



## Preface

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The first volume in this year contains two survey articles.

The first article is written by Sebastian Pokuttka on 'The Frank-Wolfe Algorithm'. I am particularly happy that we are able to publish this article in the Jahresbericht. In the meantime we have all been in contact with artificial intelligence algorithms, in particular in the context of picture recognition. The article here gives you some insight into the mathematics of some aspects of the inner mechanisms of artificial intelligence algorithms. I found this most stunning to see the mathematical principles and questions which make these engines work.

The subject of the second article written by Barbara Verfürth is the numerical analysis of wave propagation in an inhomogeneous domain with very different propagation properties in microscopic scales. The difficult challenges on the numerical analysis of this setting is illustrated mainly on the Helmholtz equation.

I hope you will enjoy reading this new volume.

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