D is symmetric; homogeneity is not enough.) This is the beginning of the theory of automorphic functions. In one variable, if Γ is the modular group, $\Gamma\backslash D$ gives, through the theory of the Weierstrass p-function, the natural parametrization of the possible complex structures on the 2-torus. In the general case there are similar families of Abelian varieties. These are Kuga's fiber varieties, which are constructed in the book in the author's own way, and their algebraicity is proved.

As to the organization of the book, it contains five chapters of roughly equal length. The first two summarize the essential facts about algebraic groups and semisimple Lie groups with a few proofs, and give the Jordan algebra prerequisites with concise proofs. The third is about Cayley transforms and boundary structure, and the fourth about equivariant holomorphic maps, culminating in the results about Kuga's fiber varieties. Chapter 5 gives more detail about the Lie algebra of $\mathrm{Aut}(D)$ for the half-plane version of D; it includes, up to a point, nonsymmetric domains. There is also an Appendix, where the classical domains are explicitly constructed.

The book is not easy to read because of its conciseness and because of the many prerequisites, such as linear algebraic groups, that it constantly uses. On the other hand, it is very carefully written and organized; everything is in its place. It has a good index and index of notations, and a very detailed bibliography. Also, despite the unfortunate circumstance that this review is written so long after the book's publication, it is still the only book on this subject.

ADAM KORANYI
LEHMAN COLLEGE (CUNY)

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Numerical methods for initial value problems in ordinary differential equations, by S. O. Fatunla. Academic Press, London, 265 pp., $44.50. ISBN 0-12-249930-1

For many years the textbooks by Gear [2] and by Lambert [7] and the summer school proceedings edited by Hall and Watt [4]