

# Modal and intuitionistic logic and the use of universal models

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## Abstract

I will give an introduction to intuitionistic and modal logic with some more stress on the first. It will cover an introduction to intuitionism, proofs, Kripke models, completeness and other metatheorems, Heyting algebras and their relationship with Kripke models, universal models, Jankov formulas. Similar things for modal logic, translations between classical and intuitionistic logic, intuitionistic logic and modal logic. The last lecture will be about an application of universal models to unifiability in extensions of  $K4$ .

## References

- [1] N. Bezhanishvili. Lattices of intermediate and cylindric modal logics. Diploma thesis, Universiteit van Amsterdam, ILLC Dissertation Series DS-2006-02, 2006.
- [2] N. Bezhanishvili and D. de Jongh. Intuitionistic logic. Preprint, ILLC-Prepublications PP-2006-25, Lecture Notes for ESSLI 2005, [www.illc.uva.nl](http://www.illc.uva.nl), 2006.
- [3] A. Chagrov and M. Zakharyashev. *Modal Logic*. Oxford University Press, 1997.
- [4] C. Gencer and D. de Jongh. Unifiability in extensions of  $k4$ . Preprint, ILLC-Prepublications PP-2007-38, [www.illc.uva.nl](http://www.illc.uva.nl), 2007.