no-nonsense style of a research monograph, this book provides a rewarding look at some of the recent work of the Soviet school of complex analysis in several variables for those with some previous experience in the subject.

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Univalent functions, by Peter L. Duren, Grundlehren der mathematischen Wissenschaften 259, Springer-Verlag, New York, 1983, $46.00, xiv + 382 pp. ISBN 0-3879-0795-5

Prefatory Note (added August, 1984). After the review appearing below was submitted I learned that Bieberbach's conjecture had been proved by L. de Branges. His proof is short and miraculous. It combines the theories of Loewner and Milin with a new ingredient from a totally unexpected source: a theorem of Askey and Gasper (Amer. J. Math. **98** (1976), 709–737, Theorem 3) which asserts that

$$\sum_{j=0}^{k} P_j^{(\alpha,0)}(x) > 0$$

for $-1 < x \leqq 1$ and $\alpha > -2$, where $P_j^{(\alpha,\beta)}$ denote the Jacobi polynomials.

Thus, some of the discussion of Bieberbach's conjecture below is obsolete, except insofar as it can serve to showcase the remarkableness of de Branges' achievement. Although its most famous problem has now been solved, the subject of univalent functions remains interesting, both for its own sake and for its connections with other branches of analysis, and Duren's book is an outstanding contribution to it.

In the language of classical complex function theory, "univalent" means one-to-one. Thus, the univalent functions of Duren's book are analytic functions which are one-one in some connected open subset of the complex plane, most often the unit disk $\mathbf{D} = \{z \in \mathbf{C}\colon |z| < 1\}$. Such functions effect a conformal mapping onto another domain $\Omega \subset \mathbf{C}$.

Much research in the subject, and most of this book, is devoted to the class S of univalent analytic functions f in $\mathbf{D}$ which satisfy the normalizations