
CONTENTS

PREFACE		vii
CHAPTER 1.	AN OVERVIEW	3
	1. Sources of Noncommutative Geometry	3
	2. Noncommutative de Rham Complex and Cyclic Cohomology	8
	3. Quantum Groups and Yang–Baxter Equations	16
	4. Monoidal and Tensor Categories as a Unifying Machine	26
CHAPTER 2.	SUPERSYMMETRIC ALGEBRAIC CURVES	33
	1. A Superextension of the Riemann Sphere	33
	2. SUSY-Families and Schottky Groups	45
	3. Automorphic Jacobi–Schottky Superfunctions	55
	4. Superprojective Structures	61
	5. Sheaves of the Virasoro and Neveu–Schwarz Algebras	64
	6. The Second Construction of the Neveu–Schwarz Sheaves	73
	7. Elliptic SUSY-Families	80
	8. Supertheta-Functions	85
CHAPTER 3.	FLAG SUPERSPACES AND SCHUBERT SUPERCELLS	96
	1. Classical Supergroups and Flag Superspaces	96
	2. Schubert Supercells	100
	3. Superlength in Flag Weyl Groups	103
	4. Order in Flag Weyl Groups and Closure of Schubert Supercells	109
	5. Singularities of Schubert Supercells	114
	6. Root Systems and Parabolic Subgroups	118
CHAPTER 4.	QUANTUM GROUPS AS SYMMETRIES OF QUANTUM SPACES	124
	1. Quantum Supergroups	124
	2. Automorphisms of Quantum Spaces	129
	3. General Linear Supergroups	135
	4. Regular Quantum Spaces	145
	5. $GL_q(n)$ at the Roots of Unity: Frobenius at Characteristic Zero and the Hopf Fundamental Group	151
	6. Quantum Tori and Quantum Theta-Functions	153
	BIBLIOGRAPHY	157
	INDEX	164