Encore des inductifs

Séquent : couple $\Gamma \vdash F$

- Γ ensemble de formules — contexte
- F formule — conclusion

Notation $\Gamma \cup \{F\} \rightsquigarrow \Gamma, F$

Encore des inductifs

Schéma

$\to \Gamma, F \vdash F$ (ax) $\qquad \Gamma \vdash F \to \Gamma, G \vdash F$ (aff)

$\Gamma, F \vdash G \to \Gamma \vdash F \Rightarrow G$ $(\Rightarrow_i)$ $\qquad \Gamma \vdash F \Rightarrow G, \Gamma \vdash F \to \Gamma \vdash G$ $(\Rightarrow_e)$

$\Gamma \vdash F, \Gamma \vdash G \to \Gamma \vdash F \wedge G$ $(\wedge_i)$ $\quad \Gamma \vdash F \wedge G \to \Gamma \vdash F$ $(\wedge_e^g)$ $\Gamma \vdash F \wedge G \to \Gamma \vdash G$ $(\wedge_e^d)$

$\Gamma \vdash F \to \Gamma \vdash F \vee G$ $(\vee_i^g)$ $\quad \Gamma \vdash G \to \Gamma \vdash F \vee G$ $(\vee_i^d)$

$\Gamma \vdash F \vee G,\ \Gamma, F \vdash H,\ \Gamma, G \vdash H \to \Gamma \vdash H$ $(\vee_e)$

$\Gamma, F \vdash \bot \to \Gamma \vdash \neg F$ $(\neg_i)$ $\quad \Gamma \vdash \neg F,\ \Gamma \vdash F \to \Gamma \vdash \bot$ $(\neg_e)$ $\quad \Gamma, \neg F \vdash \bot \to \Gamma \vdash F$ $(\bot_c)$

Déduction naturelle

Séquents prouvables

$$\frac{}{\Gamma, F \vdash F}\ (\text{ax}) \qquad \frac{\Gamma \vdash F}{\Gamma, G \vdash F}\ (\text{aff})$$

$$\frac{\Gamma, F \vdash G}{\Gamma \vdash F \Rightarrow G}\ (\Rightarrow_i) \qquad \frac{\Gamma \vdash F \Rightarrow G \quad \Gamma \vdash F}{\Gamma \vdash G}\ (\Rightarrow_e)$$

$$\frac{\Gamma \vdash F \quad \Gamma \vdash G}{\Gamma \vdash F \wedge G}\ (\wedge_i) \qquad \frac{\Gamma \vdash F \wedge G}{\Gamma \vdash F}\ (\wedge_e^g) \qquad \frac{\Gamma \vdash F \wedge G}{\Gamma \vdash G}\ (\wedge_e^d)$$

$$\frac{\Gamma \vdash F}{\Gamma \vdash F \vee G}\ (\vee_i^g) \qquad \frac{\Gamma \vdash G}{\Gamma \vdash F \vee G}\ (\vee_i^d)$$

$$\frac{\Gamma \vdash F \vee G \quad \Gamma, F \vdash H \quad \Gamma, G \vdash H}{\Gamma \vdash H}\ (\vee_e)$$

$$\frac{\Gamma, F \vdash \bot}{\Gamma \vdash \neg F}\ (\neg_i) \qquad \frac{\Gamma \vdash \neg F \quad \Gamma \vdash F}{\Gamma \vdash \bot}\ (\neg_e) \qquad \frac{\Gamma, \neg F \vdash \bot}{\Gamma \vdash F}\ (\bot_c)$$