Foreword

In this book, I provide an edition of Leibniz' writings on the theory of parallels, which include several attempts to prove the Parallel Postulate. A few of these papers were published by Leibniz himself in his lifetime, while others were only printed in modern editions of his mathematical works. The most important essays, however, were still unpublished, and I have transcribed them from the Leibnizian manuscripts in the *Niedersächsische Landesbibliothek* in Hannover. Given the enormous amount of Leibnizian papers preserved in the *Leibniz-Archiv*, I cannot claim to have found all the relevant material, and to have a complete picture of Leibniz' endeavors in this direction we have to wait for the publication of the related volumes by the Academy Edition of Leibniz' *Werke*; since however the scholars at the *Leibniz-Archiv* have just begun the first surveys of Leibniz' geometrical writings after 1676, it is likely that a full edition will require many years. In any case, I am confident that the present collection of papers on the theory of parallels is comprehensive enough to give a quite good idea of Leibniz' work in this field.

Most of the texts presented here are sections and paragraphs of longer essays on the foundations of geometry, while a few others are self-contained notes and remarks on the Parallel Postulate that Leibniz penned from time to time. Given the highly fragmentary character of these drafts and private notes, their meaning and significance may easily be missed and reading them requires a careful study of Leibniz' intellectual development and environment. To this end, I introduce them with an essay commenting the most relevant passages and outcomes, while dealing with the history of the attempts to prove the Parallel Postulate at the time of Leibniz, the main epistemological tenets of Leibniz' philosophy of geometry, and the historical reception of Leibniz' ideas on the subject. On the one hand, my introductory essay is strictly related to my previous book *Geometry and Monadology*, published in this Birkhäuser series in 2007; and while the latter book dealt with Leibniz' philosophy of space and *metaphysical* foundations of geometry, the present essay complements those researches expounding Leibniz' geometrical *epistemology* (albeit from a very specific perspective). On the other hand, this volume may also be read in connection with my commented editions of Saccheri and Lambert on the theory of parallel lines (both published by Birkhäuser), and the three books together offer a comprehensive account of the prehistory of non-Euclidean geometry in the eighteenth century.

I would like to thank the *Leibniz-Archiv* and the *Niedersächsische Landesbibliothek* for allowing me to read, transcribe and publish Leibniz' manuscripts on the

theory of parallels. My deepest gratitude goes to Siegmund Probst, whose help in finding and deciphering Leibniz' papers was invaluable for the present edition.

I began to work on Leibniz' theory of parallels in 2009, while I was Alexander von Humboldt Fellow at the Technische Universität Berlin. I would like to thank the Alexander von Humboldt Stiftung for financial support, and my generous host in Berlin, Eberhard Knobloch, who also carefully read and commented on the first draft of this book. His suggestions and advice saved me from several mistakes and considerably enhanced the final version. I am also very grateful to Richard Arthur, Gideon Freudenthal, Mattia Mantovani, and Victor Pambuccian, whose illuminating remarks on further drafts of the volume were crucial to my understanding of several passages.

My studies were presented and discussed in a few seminars from 2010 onwards, in Paris, Hannover, Pisa, Urbino, Leipzig, Ghent, and Princeton, and I am grateful to all the participants who helped me in understanding Leibniz' mathematics and epistemology; in particular, I mention here Herbert Breger, Daniel Garber, Tal Glezer, Pierluigi Graziani, Jürgen Jost, Massimo Mugnai, Enrico Pasini, Francesco Piro, and David Rabouin, whose comments and remarks substantially improved the present study.

Finally, I would like to thank Fred Sengmueller and James Garahan for a linguistic revision of the manuscript, David Merry for having helped me with the translation of Leibniz' texts, and Chiara Fabbrizi for the general editing.

This book is dedicated to my mother Laura, whose unfailing care made everything possible.

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