

## Mar 23: Agenda

- Beyond model checking, direct proof:

- ▶ And elimination:

$$\frac{\alpha \wedge \beta}{\alpha}$$

- ▶ Modus ponens:

$$\frac{\alpha \implies \beta, \alpha}{\beta}$$

- ▶ Resolution rule:

$$\frac{\alpha \vee \beta, \gamma \vee \neg\beta}{\alpha \vee \gamma}$$

- First-order logic: an initial introduction