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## Introduction

This book comprises the proceedings of the final symposium of the Collaborative Research Center (SFB 370) of the Deutsche Forschungsgemeinschaft on “Integral Materials Modeling” which took place in Aachen, Germany, on December 1–2, 2005. It is composed of the final reports of the projects and complementary manuscripts of renowned scientists in the field of materials modeling, covering a broad range of current simulation activities.

The projects are identified by their project numbers in their title. The manuscripts are organized such that after a list of persons involved in the SFB 370 the final through-process modeling exercises (group C) are introduced by the reports on supporting process and materials models (groups A and B) and complemented by the invited contributions. The first article on “Integral Materials Modeling” gives an introduction into the philosophy, history, and structure of the collaborative research center.

With the final symposium the SFB officially ended but its core topic was continued in a transfer program of the Deutsche Forschungsgemeinschaft (TFB 63) on “Industrially Relevant Modeling Tools”.

As a chairman of the collaborative research center on “Integral Materials Modeling” (SFB 370) I would like to express my sincere gratitude to my colleagues for their continuous support and encouragement. As a university professor it was my great pleasure to see the interest and engagement of the young doctoral students in the research program, their fascination by the scientific challenge, and their natural openness to interdisciplinary cooperation, discussion, and information exchange. Last but not least my thanks go to the review panels for their valuable advice and the Deutsche Forschungsgemeinschaft which not only funded the collaborative research center for 12 years but also offered unbureaucratic support.

Günter Gottstein  
Chairman, SFB 370  
Aachen, December 2006



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on “Integral Materials Modeling” (1994–2005)**

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