

Preface

Annual Conferences in Analytic and Algebraic Geometry have been organized by Faculty of Mathematics and Computer Science of the University of Łódź since 1980. Until now, proceedings of these conferences (mainly in Polish) have comprised educational materials describing current state of a branch of mathematics, new approaches to known topics, and new proofs of known results (see the Internet page: <http://konfrogen.math.uni.lodz.pl/>).

The subject of the present volume include new results and survey articles concerning real and complex algebraic geometry, singularities of curves and hypersurfaces, invariants of singularities (the Milnor number, degree of \mathcal{C}^0 -sufficiency), algebraic theory of derivations and others topics.

One remarkable element of this collection is an English translation of the Polish version, published in proceedings of the above mentioned conferences, of an article by Stanisław Łojasiewicz (1926-2002) devoted to the famous Hironaka theorem on resolution of singularities. It contains his original approach to the problem in the case of curves and coherent analytic sheaves on 2-dimensional manifolds. This interesting article has not yet been available in English. Additionally, we add a photo portrait of him and the facsimile of one page of his original handwritten manuscript.

We would like to thank Arkadiusz Płoski for the help in preparing the volume, Michał Jankowski for designing the cover, referees for preparing reports of the articles and all participants of the Conferences for their good humor and enthusiasm in doing mathematics.

Finally, we would like to thank Stanisław Łojasiewicz jr and Anna Ostoja-Łojasiewicz, the heirs of Stanisław Łojasiewicz, for having agreed to include his article into this volume.

We dedicate the whole volume to the memory of Stanisław Łojasiewicz.

Tadeusz Krasieński
Stanisław Spodzieja

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