

Contents

1	Introduction	1
2	Sequent calculus for linear logic	15
3	Some elementary syntactic results	26
4	The calculus of two implications: a digression	41
5	Embeddings and approximations	45
6	Natural deduction systems for linear logic	56
7	Hilbert-type systems	65
8	Algebraic semantics	71
9	Combinatorial linear logic	81
10	Girard domains	92
11	Coherence in symmetric monoidal categories	102
12	The storage operator as a cofree comonoid	111
13	Evaluation in typed calculi	119
14	Computation by lazy evaluation in CCC's	125
15	Computation by lazy evaluation in SMC's and ILC's	134

viii LECTURES ON LINEAR LOGIC

16	The categorical and linear machine	139
17	Proofnets for the multiplicative fragment	144
18	The algorithm of cut elimination for proof nets	155
19	Multiplicative operators	162
20	The undecidability of linear logic	172
21	Cut elimination and strong normalization	179
	References	191
	Index	197