Victor Pablos Ceruelo Susana Munoz Hernandez

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rfuzzy 1

### rfuzzy

This package implements an extension of Prolog to deal with uncertainty. Consult the following papers for detailed information about the semantics:

- [ MHPCS10]
- [ VAS10]
- [ASV10]
- [SMHP09]
- [ MHPS09]
- [PSM09]
- [ PMS08]

#### Usage and interface

```
• Library usage:

:- use_package(rfuzzy).

or

:- module(...,...,[rfuzzy]).

• Implicit imports:

- Internal (engine) modules:

term_basic, arithmetic, atomic_basic, basiccontrol, exceptions, term_compare, term_typing, debugger_support, basic_props.

- Packages:

prelude, initial, condcomp, assertions, assertions/assertions_basic, regtypes.
```

#### Other information

An example program:

```
@includeverbatim{examples/ex_good_player.pl}
```

There are more examples in the subdirectory examples of the distribution.

References 3

### References

[ASV10] Ivaro Fernández-Díaz, Susana Muoz-Hernández, and Víctor Pablos-Ceruelo. Developing user-sensitive e-commerce applications from fuzzy concepts. In Algebraic methods, soft computing, and program verification, International Center for Mathematical Meetings (CIEM), Castro Urdiales, Cantabria, Spain, April 2010. Julio Rubio (Univ. de La Rioja) and Manuel Ojeda-Aciego (Univ. de Mlaga). Sponsored by: Ingenio2010, CIEM, Excmo. Ayuntamiento de Castro Urdiales. Keynote Speakers: Thomas Arts (Univ. of Gothenburg), Gilles Barthe (Madrid Institute for Advanced Studies (Software)), Stefan Berghofer (Technische Universitt Mnchen), Mario de Jess Prez Jimnez (Univ. de Sevilla), Jos Luis Ruiz Reina (Univ. de Sevilla), Enric Trillas (European Centre for Soft Computing).

#### [MHPCS10]

Susana Munoz-Hernandez, Vctor Pablos-Ceruelo, and Hannes Strass.

Rfuzzy: Syntax, semantics and implementation details of a simple and expressive fuzzy tool over prolog.

Information Sciences, In Press, Accepted Manuscript:-, 2010.

[MHPS09] Susana Muoz-Hernández, Víctor Pablos-Ceruelo, and Hannes Strass.

Rfuzzy: An expressive simple fuzzy compiler.

In Joan Cabestany, Francisco Sandoval, Alberto Prieto, and Juan M. Corchado, editors, *IWANN* (1), volume 5517 of *Lecture Notes in Computer Science*, pages 270–277. Springer, 2009.

[PMS08] Víctor Pablos-Ceruelo, Susana Muoz Hernandez, and Hannes Strass. Rfuzzy framework.

In Puri Arenas and Damiano Zanardini, editors, 18th Workshop on Logic-based methods in Programming Environments, WLPE 2008, pages 62–76, Udine, Italy, December 2008.

- [PSM09] Víctor Pablos-Ceruelo, Hannes Strass, and Susana Muoz Hernndez.
  Rfuzzy—a framework for multi-adjoint fuzzy logic programming.
  In Fuzzy Information Processing Society, 2009. NAFIPS 2009. Annual Meeting of the North American Fuzzy Information Processing Society Annual Conference, pages 1–6, Cincinnati, Ohio, USA, June 2009.
- [SMHP09] Hannes Strass, Susana Muoz-Hernández, and Víctor Pablos-Ceruelo.
   Operational semantics for a fuzzy logic programming system with defaults and constructive answers.
   In João Paulo Carvalho, Didier Dubois, Uzay Kaymak, and João Miguel da Costa Sousa, editors, IFSA/EUSFLAT Conf., pages 1827–1832, 2009.
- [VAS10] Víctor Pablos-Ceruelo, lvaro Fernández-Díaz, and Susana Muoz-Hernández.
  Developing user-sensitive search engines from fuzzy concepts.
  In JISBD'2010, September 2010.
  accepted for publication, see http://www.dsic.upv.es/conferences/jisbd2010/articulos.shtml.

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### Global Index

This is a global index containing pointers to places where concepts, predicates, modes, properties, types, applications, authors, etc., are referred to in the text of the document.

5	I
5156427	initial 1
$\mathbf{A}$	J
arithmetic       1         assertions       1         assertions/assertions_basic       1	jisbd:2010:vpcafdsmh
atomic_basic	M
В	MunozHernandez2010 1
basic_props       1         basiccontrol       1	P
$\mathbf{C}$	prelude 1
condcomp	R
D	regtypes 1
DBLP:conf/eusflat/StrassMC09         1           DBLP:conf/iwann/Munoz-HernandezCS09         1           debugger_support         1	${f T}$
	term_basic
E	term_compare
exceptions 1	term_typing
H	$\mathbf{V}$
hardandsoft:2010:afdvpcsmh	victor:susana:2008:wlpe