

CL 2002:

Computational Logic

(Lecture 6)

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This lecture plan

1. Normal derivations in intuitionistic logic. Context and proof trees.
2. Discharging assumptions in natural derivation. Examples.
3. Eliminating empty succedents in Gentzen style calculi. Paradigm: sequent $\Gamma \Rightarrow F$ is an input-output record of a natural derivation of F from open assumptions Γ .
4. Fire drill.
5. Transformation of a Gentzen style proof into a Natural Derivation. Two ways to handle $(\Rightarrow, \rightarrow)$ rule: size vs. redundant derivation steps.
6. Transformation of natural deduction trees into Gentzen style derivations.
7. Abstract data types, examples. Types and typed λ -terms. Similarity between natural deductions in **Int** and λ -terms derivations.