

Obituary of David Goss

We would like to dedicate this volume of the Journal of Number Theory to the memory of the former Editor-in-Chief David Goss (1952-2017). With David's passing, the mathematical community lost one of its most distinguished members, whose outstanding work profoundly influenced the way we see number theory today.

David received his PhD in 1977 from Harvard under the supervision of Barry Mazur. He held positions at Princeton, Berkeley, and Brandeis before joining Ohio State University in 1982, where he retired in 2013 and became Professor Emeritus. David was the advisor for three doctoral students. David was generous with his time and knowledge and was full of enthusiasm and support for his colleagues, especially junior researchers in Number Theory. He was viewed by many as a mentor and a friend, and his broad and deep knowledge, as well as his kindness and warmth will be missed by many.

David's research was in Algebraic Number Theory and Algebraic Geometry, where he made extensive contributions to the arithmetic theory of function fields, publishing some 40 academic papers. He also authored a book on "Basic Structures of Function Field Arithmetic", which is widely viewed as one of the most standard and accessible references for function field arithmetic. Starting with his Harvard thesis, David introduced his completely new and revolutionary theory of modular forms for (k, ∞) , with k a global field of positive characteristic and ∞ a fixed place of k , also constructing explicitly Eisenstein series in this setting. In 1979, while at Princeton, he accomplished another great milestone by introducing zeta functions for (k, ∞) (now called Goss zeta functions). In this seminal work, he also introduced the famous character group S_∞ and the zeta-phenomenology of analytic continuation, the negative values, the trivial zeroes, and other important structures which have inspired so many mathematicians. He later continued developing his theory of zeta and L -functions in the path of Euler and Riemann, and pioneered this vast area and its most remote parts, such as the analogue of Riemann's hypothesis, the hypothetical functional equation, the quest of the Gamma factors. With unlimited energy, he inspired and encouraged research in these and other topics of Number Theory.

He became an editor of the Journal of Number Theory in 1988 and then served as its Editor-in-Chief for over fifteen years. He was a great leader of the journal and was truly appreciated by all the Editors and the Elsevier staff. He led the journal through difficult times with his strength and his devotion.

In 2012, he was named a Fellow of the American Mathematical Society.

David's warmth and energy contributed greatly to the life of the journal. He will be truly missed.