

In the 2012–13 academic year, the Mathematical Sciences Research Institute, Berkeley, hosted programs in Commutative Algebra (Fall 2012 and Spring 2013) and Noncommutative Algebraic Geometry and Representation Theory (Spring 2013). There have been many significant developments in these fields in recent years; what is more, the boundary between them has become increasingly blurred. This was apparent during the MSRI program, where there were a number of joint seminars on subjects of common interest: birational geometry, D-modules, invariant theory, matrix factorizations, noncommutative resolutions, singularity categories, support varieties, and tilting theory, to name a few. These volumes reflect the lively interaction between the subjects witnessed at MSRI.

The Introductory Workshops and Connections for Women Workshops for the two programs included lecture series by experts in the field. The volumes include a number of survey articles based on these lectures, along with expository articles and research papers by participants of the programs.

Mathematical Sciences Research Institute
Publications

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Commutative Algebra and
Noncommutative Algebraic Geometry
Volume II: Research Articles

Mathematical Sciences Research Institute Publications

- 1 Freed/Uhlenbeck: *Instantons and Four-Manifolds*, second edition
- 2 Chern (ed.): *Seminar on Nonlinear Partial Differential Equations*
- 3 Lepowsky/Mandelstam/Singer (eds.): *Vertex Operators in Mathematics and Physics*
- 4 Kac (ed.): *Infinite Dimensional Groups with Applications*
- 5 Blackadar: *K-Theory for Operator Algebras*, second edition
- 6 Moore (ed.): *Group Representations, Ergodic Theory, Operator Algebras, and Mathematical Physics*
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- 8 Gersten (ed.): *Essays in Group Theory*
- 9 Moore/Schochet: *Global Analysis on Foliated Spaces*, second edition
- 10–11 Drasin/Earle/Gehring/Kra/Marden (eds.): *Holomorphic Functions and Moduli*
- 12–13 Ni/Peletier/Serrin (eds.): *Nonlinear Diffusion Equations and Their Equilibrium States*
- 14 Goodman/de la Harpe/Jones: *Coxeter Graphs and Towers of Algebras*
- 15 Hochster/Huneke/Sally (eds.): *Commutative Algebra*
- 16 Ihara/Ribet/Serre (eds.): *Galois Groups over \mathbb{Q}*
- 17 Concus/Finn/Hoffman (eds.): *Geometric Analysis and Computer Graphics*
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- 67–68 Eisenbud/Iyengar/Singh/Stafford/Van den Bergh (eds.): *Commutative Algebra and Noncommutative Algebraic Geometry*

**Commutative Algebra
and Noncommutative
Algebraic Geometry**
Volume II: Research Articles

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