's manifolds*.

He speaks Serbian and English, and he also uses Russian. He has been living and working in Belgrade since 1992.

Employment and research visits. Since October 1, 1992, he has been working at the Faculty of Mathematics at the University of Belgrade (MF). He has been a full professor since 2011. He was on scientific visits to well-known world universities and institutes, such as: Moscow State University, Steklov Institute of Mathematics in Moscow, Technical University of Berlin, University Tor Vergata in Rome, University of Cagliari, Institut LAPP (Le Laboratoire d' Annecy-le-Vieux de Physique des Particules) in Annecy and La Trobe University in Melbourne, and lectured at their seminars.

Fields of scientific research. He researched various problems of differential and Riemannian geometry and their applications, quantum group theory, applications of non-commutative geometry in quantum mechanics, p-adic mathematical physics, theory of gravity and cosmology.

Organizational work. Z. Rakić was: head of the Chair of Geometry at the Faculty of Mathematics from 2006 to 2011, vice dean for finance of the Faculty of Mathematics from 2007 to 2014, since the end of 2014 he has been the dean of the Faculty of Mathematics. Since 2012, he has been the editor for the field of differential geometry of the journal Publications de l'Institut Mathématique. He is a reviewer in several international journals. He was a guest editor of several special editions in the journals: Symmetry, Publications de l'Institut Mathé and Filomat. He is the editor of over 15 proceedings of scientific conferences, published in English. He participated in about 60 international scientific conferences, most of them with invited lectures or plenary lectures. He was the organizer or co-organizer of about 40 scientific meetings, most of which were international meetings, and some were held abroad. He has been the main organizer of a series of international conferences *Geometrical Seminars* since 2012, which are held in Serbia. He actively worked on the organization of the Geometry Seminar from 1995 to the present day, which has existed for about forty years. He was the leader of scientific project *Geometry, Education and Visualization with Applications* financed by the Ministry of Science of the Republic of Serbia from 2005 to 2019, and participated in scientific projects in Serbia (before 2005), and international scientific research projects and faculty projects of Serbia with Russia, Germany, Italy and France.

Pedagogical work. At the Faculty of Mathematics, he lectured in a dozen courses for graduate and master's studies (Analytical Geometry, Fundamentals of Geometry, Local Theory of Curves and Surfaces, Linear Algebra, Lie Groups and Algebras, Selected Chapters of Algebra, etc.) and five courses for doctoral studies (Rimannian geometry, Groups in geometry, Ḥopf algebras, Representations of groups and Supersymmetries). He supervised three doctoral dissertations, and several master's theses. He was a member over ten Doctoral Dissertation Defense Committees. He published a co-author textbook on Analytical Geometry.

Recognitions and awards. In 2004 he received an award from the Faculty of Mathematics for scientific work. He has been a member of the Serbian Academy of Nonlinear Sciences since 2021.

Main research problems and results. Almost all the problems that Z. Rakić investigated are of non-linear nature. Among the most important results obtained by Z. Rakić's are 1) in his doctoral thesis he proved the duality principle (also known as Rakić's duality principle) for Osserman manifolds in the Riemannian case and constructed the first example of a pseudo-Riemannian manifold of signature (2,2) in which Osserman's hypothesis is not valid, together with collaborators (N. Blažić and N. Bokan) gave a characterization of the 4-dimensional Oserman manifold and introduced the notion of Osserman-Jordan manifold; 2) with collaborators (B. Dragović, I. Dimitrijević and J. Stanković) he dealt with models of non-local modification of the General Theory of Relativity. A simple cosmological model (Square root model) was constructed as well as its cosmological solution containing the effects attributed to dark energy and dark matter; 3) with collaborators (N. Bokan and P. Matzeu) described the decomposition of the space of curvature tensor over tensor product vector spaces into simple modules under the action of the group $G = Gl(p, \mathbb{R}) \otimes Gl(q, \mathbb{R})$. The dimensions, the largest weights and the largest weight vectors for all simple modules are fully determined, the decomposition was applied to the study of various manifolds, especially Grassmann manifolds without torsion. Algebraic results were used to find the obstructions of the appropriate connection, ie. algebraic methods were used to obtain results in differential geometry; 4) with a collaborator (F. Gavarini) studied the quantized hyperalgebras $F_q[Mat_n]$, $F_q[GL_n]$ and $F_q[SL_n]$, and described the quantum algebra of functions $\mathcal{F}_q[GL_n]$, also known as unrestricted $\mathbb{Z}[q, q^{-1}] -$ integral form of $U_q[\mathfrak{gl}_n]$ introduced by De Concini, Kac and Procesi, in terms of generators and relations as well as its analogue of PBW (Poincaré-Birkof-Witt) theorem. It is shown that $\mathcal{F}_q[GL_n]$ is a Hopf subalgebra of $F_q[GLn]$, we gave a quantum Frobenius epimorphism from $\mathcal{F}_\varepsilon[GL_n]$ то $\mathcal{F}_1[GL_n]$, where ϵ is some root of 1. The same type of analysis was done for both algebras $\mathcal{F}_q[SL_n]$ и за $\mathcal{F}_q[Mat_n]$; 5) with a collaborator (B. Dragović) we studied non-commutative quantum mechanics using the Feynman path integral, we gave a general procedure for studying the Feynman path integral on the non-commutative phase space for an arbitrary quadratic Lagrangian. A matrix formalism is introduced in the case of quadratic Lagrangians. Feynman's approach makes it possible to simultaneously treat quantum systems over real, p-adic and adelic numbers. The obtained invariance of the formulas on the replacement of the field of real numbers and the p-adic field shows that the adelian path integral is a fundamental object in the mathematical physics of quantum phenomena.

He has published over 50 peer-reviewed scientific papers in international journals and conference proceedings in the fields of differential geometry, quantum groups, mathematical physics, gravity theory and cosmology, which have been cited over 600 times (Google Scholar, h-index 14).

Five selected papers.

[1] Z. Rakić, *Duality principle in Osserman manifolds*, Lin. Alg. and its Appl., 296 (1--3) (1999), 183-189.

[2] N. Blažić, N. Bokan & Z. Rakić, *Osserman Pseudo-Riemannian manifolds of signature (2,2)*, J. Austral. Math. Soc. A (71), (2001), 367-395.

[3] I. Dimitrijević, B. Dragovich, Z. Rakić & J. Stanković, *Nonlocal de Sitter gravity and its exact cosmologi-cal solutions*, Journal of High Energy Physics, Article number: 54 (2022), 1-27; https://doi.org/10.1007/JHEP12(2022)054, arXiv:2206.13515 [gr-qc].

[4] N.Bokan, P. Matzeu & Z. Rakić *Algebraic structure of geometric quantities defined on manifolds with Grassmannian structure*, Nagoya Math. Jour., Vol. 180, (2005), 45-76.

[5] F. Gavarini & Z. Rakić, $F_q[Mat_n]$, $F_q[GL_n]$ и $F_q[SL_n]$ as quantized hyperalgebras, Journal of Algebra, Vol. 315, No. 2, 2007, 761-800, (2007).

Belgrade, May 2023.