Professor Mileva Prvanović - in memoriam[1]

The mathematical community deeply regrets the recent passing over of Professor Mileva Prvanović, a person of enormous erudition, personal integrity, and exceptional warmth. Professor Mileva Prvanović is among the most prominent professors of Geometry, which has played a crucial role in enriching the research, growth and development of Differential Geometry over a 60-year period, which places her among the foremost geometers of our day. The long list of her outstanding scientific publications - remarkably cross-referenced - is a proof of her great imagination, creativity and dedication to science.

Professor Mileva Prvanović was born on 16 July 1929, in Žlne (Knjaževac, Serbia). Her father, Stanko Prvanović, was a renowned Serbian educator, mathematician, professor of the Teacher Training College in Belgrade. She studied mathematics at the University of Belgrade from 1947 to 1951, and acquired the doctoral degree in 1955 at the University of Zagreb as the first doctor of Geometry from Serbia. The title of her Ph.D. thesis - which was mentored by Danilo Blanuša - was "*Para-geodesic space and para-geodesic curves in a subspace of the Riemannian space*". In the period from 1951 to 1955, she was a Teaching Assistant at the Mathematical Institute of the Serbian Academy of Sciences in Belgrade; then, until the end of 1956, an Assistant Professor at the Department of Mathematics of the Faculty of Philosophy (later *Faculty of Natural Sciences and Mathematics*) in Novi Sad; from 1957 a Docent; from 1962 an Associate, and from 1967 a Full Professor - for a group of subjects in the field of Geometry. Professor Prvanović retired in 1993. She was a member of the *Serbian Academy of Sciences and Arts* starting with 1981.

Her unique personality, wisdom and authority had a beneficial impact on the Serbian and worldwide mathematical community, and led to respect, appreciation and love from her colleagues and students. She published 84 scientific papers in journals from Serbia and from abroad, and authored three university and three secondary school textbooks. Her main fields of research were: transformations of smooth manifolds; the geometry of connections with torsion; recurrent spaces and algebraic structure of curvature.

A more detailed outlook which emphasizes the main topics in which her contribution to Differential Geometry is highlighted, follows. Differentiable manifolds supplied with complex or with product structure are, depending on whether the metric is invariant or anti-invariant with respect to the structure, almost Hermitian, almost para-Hermitian, almost product-manifolds, i.e., complex manifolds with Norden metric. By applying conformal transformations on the holomorphic and anti-holomorphic curvature tensors, professor Prvanović determined the corresponding conformal invariant tensors (among them, in the case of Kaehler manifolds, Bochner's curvature tensor as well). As an example, she determined the holomorphic curvature tensor of locally-conformal Kaehler's spaces, as well as the Riemannian curvature tensor in the case of spaces of constant holomorphic sectional curvature. The holomorphic hypersurfaces of the conformally flat anti-Kaehler manifolds were studied. The results correspond to a well-known theorem of E. Cartan and J. Schouten, according to which a hypersurface of a conformally flat Riemannian manifold (for dimension greater than 5) was shown to be conformally flat if and only if it is quasi-umbilical. The notion of pseudo-symmetry and Ricci pseudo-symmetry was extended to the anti-Kaehler manifolds and applied to the holomorphic hypersurface of the anti-Kaehler manifolds of constant totally real sectional curvature. It was also proven that anti-Kaehler manifolds of quasi constant totally real sectional curvature satisfy a Roter type equation.

Professor Mileva Prvanović participated in many international conferences with presentations and lectures on Differential Geometry. For many years she was Editor-in-Chief of the journal Publication de L'Institut Mathematique (Belgrade).

She mentored more than fifteen M.A. and Ph.D. theses in Novi Sad, Belgrade and Skopje, being Ph.D. advisor of the following doctoral students: Neda Bokan, Judita Cofman, Haizhong Li, Svetislav Minčić, Srdjan Vukmirović, Irena Čomić, Miroljub Milojević, Milan Janjić, Jovanka Nikić, Nevena Pušić, Djerdji Nadj; Dragoljub Cvetković and Neda Bokan; Kostadin Trenčevski and Ognjan Jotov. For all of them - except for M. Janjić - she was also M.Sc. advisor, as well as for Vojislav Petrović, Mihailo Jokić, Jan Djuras and Djordje Lisulov.

Professor Mileva Prvanović has been internationally recognized as maintaining the highest standards of integrity and excellence in scientific research. Her unique personality and remarkable abilities which enriched the field of Geometry will continue to guide and encourage all of us in new scientific endeavors.

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iv