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Guest editors' preface

## Computability and complexity in analysis

This special issue of the *Journal of Complexity* is devoted to research in the field of computability and complexity in analysis (CCA). Computability theory and complexity theory are two central areas of research in mathematical logic and theoretical computer science. Computability theory is the study of the limitations and abilities of computers in principle. Computational complexity theory provides a framework for understanding the cost of solving computational problems, as measured by the requirement for resources such as time and space. In CCA, notions and ideas from these fields are applied to computation problems over real-valued data. For more information about CCA see <http://cca-net.de>.

The papers in this special issue were submitted in response to an open call for papers following the Second International Conference on Computability and Complexity in Analysis, CCA 2005, which took place on August 25–29, 2005, at Kyoto University, Japan. The conference was the 11th event in a series of workshops, seminars and conferences on CCA starting in 1995. The conference started with six satellite seminar lectures on August 25 and 26. These lectures provided introductions to basic notions as well as to current research areas of CCA. From August 27 to 29, the program consisted of three invited talks and 20 contributed talks. Slightly more than half of the papers in the special issue were presented at this conference. All papers in the special issue passed through the usual thorough refereeing process of the *Journal of Complexity*.

We thank all the authors for their contributions and the referees for their careful work. We also acknowledge gratefully the support for the conference provided by the Graduate School of Human and Environmental Studies of Kyoto University.

Vasco Brattka  
*University of Cape Town*

Peter Hertling  
*Universität der Bundeswehr München*

Ker-I Ko  
*State University of New York, Stony Brook*

Hideki Tsuiki  
*Kyoto University*