DIMACS Series in Discrete Mathematics
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Preface

Discrete mathematics can and should be taught in K-12 classrooms. This volume, a collection of articles by experienced educators, explains why and how, including evidence for "why" and practical guidance on "how". It also discusses how discrete mathematics can be used as a vehicle for achieving the broader goals of the major effort now underway to improve mathematics education.

This volume is intended for several different audiences. Teachers at all grade levels will find here a great deal of valuable material that will help them introduce discrete mathematics in their classrooms, as well as examples of innovative teaching techniques. School and district curriculum leaders will find articles that address their questions of whether and how discrete mathematics can be introduced into their curricula. College faculty will find ideas and topics that can be incorporated into a variety of courses, including mathematics courses for prospective teachers. A description of the organization of this volume and an annotated summary of the articles it contains can be found in the **Overview and Abstracts**.

This volume developed from a conference that took place at Rutgers University on October 2-4, 1992. The conference, entitled "Discrete Mathematics in the Schools: How Do We Make an Impact?" was attended by 33 people, from high schools and colleges, who had played leadership roles in introducing discrete mathematics at precollege levels.[1] The conference was sponsored by the Center for Discrete Mathematics and Theoretical Computer Science (DIMACS)[2] and funded by the National Science Foundation (NSF).

The invitation to the conference noted that "Although primarily a re-

[1]A list of conference participants and an abbreviated conference program appear as appendices to the **Introduction.**

[2]DIMACS is an NSF-funded Science and Technology Center which was founded in 1989 as a consortium of Rutgers and Princeton Universities, AT&T Bell Laboratories, and Bellcore (Bell Communications Research). With the reorganization of AT&T Bell Laboratories in 1996, it was replaced in the DIMACS consortium by AT&T Labs and Bell Labs (part of Lucent Technologies). DIMACS is also funded by the New Jersey Commission on Science and Technology, its partner organizations, and numerous other agencies.

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search center, DIMACS is committed to educational programs involving discrete mathematics ... as discrete mathematics activities at K-12 levels increase, it is appropriate for a national center in discrete mathematics to bring together those associated with such activities for an opportunity to reflect on how all of our activities can make an impact on mathematics education nationally." The rationale for the conference is further described in the **Introduction**, and the **Vision Statement** concerning discrete mathematics in the schools that emerged from the conference appears directly after this **Preface**.

This volume was originally conceived as the proceedings of the conference. However, as we began receiving and reviewing articles, we realized that an expanded and more comprehensive book would have greater value and impact. Accordingly, we solicited additional articles from appropriate authors; approximately two-thirds of the articles are based on conference presentations, and the remainder were written independently. All of the authors received comments and suggestions from both anonymous referees and the editors, and revised their articles accordingly; this lengthened considerably the time to produce the volume, but greatly enhanced its quality.

The editors wish to thank the authors for their cooperation and patience, as well as for their contributions. We also thank the referees for their assistance, Reuben Settergren for many hours spent in editorial work, typesetting, and creating figures, Pat Pravato for her able secretarial help, and NSF for a supplementary grant that enabled us to complete the volume.

Compiling a volume like this, involving 34 articles from different authors, is not an easy task, and we are quite pleased that this task has now been completed.

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