Professor Wojciech Kucharz

WOJCIECH KUCHARZ
– SCIENTIFIC BIOGRAPHY

Wojciech Kucharz was born in Kozłów (near Miechów) on January 2, 1952. He entered the Jagiellonian University in 1969, graduated with a degree in mathematics in 1974, and earned his Ph.D. in mathematics three years later under the supervision of Professor Józef Siciak and, informally, Professor Jacek Bochnak. His doctoral dissertation was entitled "Sufficiency of jets and finite determinacy of germs". In the years 1977–1981, Kucharz was an assistant professor at the University of Silesia. Then, after completing his visiting positions at the Free University of Amsterdam, he moved to the USA in 1984. From 1984 to 2009 he held academic positions at the University of New Mexico, where he advanced to the rank of Full Professor in 1990. Concurrently, he also held a position of Full Professor at the University of Hawaii at Manoa in 1989 and 1990. Kucharz returned to the Jagiellonian University as a visiting professor in 2009. Since 2010 he has been Full Professor at the Jagiellonian University. He met the requirements of the Polish higher education system, obtaining his habilitation in 2008 and the Polish title of professor in 2010. Professor Kucharz has travelled widely and visited many research institutes and universities in Austria, Brazil, Canada, Chile, France, Germany, Italy, Japan, the Netherlands, Spain, Switzerland, and the United Kingdom. He held visiting positions in the above-mentioned countries for a total of over 7 years.

In 2019, Professor Kucharz was elected to the Polish Academy of Sciences. In addition to the above, his honors include the Polish Mathematical Society Prize for Young Mathematicians (1979), the Presidential Lectureship at the University of New Mexico (1988–1990), the Efroymson Award at the University of New Mexico (1994, 1995), the Prime Minister of Poland Award for Scientific Achievements (2018), the Stefan Banach Prize of the Polish Mathematical Society (2019), the Jagiellonian Laurel (2020), and the Nicolaus Copernicus Prize of the Polish Academy of Arts and Sciences (2020), as well as election to the Polish Academy of Arts and Sciences (2022).

Professor Kucharz is the author or coauthor of over 150 scientific papers. He contributed to the development of several areas of mathematics, including algebraic and analytic geometry, singularity theory, complex analysis, and commutative

algebra. He works on questions of central interest and importance, his solutions regularly demonstrate originality of his approaches and his results appear in the most prestigious mathematical journals. He is best known for his work on the borderline between real algebraic geometry and topology. In collaboration with Jacek Bochnak, he obtained significant results on real algebraic morphisms, algebraic cycles, and algebraic vector bundles, developing along the way several important methods that have proved to be indispensable in the works of other mathematicians. Kucharz was the first researcher to draw the attention of real algebraic geometers to the study of continuous rational maps between real algebraic varieties. Since then this line of research has led to the development of regulous geometry as an independent subfield of real algebraic geometry, showing that a very slight weakening of algebraicity implies a major change in the scope of the theory. The results of Kucharz in regulous geometry, some obtained in collaboration with János Kollár and Krzysztof Kurdyka, are surprising and contain a wealth of new ideas. Professor Kucharz presented, jointly with Professor Krzysztof Kurdyka from the University of Savoie Mont Blanc, an invited lecture at the International Congress of Mathematicians 2018 in Rio de Janeiro.

Since 2009 Professor Wojciech Kucharz has been an active participant in the Analytic and Algebraic Geometry Conference organized by the Faculty of Mathematics and Computer Science of the University of Łódź.

It is no secret for Kucharz's friends that he loves opera and likes to read biographies, and that his favorite physical activities are hiking in the mountains and swimming in warm seas.

Prepared by Kamil Rusek