Contents

Infinite-dimensional Groups and their Representations

Karl-Hermann Neeb

Borel-Weil Theory for Loop Groups

Karl-Hermann Neeb

Coadjoint Representation of Virasoro-type Lie Algebras and Differential Operators on Tensor-densities

Valentin Yu. Ovsienko

From Group Actions to Determinant Bundles Using (Heat-kernel) Renormalization Techniques

Sylvie Paycha

Fermionic Second Quantization and the Geometry of the Restricted Grassmannian

Tilmann Wurzbacher