5th Homework sheet Proof Theory

- Deadline: 30 November.

- Submit your solutions by handing them to the TA at the *beginning of the lecture.*

- Good luck!

Let δ be the following sentence:

$$\exists x\, (\, P(x) \to \forall y\, P(y)\,).$$

(a) *(30 points)* Give a derivation of δ in classical natural deduction.

(b) *(30 points)* Give a derivation of δ in the classical sequent calculus.

(c) *(40 points)* Use Kripke models to show that not even $\neg\neg\delta$ is an intuitionistic tautology.