

Preface

This work was realized during my tenure as a research assistant at the Institute of Internal Combustion Engines and Automotive Engineering (IVK) at the Universität Stuttgart. I would like to thank my supervisor Prof. Dr.-Ing. Jochen Wiedemann and my co-supervisor Prof. Dr.-Ing. Philip Leistner.

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Sadly, the impact of the economic crisis of 2009 on this project was quite severe: the involved vehicle manufacturer dropped out of the project, the funding was reduced significantly and the topic of the thesis was switched to the current one. Finding industrial partners for the new topic took until April 2011 and resulted in the foundation of the Seal Noise Transmission Consortium (SNT-C). Finally, three years after the start of my tenure, the SNT-C was able to provide CAD and material data and a foundation for experimental investigations. As the new technical managers, Dr. Philippe Moron (Exa) and Dr. Robert Powell (Exa) have my gratitude for supporting me with their expert knowledge. I would also like to acknowledge the participants of the SNT-C for the great collaboration. Without the data and experiments conducted in the SNT-C, this thesis would not have been possible. In particular I would like to thank Sandrine Vergne (PSA Peugeot-Citroën), Cornelia Kain (BMW), Frank Ullrich (BMW), François Van Herpe (PSA Peugeot-Citroën), Ivaylo Iovtchev (Copper Standard) and Mohammed Meskine (Exa). In March 2014 the SNT-C was completed and the outcome was transformed into this document. Sincere thanks go to all reviewers for the time-consuming work and for their helpful remarks.

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