

**Iemhoff, Rosalie; Metcalfe, George**

**Proof theory for admissible rules.** (English) Zbl 1174.03024  
Ann. Pure Appl. Logic 159, No. 1-2, 171-186 (2009).

The paper is a contribution to the study of admissible rules of nonclassical propositional logics. A rule (closed under substitution) is admissible in a logic if the set of its theorems is closed under the rule. Admissibility was shown to be decidable in a variety of normal modal and superintuitionistic logics by *V. V. Rybakov* [Admissibility of logical inference rules. Amsterdam: Elsevier (1997; [Zbl 0872.03002](#))]. Explicit bases of admissible rules were constructed for some superintuitionistic logics by *R. Iemhoff* [J. Symb. Log. 66, No. 1, 281–294 (2001; [Zbl 0986.03013](#)); Notre Dame J. Formal Logic 46, No. 1, 65–81 (2005; [Zbl 1102.03032](#))] and for some modal logics by *E. Jeřábek* [J. Log. Comput. 15, No. 4, 411–431 (2005; [Zbl 1077.03011](#))], drawing on the work of *S. Ghilardi* [J. Symb. Log. 64, No. 2, 859–880 (1999; [Zbl 0930.03009](#)); Ann. Pure Appl. Logic 102, No. 3, 183–198 (2000; [Zbl 0949.03010](#))] on projective formulas.

In the paper under review, the authors present a proof-theoretic treatment of admissible rules. They introduce certain analytic calculi operating with multiple-conclusion rules consisting of Gentzen-style sequents of formulas, and show their completeness for admissibility in a class of modal logics and in intuitionistic logic.

Reviewer: [Emil Jeřábek \(Praha\)](#)

**MSC:**

[03F07](#) Structure of proofs  
[03B20](#) Subsystems of classical logic (including intuitionistic logic)  
[03B45](#) Modal logic (including the logic of norms)

Cited in **26** Documents

**Keywords:**

[admissible rules](#); [analytic proof system](#); [modal logic](#); [intuitionistic logic](#)

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