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New reports

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Michael A. Covington
Natural Language Plurals in Logic Programming Queries

This paper presents a representation for natural language plurals in knowledge base queries, implementing collective, distributive cumulative, and multiply distributive senses of the plural by means of higher predicates.

AI–1995-01 (available by FTP)
Michael A. Covington
Toward a New Type of Language for Electronic Commerce

This paper proposes a new type of language for electronic commerce (LEC) in which transactions are put together by combining meaningful elements, much as a programming language encodes algorithms. Such a language is preferable to existing codes such as ANSI X.12 and UN EDIFACT because of its much greater versatility.

Previously published reports still available

AI–1994–10 (available by FTP)
Guo-Qiang Zhang and William C. Rounds
Nonmonotonic Consequences in Default Model Theory

This paper reconsiders some of the laws of nonmonotonic consequence, due to Gabbay and to Kraus, Lehmann, and Magidor, in the light of default model theory. Among other results, it has been proved that EVERY nonmonotonic consequence relation can be represented by a default structure.

AI–1994–09 (available by FTP)
Guo-Qiang Zhang and William C. Rounds
Defaults in Domain Theory

This paper uses ideas from artificial intelligence to show how default notions can be defined over Scott domains. These ideas are combined with ideas arising in domain theory to shed some light on the properties of nonmonotonicity in a general model-theoretic setting.

AI–1994–08 (available by FTP)
William C. Rounds and Guo-Qiang Zhang
Attunement to Constraints in Nonmonotonic Reasoning

After a brief introduction to default model theory, this paper presents a first order positive logic interpreted by default models with background constraints. A notion of conditional degree of belief is introduced, and several examples are treated.

AI–1994–07 (available by FTP)
William C. Rounds and Guo-Qiang Zhang
Logical Considerations on Default Semantics

This paper presents a first order logic with a partial semantics based on default models. As an application, this semantics is shown to give a partial solution to the conceptual problems with open defaults pointed out by Lifschitz, and Baader and Hollunder.

AI–1994–06 (available by FTP)
Michael A. Covington
GULP 3.1: An Extension of Prolog for Unification–Based Grammar

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Sven Hartrumpf
IBL*: An Inheritance–Based Lexicon Formalism*

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Laurel Kathleen Graham
An Implementation of Plurality in Discourse Representation Theory

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Incorporating Defeasible Reasoning into an Implementation of Discourse Representation Theory

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