



Seppo Rickman

* 28.11.1935 † 16.8.2017

PROFESSOR SEPPÖ Uolevi Rickman died in Helsinki on 16th August 2017 aged 81 years, having been born in the same city on 28th November 1935. Having passed his student matriculation examinations at the Arcadia Coeducational Lyceum in Helsinki in 1955 and completed his military service, he enrolled at Helsinki University of Technology to study in the Department of Electrical Engineering. After graduating in 1961, he nevertheless decided that he was more interested in mathematics and went on to obtain a degree of candidate in philosophy at the University of Helsinki in 1964 with mathematics as his main subject.

Two years later, in 1966, he completed his doctoral thesis on *Characterizations of quasiconformal arcs* under the supervision of Academician Olli Lehto and Professor K. I. Virtanen, at a time when quasiconformal mappings had emerged as a new area of Finnish expertise in the traditional specialist area of function theory. He then continued his research at Harvard University, where Finland's best-known mathematician, the Fields medalist Lars Ahlfors, had been a personal professor since 1946. In 1969 Rickman became a member of the Martio-Rickman-

Väisälä research team which initiated the study of the more general non-homeomorphic quasiconformal mappings in Finland. The team adopted the name quasiregular for these mappings and Rickman eventually became to specialize in this class of mappings.

Although this group concentrated on establishing the basic theory of quasiregular mappings during the period 1969–1973, one important problem remained unsolved: does the famous theorem concerning analytic functions proved by E. Picard in 1879 also apply to quasiregular mappings of a multidimensional space, in other words, can the complement of the image of the whole space contain more than one point? The writers of this obituary were of the opinion that the problem was too difficult, but Rickman set out with renewed determination to develop a value distribution theory for these mappings – until he achieved his first breakthrough in 1980, when he proved that the set is always finite. Finally, he solved the whole problem in a somewhat surprising manner in 1985, by constructing an ingenious complicated example of a 3-dimensional mapping which omitted more than one point, demonstrating that the 3-dimen-

sional version of Picard's theorem does not as such hold good.

Rickman was professor of mathematics at the University of Helsinki from 1971 until his retirement in 1999, except for the academic year 1972/73, when he was a Fulbright scholar at the University of Michigan. In the course of his career he published 53 papers in international journals together with the monograph *Quasiregular mappings*. He was a highly sought-after lecturer world-wide and had visited many of the world's leading universities, including Princeton and MRSI in the United States and IHES and the Max Planck Institute in Europe. At the ICM international mathematics conference held at the Finlandia Hall in Helsinki in 1978 he gave a lecture on "The number of omitted values of entire quasiregular mappings".

He was an active organizer of conferences throughout his career, and when a memorial meeting for Lars Ahlfors was arranged at Harvard University in 1996 Rickman was invited as the guest speaker to represent Finland. He was also the scientific leader of the theme year for Quasiconformal Analysis held at the Mittag-Lef-

fler Institute in Stockholm in the academic year 1989/90 and one of the stalwarts of the Rolf Nevanlinna Colloquia held in Finland from 1964 onwards.

Rickman was elected a member of the Finnish Academy of Science and Letters in 1974 and of the Finnish Society of Sciences and Letters in 1986. He was a member of the governing board of the Mittag-Leffler Institute for the period 1986–1998 and represented Finland at the International Mathematical Union (IMU) meetings at Oakland in 1986 and Kyoto in 1990. In 1994 he was awarded the Magnus Ehrnrooth Foundation's prize for mathematics.

Seppo was a reserved but warm-hearted and polite man who had a powerful sense of duty. Although precise and highly disciplined in his habits, he was easily approachable in all manner of difficult situations and was frequently able to put forward quite openly and unpretentiously viewpoints that would lead to a satisfactory solution. He had a genuine ability to treat others as his equals.

Music, particularly jazz, was close to his heart, and he himself played the clarinet.

*Obituary by
Olli Martio and Jussi Väisälä*

Picture: Sampo Tiensuu