
Preface

Bruno Chanetz* and Jean Délery

Onera, 8 rue des Vertugadins,
92 190 Meudon, France
Fax: +33-1-46-23-51-58
E-mail: chanetz@onera.fr
E-mail: bchanetz@u-paris10.fr
E-mail: jean.delery@free.fr
*Corresponding author

Abderrahmane Baïri

Université Paris-Ouest,
LTIE-GTE, EA 4415, 50 rue de Sèvres,
92410 Ville d'Avray, France
Fax: +33-1-40-97-48-73
E-mail: bairi.a@gmail.com
E-mail: abairi@u-paris10.fr

Biographical notes: Bruno Chanetz received his PhD in 1986 and HDR in 1997 from the University Lyon I. He is the Deputy Director of the Fundamental and Experimental Aerodynamics Department since 2003. He was an Associate Professor at the University of Versailles from 2003 to 2009 and he is presently an Associate Professor at the University Paris-Ouest. He published 40 papers in archival journals and 100 articles in international or national conferences, mainly dealing with experimental hypersonic studies. He is now involved in activities using plasmas for supersonic aerodynamics with presence of shock waves. He is a member of the Aerodynamics Commission of 3AF (French Aeronautics and Astronautics Society) and member of the National Centre for Technological Research in the field of land vehicle aerodynamics and aeroacoustics.

Jean Délery has been the Director of the Fundamental and Experimental Aerodynamics Department of Onera until 2003. He is now Emeritus Advisor for this department, the Chairman of the Aerodynamics Commission of 3AF (French Aeronautics and Astronautics Society) and the Chairman of the Scientific Committee of the National Centre for Technological Research in the field of land vehicle aerodynamics and aeroacoustics. He was an Associate Professor at the University of Versailles from 1994 to 2003. He gives lectures at the University of Paris and the University of Roma 'La Sapienza'.

Abderrahmane Baïri is Professor at the University Paris Ouest (UPO). His main teaching activity is related to heat transfer and engineering numerical methods. His areas of research are numerical and experimental natural convection in closed cavities, thermal characterisation of materials, heat transfer at solid-solid interfaces and renewable energy. He is a member of the Aerodynamics Commission of 3AF (French Aeronautics and Astronautics Society) and member of the National Centre for Technological Research in the field of land vehicle aerodynamics and aeroacoustics.

The Centre National de Recherche Technologique on 'Aerodynamics and aeroacoustics of land vehicles' (CNRT R2A) federates the main actors of the French automobile industry and prominent research laboratories active in the domain of fluid mechanics and aeroacoustics. The research actions undertaken under the auspices of the CNRT R2A and with its financial support are organised in different scientific topics aiming at:

- improvement of the physical understanding of phenomena
- exploitation of advanced experimental facilities and evaluation of accompanying measurement techniques including processing methods
- contribution to the development of predictive methods and establishment of data banks for code validation
- setting of methodologies for the analysis of vehicle aerodynamic and acoustic properties.

The present special issue of *IJAD* publishes nine articles presenting recent research actions executed within the framework of the CNRT R2A or connected to its domain. The articles are organised according to the following themes:

- Flow control which is today a major concern with a view of reducing drag in order to reduce fuel consumption and accordingly pollutant emission and save oil. Flow control techniques are also actively developed to reduce noise generated by flow separation (five-articles).
- Aeroacoustics is an important concern both for cars and high-speed trains developers since at high speed the flow around the vehicle becomes the dominant noise source (two-articles).
- Complex aerodynamic behaviours which can compromise the vehicle stability or flow in some parts of the vehicle, its engine in particular (two articles).