

Editorial

This issue of the Münster Journal of Mathematics is dedicated to our colleague, friend, and teacher Professor Dr. Christopher Deninger on the occasion of his 60th birthday. Most contributors were speakers at the conference “Arithmetic and Analysis”, April 9 - 13, 2018, which we organized at Münster.

The early work of Christopher Deninger was devoted to the Beilinson conjectures. In several breakthrough papers he established these conjectures for algebraic Hecke characters of imaginary quadratic fields. He contributed new ideas to the theory of motives like the construction of a Massey product in Deligne cohomology and, in a very influential paper with Murre, introduced the Fourier-Mukai transform into the motivic decomposition of abelian schemes.

The central theme of his research during the last three decades is the vision to advance analytic number theory by introducing cohomological methods. Deninger developed fundamentally new ideas about regularized determinants in the theory of complex L -functions of motives. He sees and exploits deep analogies between arithmetic schemes and foliated manifolds. In another direction he advanced systematically, together with Werner, the theory of vector bundles on p -adic varieties and their relation with representations of the étale fundamental group. More recently he found, together with Cuntz, an ingenious new approach to the theory of Witt vectors.

Through his enthusiasm for mathematics, Christopher Deninger attracted many students and created an extremely productive atmosphere. He deeply influenced the thinking and mathematical stature of his students with his very broad mathematical knowledge and his ability to point to interesting questions. Always supportive and giving enormous mathematical and personal freedom, Christopher Deninger had so far roughly 30 PhD students several of which became professional mathematicians.

In 1992 Christopher Deninger was awarded the Leibniz-Preis of the German Science Foundation (DFG). He was a plenary speaker at the International Congress of Mathematicians 1998 at Berlin. For twelve years Deninger was the Speaker of the Collaborative Research Center “Geometrische Strukturen in der Mathematik”, since 2018 he is one of the two Speakers of the Cluster of Excellence “Dynamics, Geometry, Structure” at Münster. In 2003 Deninger was elected to the Deutsche Akademie der Naturforscher Leopoldina.

We feel very lucky to have had or to have Christopher as a teacher or as a colleague. We congratulate him on his many impressive achievements and wish him all the very best for the coming years.

The Editors