## **PREFACE**

Professor A. V. Kazhikhov was one of the very distinguished analysts in our time. He made fundamental contributions on the mathematical theory of fluid mechanics, in particular he achieved outstanding results on the compressible Navier-Stokes system that had, and still have, a significant influence on this field.

This special issue of MAA, dedicated to the memory of Professor A. V. Kazhikhov, consists of 6 mathematical research papers dealing with compressible flows PDEs. They correspond to invited forty minutes lectures given during the session "États de la Recherche" (initiated through the Société Mathématique de France: SMF): "Topics on compressible Navier-Stokes equations" organized from 21 to 25 May 2012 in the Laboratoire de Mathématiques – UMR5127 CNRS, 733776 le Bourget du Lac, France. This session has been co-organized by C. Acary-Robert, M. Gisclon and D. Bresch.

We are grateful to all the distinguished authors who have contributed their significant articles to this special issue, and we would also like to thank the organizers of this successful workshop for their hard work. The board of editors of MAA would like to express their sincere appreciation to the guest editors and associated guest editors, especially Professor Didier Bresch, for their hard work on this special issue.

**Guest Editors:** 

Didier Bresch, CNRS and Université de Savoie; Zhouping Xin, The Institute of Mathematical Sciences, CUHK.

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