
Preface

My book, *General Lattice Theory*, was published in 1978. Its goal: “to discuss in depth the basics of general lattice theory”. Each chapter concluded with a section, *Further Topics and References*, providing brief outlines of, and references to, related topics. Each chapter contained a long list of open problems.

The *second edition* appeared twenty years later, in 1998. It included the material of the first edition, and a series of appendices. The first, *Retrospective*, reviewed developments of the 20 years between the two editions, especially, solutions of the open problems proposed in the first edition. The other seven appendices surveyed new fields. They were written by the best experts available. Obviously, I could no longer command an overview of all of lattice theory. The book provided foundation, the appendices surveyed contemporary research.

The explosive growth of the field continued. While the nineteen sixties provided under 1,500 papers and books, the seventies 2,700, the eighties over 3,200, the nineties almost 3,600, and the first decade of this century about 4,000. As a result, it became almost inevitable that we split the book into two volumes.

This book, *Lattice Theory: Foundation*, lays the foundations of the field. There are no *Retrospectives* and no lists of open problems. Its companion volume, *Lattice Theory: Special Topics and Applications*, completes the picture; it is written by experts in the various topics covered.

To help the readers of this book to acquire a wider view, almost a thousand exercises are provided. And there are over forty *diamond sections*, brief sections marked by the symbol \diamond , that provide brief glimpses into research fields beyond the horizon of this book.

Contributors

The following mathematicians contributed diamond sections:

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- Gábor Czédli (Section V.1.9);
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- Kalle Kaarli (Section II.2.5);
- Jimmie D. Lawson (Section I.3.16);
- Joseph P. S. Kung (Section V.5.13);
- Tibor Katriňák (Section V.1.8);
- J. B. Nation (Section IV.4.4);
- Hilary A. Priestley (Section II.5.6);
- Aleš Pultr (Section II.5.7);
- Manfred Stern (Section V.2.6);
- Friedrich Wehrung (Sections III.4.4, IV.5.5, V.5.11, and V.5.12).

I am deeply appreciative to all of them.

Acknowledgements

To keep this *Preface* short, I put the history of this book and the very extensive acknowledgements into the *Afterword*. But let me repeat one point made there. I started writing this book in 1968. In the forty plus years of this endeavor, I received help from hundreds of mathematicians. I am forever grateful.



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