Bohuslav Diviš

In Memoriam

BOHUSLAV DIVIŠ

December 20, 1942–July 26, 1976

On July 26, 1976 Bohuslav Diviš died at the age of 33, of a heart attack, while participating in a conference on number theory and diophantine approximations at Normal (Illinois), and the rising career of a promising, gifted, and extremely diligent young mathematician came to its end.

Bohuslav Diviš was born in Prague, Czechoslovakia, on December 20, 1942. By the end of his high school career (1959) he excelled in mathematics, winning first prize at the First International Mathematics Olympiad in Rumania. He obtained his basic mathematical education at the Faculty of Mathematics and Physical Sciences of the Charles University of Prague, specializing in numerical mathematics for his 1966 diploma.

Right afterward he was appointed Engineering Assistant at the Prague Institute for Radiation Hygienics; in early 1967 he was appointed scientific collaborator of the Mathematics Institute of the Czechoslovakian Academy of Sciences. There he met the late Professor Járnik, who exerted a decisive influence on Diviš's further mathematical development by interesting him in the theory of lattice points, with its many applications to numerical mathematics (as recently evidenced in the work of Zaremba, Niederreiter, and Hlawka).

Bohuslav Diviš and Bretislav Novák devoted their full energy to the further development of the research field of their teacher, and made many valuable and important contributions to the theory of lattice points in multidimensional ellipsoids.

In 1968 an invitation to spend an academic year at the University of Heidelberg was extended to B. Diviš. He obtained his Ph.D. degree, with a thesis subject of Járnik [6], at Heidelberg on July 26, 1969, after deciding not to return to Prague.

Professor P. Roquette acted as his official Ph.D. advisor. Of great importance to Diviš and his wife Zita (who also obtained her Ph.D. degree at Heidelberg in 1969) was the warm human interest and friendship extended to both of them by Roquette and his wife. They helped and encouraged them to find employment as assistant professors in the Department of Mathematics of the Ohio State University. Since 1972, Diviš had rendered most valuable service in the development of the *Journal of Number Theory*, as Managing Editor and a member of the advisory board.

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For the academic year 1973/1974 Diviš accepted an invitation of W. Schwarz to be a visitor at the Mathematics Institute of the University of Frankfurt, Germany. There he obtained the degree of Dr. habil. (Habilitation) in the field of "Mathematics" with another thesis [16] on June 24, 1974. The challenging special courses on lattice points, diophantine equations, and algebraic number theory given by Diviš at Frankfurt University were of great profit to his audience and motivated some of them to specialize in number theory. He also gave a course on Russian for mathematicians.

The collaboration of Diviš and his friend Novák produced a rich harvest [7–9, 15]. The central target of this work is the precise upper and lower asymptotic estimate of the difference ("lattice residue")

$$P_Q(x) = A_Q(x) - V_Q(x)$$

of $A_Q(x)$, the (weighted) number of lattice points in the n-dimensional ellipsoid $\{y \in \mathbb{R}^n \colon Q(y) \leqslant x \mid Q$ a positive definite quadratic form$\}$ and $V_Q(x)$, the volume of the ellipsoid. The many facets of this problem were developed originally by Landau, Walfisz, and Járnik. In the case of Q having rational coefficients, satisfactory solutions of the problem were found. If Q also has irrational coefficients, Járnik was the first to obtain results. Other important contributions were made by Novák and Diviš, who succeeded in determining the precise order of magnitude of growth for large classes of ellipsoids, refining the analytic methods developed by Landau and Járnik.

These investigations suggested strongly to Diviš the study of certain problems of diophantine approximations, e.g., the study of the function

$$\mu * (\beta) = \sup_{t > 1} \min_{\substack{p, q \\ 0 < q \leqslant t}} |q \cdot \beta - p|.$$

A third theme of Diviš' research deals with estimates of the number of lattice points on boundary curves (surfaces) of convex bodies in 2(3)-dimensional space. Also, those investigations continued earlier research of Járnik.

In his Columbus years Bohuslav became increasingly interested in algebraic number theory. His papers [21, 22] reflect one facet of his deep commitment to higher number theory. By very ingenious combinatorial arguments he largely settled the problem, when it is true that for linearly disjoint separable algebraic extensions $K(\alpha)$, $K(\beta)$ of the field K one has $K(\alpha, \beta) = K(\alpha + \beta)$.

Diviš, who was promoted to the rank of associate professor only 3 years after his appointment, was honored and appreciated in his new homeland as an outstanding teacher and research mathematician. Just when he had

settled down in a new home with his wife and little Andrej, his life and career were cut short.

Scientists and mathematicians, friends and colleagues around the world deplore the loss of a young and able research mathematician and of a devoted and committed teacher.

W. SCHWARZ AND H. ZASSENHAUS

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