

## PREFACE

The final meeting of the European Science Foundation (ESF) programme European Ice Sheet Modelling Initiative (EISMINT) took the form of a symposium embedded in the European Geophysical Society's (EGS) XXIV General Assembly, held in Den Haag, The Netherlands from 21-22 April 1999. The session was titled 'EISMINT/EPICA symposium on ice sheet modelling and deep ice drilling'. Objectives were to reflect the achievements of EISMINT since its inception in January 1993 and to highlight and look forward to applications of ice sheet modelling to deep drilling projects, especially the European Programme for Ice Coring in Antarctica (EPICA), another programme supported by ESF. The symposium was organised by EGS and ESF and co-sponsored by the International Glaciological Society (IGS). Conveners were C. Doake, C. Hammer, P. Huybrechts, J. Oerlemans and D. Peel.

There were over 100 participants, with 48 oral presentations and 41 posters. Thirty three papers have been accepted for publication in this volume of the *Annals of Glaciology*, having been refereed in accordance with the standard practices of IGS. Professor K Hutter was the Chief Editor, aided by a team of Scientific Editors comprising A. Abe-Ouchi, H. Blatter, R. Greve, J. Meyssonier and L. Morland.

EISMINT was launched by the General Assembly of the European Science Foundation at Strasbourg in November 1992. Member organisations from nine countries gave financial support for a period of three years, which culminated in an international symposium on Ice Sheet Modelling held in Chamonix, France from 18-22 September 1995. Proceedings were published in *Annals of Glaciology*, volume 23. Further support for two years allowed a second phase of EISMINT to consolidate its earlier activities. Overall, it held two summer schools; 16 workshops on topics including intercomparison of ice sheet models, ice-environment interactions (atmosphere, ocean, lithosphere), subglacial processes, ice rheology and anisotropy, and behaviour of former ice sheets; ran an exchange grant scheme; and held two international symposia. Participation was not restricted to just those from the contributing countries, but included scientists and students worldwide.

Advances made during this period are reflected in the contributions seen in this volume. Intercomparison of models has allowed codes to be checked and standards set for new models.

Ever increasing computer power means that more sophisticated ice sheet models can be coupled with atmospheric ones to improve the important climate forcing, which tends to dominate the long period behaviour of ice sheets. Internal instabilities have been studied, which may help explain the existence and distribution of ice streams. Interest in rheology and anisotropy is reflected in both theoretical advances and ice core observations. The intermingling of modelling and drilling is seen in the need of models for data, for example in the site selection for EPICA, and in the demand for accurate dating of ice cores, which requires a detailed understanding of processes on a wide range of spatial and temporal scales. But perhaps the longest lasting legacy of EISMINT will be the strengthening of the glaciological community and the ties formed during the various activities, so ably organised and enthusiastically run by the conveners drawn from many countries.

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