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## **MODAL HYBRID LOGIC**

**Abstract.** This is an extended version of the lectures given during the 12-th Conference on Applications of Logic in Philosophy and in the Foundations of Mathematics in Szklarska Poręba (7–11 May 2007). It contains a survey of modal hybrid logic, one of the branches of contemporary modal logic. In the first part a variety of hybrid languages and logics is presented with a discussion of expressivity matters. The second part is devoted to thorough exposition of proof methods for hybrid logics. The main point is to show that application of hybrid logics may remarkably improve the situation in modal proof theory.

*Keywords:* modal logics, tense logics, hybrid logics, correspondence theory, proof methods