

**T**HIS book concludes five years of research into the linguistic applications of proof nets. While mostly self-contained, people already familiar with either linear logic or Lambek calculi will probably have an easier time reading through it, and people familiar with both can probably skip Part I altogether.

Part II contains your recommended daily dose of proof nets. Proof nets for **MLL**, **MILL**, **MILL1**,  $L_e$ , labeled proof nets and proof nets for  $NL \diamond_{\mathcal{R}}$ . This last proof net calculus is new, and we will provide a correction criterion for this calculus and prove soundness and completeness results.

Part III builds on the proof nets for  $NL \diamond_{\mathcal{R}}$  and contains reflections on automated deduction using proof nets, an analysis of the complexity of the logic and results on the relation between proof nets and lexicalized tree adjoining grammars.

Chapter 5 consists of joint work with Mario Piazza, which has appeared before in (Moot & Piazza 2001).

Chapter 7 consists of joint work with Quintijn Puite and contains work which has appeared before in (Puite & Moot 1999), (Moot & Puite 1999) and (Moot & Puite 2001).