

**PROFESSOR DR SVETISLAV M. MINČIĆ –
HIS CONTRIBUTION TO DIFFERENTIAL GEOMETRY**

MILEVA PRVANOVIĆ

ABSTRACT. In the present paper we give several basic data about the life and professional biography of Prof. dr Svetislav Minčić, retired full professor of Geometry at the Faculty of Science and Mathematics of University in Niš.

Dear colleagues and friends,

First of all, I would like to welcome all participants of Geometrical Seminar and to wish successful work and agreeable stay in Vrnjačka Banja.

Also, it is my pleasure to greet Prof. Svetislav Minčić on the occasion of his eightieth birthday, and so say a few words about his work.

During his professional activity, Prof. Minčić passed all stages of educational tasks: he was a teacher at primary and secondary school, assistant and assistant professor of Faculty of civil engineering, associate and full professor at Faculty of Economics and full professor at the Faculty of Sciences and Mathematics at University of Niš. He was the first professor of geometry there, and it is his merit that we have now in Niš the perspective group of specialists working successful on problems in geometry.

Prof. Minčić received his B.C. 1966 from University of Belgrade. Title of thesis was "Isometric imbeddings of spaces", and his Ph.D. 1975 from University of Novi Sad, presenting the thesis "Generalized Riemannian spaces."

From 1923 to the end of his life, A. Einstein worked on the various variants of the Unified Field Theory, intending to unit the gravitation theory and the theory of electromagnetism. First, he used a complex basic tensor, with symmetric real part and antisymmetric imaginary part. Beginning with 1950, Einstein used real but

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nonsymmetric basic tensor, whose symmetric part was related to gravitation and the antisymmetric one - to electromagnetism. Between 1951 and 1963, L. P. Eisenhart published several papers destined to the problems of spaces with nonsymmetric basic tensor, and called such manifolds "Generalized Riemannian spaces". The doctoral dissertation of Prof. Minčić, as well as his numerous following papers, are dedicated to the development, deepment and generalization of this theory. Because the basic tensor is nonsymmetric, the corresponding connection is nonsymmetric too, because of which the four kinds of covariant derivatives exist. Using them, Prof. Minčić obtained the corresponding Ricci-type identities and determined 12 curvature tensors and 15 quantities which are not tensors and by author were called curvature pseudotensors. He proved that 5 of curvature tensors are linearly independent. In the case of symmetric connection, all this tensors and quantities reduce to Riemannian curvature tensor. Also, Prof. Minčić gave geometric interpretation of the curvature tensors, curvature pseudotensors and torsion tensor.

Prof. Minčić in the collaboration with Lj. Velimirović investigated, also, the subspace of the generalized Riemannian space, and the manifolds endowed with nonsymmetric connection. Among others, they found conditions for induced metric of the subspace to be symmetric, that is, the subspace to be Riemannian space and have constructed examples.

With Lj. Velimirović Prof. Minčić studied problems in relations with infinitesimal deformations of spaces with nonsymmetric connection, with M. Stanković he worked in area of mappings of spaces, and, in last time, with M. Zlatanović he engaged in generalized Finsler spaces and obtained results that are generalizations of ones from generalized Riemannian spaces.

Prof. Minčić also studied Otsuki spaces and proved that there appear quoted curvature tensors and pseudotensors. Prof. Minčić published more than 60 papers. The last four are published in 2010. Among these papers, I would like to point out those related to conform and geodesic mappings of generalized Riemannian manifolds, owing to the following reason. We already said that, if the connection is nonsymmetric, five curvature tensors exist. The first three were mentioned in the papers of several others authors by using the 1st and the 2nd kind of covariant derivative. Prof. Minčić in his Ph.D. used also the 3rd and the 4th kind of derivative. In that manner he obtained the 4th curvature tensor. The 5th one is obtained by Minčić as a combination of some curvature pseudotensors. Prof. Minčić investigated them and elaborated their applications For the conform and geodesic mappings of generalized Riemannian manifolds, this Minčić's tensor has special importance. Namely, applying the mappings

on the fifth curvature tensor, we can obtain the invariant tensor of the mappings. Applying mappings on the others curvature tensors, to obtain invariant tensor, we must have some additional conditions.

I congratulate once more Prof. Minčić. I wish him a long life, good health and many new results.

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MATHEMATICAL INSTITUTE SANU,
KNEZ MIHAILA 35,
11001 BELGRADE,
P. O. BOX 367, SERBIA