

Contents

Introduction	1
Chapter 1. Background	7
1.1. Coefficient quiver	7
1.2. Schubert decompositions	8
1.3. Representations of Schubert cells	9
Chapter 2. Schubert systems	11
2.1. The complete Schubert system	11
2.2. Partial Evaluations	14
2.3. Contradictory β -states	15
2.4. Definition of β -states	15
2.5. The reduced Schubert system	16
2.6. Computing β -states	19
2.7. Solvable β -states	21
2.8. Extremal edges	23
2.9. Patchwork solutions	26
2.10. Extremal paths	28
Chapter 3. First applications	31
3.1. The Kronecker quiver	31
3.2. Dynkin quivers	32
Chapter 4. Schubert decompositions for type \widetilde{D}_n	35
4.1. Contradictory β of the first and of the second kind	35
4.2. Automorphisms of the Dynkin diagram	36
4.3. Bases for some indecomposable representations	37
4.4. The main theorem	41
Chapter 5. Proof of Theorem 4.1	43
5.1. Defect -1	43
Appendix A. Representations for quivers of type \widetilde{D}_n	63
A.1. Reflections and Auslander-Reiten translates	63
A.2. Indecomposable and exceptional representations	64
A.3. The Auslander-Reiten quiver	64
A.4. The tubes	64
A.5. Roots	65
A.6. The defect	65

Appendix B. Bases for representations of type \widetilde{D}_n	67
B.1. Defect -1	67
B.2. Defect -2	72
B.3. Positive defect	72
B.4. Exceptional tubes of rank 2	72
B.5. Exceptional tubes of rank $n - 2$	73
B.6. Homogeneous tubes	76
Bibliography	77