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James W. Cogdell · Günter Harder
Stephen Kudla · Freydoon Shahidi
Editors

Cohomology of Arithmetic Groups

On the Occasion of Joachim Schwermer's
66th Birthday, Bonn, Germany, June 2016

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Preface

In June of 2016, a conference was held at the Max Planck Institute for Mathematics, Bonn, to celebrate the 66th birthday of Joachim Schwermer. All such conferences offer us the opportunity to look back at the career of the honoree, both mathematical and otherwise. In the case of Joachim Schwermer, his career was very rich.

Schwermer received his Doctor rerum naturalium from the Rheinische–Friedrich–Wilhelms Universität, Bonn, in 1977, under the supervision of G. Harder and F. Hirzebruch, and his Habilitation there in 1982. After leaving Bonn in 1986, Schwermer held Professorships in Eichstätt (1986–1998) and Düsseldorf (1998–2000) before taking up residence as Professor at the University of Vienna in 2000. Simultaneously with his move to Vienna, he became Deputy Director of the Erwin Schrödinger Institute (ESI). He became Director in 2004 and in 2011 oversaw the transition of the ESI from an independent research institute supported by the Austrian Government to a research institute under the auspices of the University of Vienna. He retired from the ESI in 2016 and the University of Vienna in 2017.

There have been three separate but related focuses of Schwermer's career. The first is his mathematical career. His research interest has always been the cohomology of arithmetic groups and its relation with the theory of automorphic forms. This volume represents this side of his career, with many of the articles responses to the interests of Schwermer. The article of Grbac, in particular, describes his collaboration with Schwermer. But there are two more sides that have produced value in their scholarship and in the fostering of scholarship of others. The first of these is represented by Schwermer's interest in the history of mathematics, particularly that of the nineteenth and early twentieth centuries. This interest can be seen in his various articles and in particular in his books, one with Goldstein and Schappacher on Gauss' *Disquisitiones* and then with Dumbaugh on Emil Artin and Class Field Theory. Equally important is Schwermer's work in what might be termed the administration of mathematics. We would like to mention two aspects of this. One is the series of Oberwolfach meetings organized with S. Kudla, usually on cohomology of arithmetic groups, automorphic forms, representation theory, etc. These were very influential and well attended, and we owe them both a debt of gratitude for organizing these. More importantly is Schwermer's stint as the Director of the

ESI. Here too he hosted many workshops on similar topics, and many of us have enjoyed his hospitality and owe a debt of gratitude for the mathematics we have produced there. The ESI has been an important research center in Europe, and many of us recall Schwermer's heroic efforts to keep it open and move it under the umbrella of the University of Vienna. For a period it was unclear that the ESI would survive, and to a large part, its survival in its current form (which seems almost indistinguishable from its former form) is due to his efforts.

When we came together in June of 2016 to celebrate the mathematics of Joachim Schwermer, we did not forget his efforts in both history and administration. Knowing of them made his contributions to mathematics that much richer, both for the depth his historical interest provided and the appreciation of his work in light of his other concomitant administrative achievements. Not all of the speakers at the conference are represented in these proceedings, but we thank those that did contribute. We would also like to thank all of our colleagues that contributed to the volume by serving as anonymous referees for the contributions. We also thank Springer for seeing this volume through to fruition in spite our missing of various deadlines. And mostly, we thank Joachim himself for providing us with the opportunity to thank him for all he has done.

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