

# Spring Lecture Series N.23

## Combinatorial Methods in Algebra (1998)

Principal Lecturer: Efim Zelmanof, Yale University

**Contributions by:**

Efim Zelmanov

*Title: On the Burnside Problem*

Lance Small

*Title: Reductive Groups, Engel Conditions and Ring Theory*

Robert Wilson

*Title: Invariant Polynomials in the Free Field*

Efim Zelmanov

*Title: What Makes a Group Finite?*

George Bergman

*Title: Is There a Dual to the Diamond Lemma?*

Georgia Benkart

*Title: Quantum Quaternions and Octonion Algebras*

Hyman Bass

*Title: "Math Wars": Can America Create a Rational Process For Improving Mathematics Education?*

Efim Zelmanov

*Title: Growth of Algebras*

Hyman Bass

*Title: A Super-Rigid Non-Lattice*

J. Toby Stafford

*Title: Invariant Differential Operators on Symmetric Spaces*

Victor Kac

*Title: Classification of Infinite-Dimensional Groups of Supersymmetries*

Efim Zelmanov

*Title: The Locality Condition*

Inna Sysoeva

*Title: Irreducible Representations of Braid Groups of Unirank Two*

Martin Dixon

*Title: Groups That Are Covered By Non-Abelian Simple Groups"*

David Riley

*Title: Semigroup Identities and the Engel Condition in Associative Algebras and Their Group of Units*

Yuri Medvedev

*Title: On Compact Periodic and Engel Groups*

Martin J. Evans

*Title: Presentations of Free Groups in Soluble Varieties*

Arturo Magidin

*Title: Dominions in Varieties of Nilpotent Lie Groups*

Stuart A. Steinberg

*Title: On the Scarcity of Lattice-Ordered Matrix Algebras II*

Olga Poliakova

*Title: A New Construction for Free Inverse Semigroups*

Zinovy Reichstein

*Title: Can a General Polynomial be written as " $x^n - ax^{n-2} + O(x^{n-4})$ ?"*

Jie-Tai Yu

*Title: Recognizing Coordinates in Polynomial Algebras*

Vyacheslav Futorny

*Title: Verma Types Modules for Affine Lie Algebras and Their Quantizations*

Alexander Stolin

*Title: Frobenius Algebras and Yang-Baxter Equation*

Alexander Berkovich

*Title: Trinomial Analogue of Bailey's Lemma and q-Series Identities*