Werner Heise (1944–2013)

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Professor Werner Heise passed away on February 21, 2013 at the age of 68, after a long illness. Werner Heise has served on the editorial board of the Journal of Geometry from its commencement in 1971 until 2013. He is the author of 11 research papers in this journal, ranging over a period from 1971 to 1998 and being widely recognized as profound contributions to their respective area—Incidence Geometry, Finite Geometry, and Coding Theory.

Werner Heise was born on May 12, 1944, in Łódź (Litzmannstadt, as it was called during the German occupation from 1939 to 1945) as the son of Bruno Heise (1912–1995), an engineer, and his wife Helene (1914–1985). Following expulsion from their home at the end of World War II, the family fled to Lübeck, where Werner grew up and went to school. After his “Abitur” (Johanneum zu Lübeck, 1963), Werner Heise studied Mathematics and Geography at the University of Hamburg from 1963 to 1968, completing his “Staatsexamen” at the end of 1968. From 1969 to 1971 he worked as “Assistent” at the Institute for Mathematics of TU Hannover. During this period, Werner Heise received his “Promotion” with a doctoral thesis on topological Möbius spaces (12/1969,

“Doktorvater” Helmut Karzel) and completed his “Habilitation” (2/1971) with a thesis on κ -affine spaces. In August 1972, at the age of 28, he was appointed “Abteilungsvorsteher” and Professor at TU Hannover.

Having served temporary appointments at the Mathematics Institute of TU München (TUM) in 1971–1973, Werner Heise finally moved permanently to TUM in August 1973. In 1978 he was appointed Professor (“Extraordinarius”), and he worked for the Mathematics Institute (now “Zentrum Mathematik”) of TUM until his retirement in 2009.

During his career Werner Heise established and maintained contacts with many colleagues around the world. He regularly visited Italy, accepting several invitations as “professore visitatore” to the Universities of Modena, Perugia and L’Aquila. Back in the 70s and 80s of the past century, when the Iron Curtain still separated Europe and formed an insurmountable obstacle for ordinary people in Eastern Europe, Werner Heise helped his colleagues in the East in various ways, upholding contacts through frequent correspondence, visits, and conference trips to the East. He was very concerned about the economic, social and political disparity of West and East Germany. Later he used to count the German reunification among the most important events in his life, on a par with his personal and academic achievements.

Werner Heise’s scientific legacy ranges from the early work on Incidence Geometry (axiomatic foundations of Möbius, Laguerre and Minkowski Geometries) and combinatorial problems in Finite Geometry (existence questions for ovals, ovoids, etc., and sharply transitive sets of permutations) to several important contributions in Coding Theory (MDS codes, quadratic residue codes, weight functions, extensions of code isometries), of which we mention in particular the “Heise weight” (or “homogeneous weight”), a generalization of the Lee weight on $\mathbb{Z}_4$ to arbitrary integer residue class rings $\mathbb{Z}_m$, which turned out to be highly influential in ring-linear Coding Theory.

Werner Heise is the author of two graduate textbooks, *Einführung in die Kombinatorik* (with H.-R. Halder) and *Informations- und Codierungstheorie* (with P. Quattrocchi). The latter went into three editions and is still considered as one of the authoritative texts in its field. Teaching and educating young people has always been a major driving force for Werner Heise, as is also testified by the large number of nine doctoral students. They were, in chronological order, G. Falkner, H. von Koch, J. Georgiades, P. Filip, A. Bonisoli, M. Kaplan, E. Zehendner (as co-supervisor), Th. Honold, and I. Constantinescu.

Werner Heise was a professional mathematician with heart and soul. After retirement he asked for a new (inevitably smaller) office room, where he would spend the working hours as if nothing had changed. He continued to work, albeit at a lesser pace, and still participated actively in all matters of the institute. During the last months of his life, when his health deteriorated and he had to wear an oxygen concentrator, he took great pains to maintain the day-to-day routine, visiting the university regularly until being hospitalized on February 19.

Two days later Werner Heise died peacefully, surrounded by members of his family. He is survived by his wife Ulrike, née Geib, whom he married in 1968, by his elder brother Ulrich, his two daughters Henrike and Wiebke, and one grandson.

Werner Heise will be remembered, by those who had the privilege to know him, as a great mathematics writer and teacher, a true representative of our profession in all its aspects, as a polymath with authoritative knowledge in many fields —yet as being always ready for discussion, accessible, and down-to-earth, for his unique sense of humour, his jokes, his love of Italian food, his T-shirts, and much more.

In August 2009 a one-day colloquium was held at TUM to celebrate Werner Heise's 65th birthday. On this occasion, which brought quite a few of his colleagues and friends to München, Werner was awarded the Honorary Medal of the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, by his friend, Director of the Institute and President of the Bulgarian Academy of Sciences, the late Stefan Dodunekov (1945–2012). The photo was taken on this occasion.

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