

Preface

This volume is an outgrowth of two series of lectures which I gave in February 1998 at Tōhoku University and in January 2001 at Hokkaidō University respectively, during workshops organized by F. Kato. Both series focussed on p -adic period mappings, sketching various analytic, geometric and group-theoretic aspects. For the first series, I was asked to present the theory to a mixed audience of complex geometers and number theorists, whence the idea of drawing a systematic parallel between the complex theory and the p -adic theory of period mappings, with emphasis on differential equations (and examples!).

In fact, it is during the preparation of the Tōhoku lectures that I came to the idea of tempered fundamental groups, p -adic orbifolds and p -adic triangle groups, which were presented in the Hokkaidō lectures, and now form the matter of the third chapter of these notes.

This text thus reflects the evolution from introductory notes to an original monograph. I wish that non-specialists with various backgrounds could find here access to the p -adic world.

For the specialist, let me mention two more recent developments closely related to the third chapter: the connection [And] with Grothendieck-Teichmüller theory, and P. Bradley's thesis on Hurwitz spaces.

It is my pleasure to thank F. Kato for being at the origin of this project, and the editors of the Memoirs of the Japan Mathematical Society for welcoming the final product.

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