

# KNOWLEDGE REPRESENTATION AND REASONING AT UNL

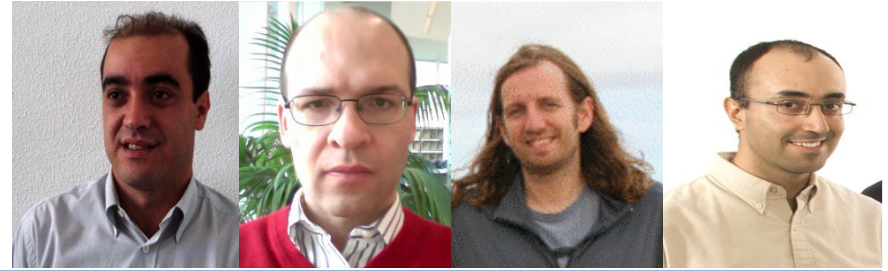
February 2011

# Research Areas



- Logic Programming
- Semantic Web
- Dynamical Systems
- Information Systems

# Logic Programming



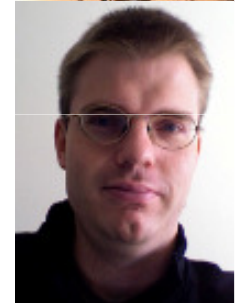
- Answer-Set Programming
  - ▣ Extensions (updates, revision, preferences, evolution)
  - ▣ Applications
- Abductive Logic Programming
  - ▣ Proof procedures
  - ▣ Integration with other logic-based programming paradigms
- Many-valued Semantics
  - ▣ Reasoning with Uncertainty/Incomplete Information



# Semantic Web



- Hybrid languages
  - ▣ Semantics
  - ▣ Proof procedures
  - ▣ Updates
  - ▣ Applications
- Modular Rule Bases
- Reactive Languages
  - ▣ long-lived transactions in ECA rule languages



# Dynamical Systems



- Reasoning
  - Activity recognition
  - Social laws
- Multi-Agent Systems
  - Specification
  - Verification (Design time and run time)
- Argumentation Theory
  - Integration with Social Networks
- Hybrid Systems
  - Verification of distributed probabilistic hybrid systems



# Information Systems



- Data integration
- Schema mapping
- Context aware applications

# The Members



You!



Alfredo Gabaldon



Carlos Damásio



João Leite



João Martins



João Moura



João Moura Pires



José Alferes



Marco Alberti



Martin Slota



Matthias Knorr



Nuno Datia



Ricardo Gonçalves



Sofia Gomes



Valéria Pequeno

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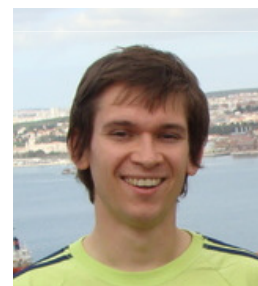
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