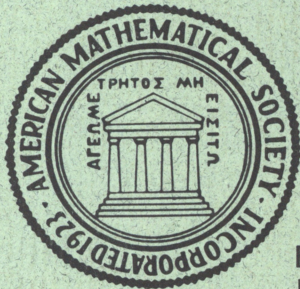


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Algebraists' Homage: Papers in Ring Theory and Related Topics

S. A. Amitsur, D. J. Saltman,
and G. B. Seligman, Editors

These *Proceedings* contain papers presented in person or by title at the Conference in Algebra held at Yale University, June 2-5, 1981, on the occasion of the retirement of Professor Nathan Jacobson. Support was generously provided by the National Science Foundation. About seventy mathematicians were visitors in residence at Yale for all or part of the conference. In addition, numbers of people within commuting distance participated on a daily or occasional basis.

The theme of the conference was to discuss the current status and to suggest directions for the future in those areas that have been decisively influenced by Nathan Jacobson.

The book contains surveys of recent work in division algebras, rings with polynomial identity, representations of associative algebras, Lie algebras and finite groups of Lie type; by experts in these fields: S. Amitsur, E. Formanek, M. Auslander, J. Humphreys, T. Springer. These topics and other themes in related fields are developed in some thirty-five additional reports by leading algebraists.

Here is the picture of the "state-of-the-art." At the risk of offending many participants by omission, the editors cite the reports of Sweedler on *Weak cohomology*, of P. M. Cohn on *Determinants*, of Schacher on *Applications of the classification of finite simple groups to Brauer groups*, of Block and Wilson summarizing their recent work on classifying simple Lie algebras of prime characteristic, and of Mac Lane on *Proof theory* as articles of high research value. Some Yale authors might also be mentioned: Saltman on *Generic structures and field theory*, Feit-Zuckerman on *Spin and orthogonal groups*, Seligman on *Generalized Clifford algebras*, Tamagawa on *Regularly closed fields*.

The sections of the book contain papers by the authors listed below.

Surveys: S. A. Amitsur, M. Auslander, E. Formanek, J. E. Humphreys and T. A. Springer.

Addresses: P. M. Cohn and M. E. Sweedler.

Papers in Ring Theory: M. Artin, C. C. Faith, M. Gerstenhaber, D. Haile, I. N. Herstein, C. Huneke, A. Klein, M. Lorenz, W. S. Martindale, B. Ososky, L. H. Rowen, D. Saltman, M. Schacher, S. D. Schack, W. Schelter, L. W. Small, S. Steinberg, and Zelmanowitz.

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1980 *Mathematics Subject Classifications*: 16-06; 17-06.

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Lectures on Nielsen Fixed Point Theory

Boju Jiang

This book is expository in nature. Starting with simplest examples, it gives an easy introduction to the subject, then explains several very recent developments. It makes available in the English language the covering space approach to Nielsen fixed point theory. As far as research value is concerned, the Nielsen theory of periodic points is published here for the first time, and an exposition and improvement of the latest progress in the Nielsen theory of fiber maps (a paper by You to appear in the *Pacific Journal of Mathematics*) is provided. There is only one other book in the field: R. Brown, *Lefschetz fixed point theorem*, Scott, Foresman and Company, Glenview, Illinois, 1971. The present work introduces the subject via a more satisfactory approach—the covering space approach, and includes the most important results of the 1970s.

General Summary: The Nielsen fixed point theory is becoming increasingly important in geometric topology and, potentially, has applications in analysis. These notes introduce the subject via a covering space approach which is very fruitful. It starts from the beginning, and goes all the way to the frontier of our knowledge, including very recent work (some unpublished) on the Nielsen-type theory of periodic points and the Nielsen theory of fiber maps.

These notes are based on courses given at the University of California, Berkeley in 1980 and at the University of California, Los Angeles in 1981.

The Introduction explains what Nielsen theory is about. Chapter I gives the basic notions of the theory, while Chapter II is devoted to computational methods. In Chapter III the author broadens the scope and introduces the Nielsen-type theory for periodic points. Chapter IV provides an exposition of the latest progress in the Nielsen theory for fiber maps. Another chapter in the original courses is now sketched as §1.6 because the material is easily available in the literature. The Historical Notes and Bibliography attached are not intended to be complete.

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