

**Benzmüller, Christoph; Farjami, Ali; Parent, Xavier**

**A dyadic deontic logic in HOL.** (English) [Zbl 1418.03069](#)

Broersen, Jan (ed.) et al., Deontic logic and normative systems. 14th international conference, DEON 2018, Utrecht, Netherlands, July 3–6, 2018. Proceedings. London: College Publications. 33-49 (2018).

Summary: A shallow semantical embedding of a dyadic deontic logic by *J. M. C. L. M. Carmo* and *A. J. I. Jones* [*J. Log. Comput.* 23, No. 3, 585–626 (2013; [Zbl 1272.03096](#))] in classical higher-order logic is presented. This embedding is proven sound and complete, that is, faithful.

The work presented here provides the theoretical foundation for the implementation and automation of dyadic deontic logic within off-the-shelf higher-order theorem provers and proof assistants.

For the entire collection see [[Zbl 1398.03006](#)].

**MSC:**

- [03B45](#) Modal logic (including the logic of norms)
- [03B15](#) Higher-order logic; type theory (MSC2010)
- [03B35](#) Mechanization of proofs and logical operations

Cited in **1** Document

**Keywords:**

logic of CTD conditionals; classical higher-order logic; semantic embedding; automated reasoning

**Software:**

[Isabelle/HOL](#); [Nitpick](#)