International Journal of Intelligent System

Editor-in-Chief: **Ronald R. Yager**
Abstracted/Indexed in: Science Citation Index Expanded™ (Thomson ISI)

Special Issue on Computational Intelligence Approaches for Ontology-based Knowledge Discovery

Deadlines

Paper submission deadline: January 20, 2010
Deadline for the completion of reviews: April 20, 2010
Deadline for the submission of modified papers: June 20, 2010
Date for submitting the material to the publisher: August 20, 2010

Submission

The submissions (PDF or Word files) are done electronically to all Guest Editors.

CALL FOR PAPERS

In the last years, the Web is evolving toward a semantic representation of information, thanks to the diffusion of the Semantic Web which suggests the annotation of Web resources with machine-processable metadata. Ontologies become the means for conceptualizing and structuring knowledge, incorporating semantics into the data, and promoting its exchange in an explicit understandable form. The construction of an unique, global reference ontology is an interesting but illusory challenge and it is clear the exigency of eliciting the semantic relationship among the resources in order to get a "semantic reconciliation", aimed at improving the interoperability and a more homogeneous integration of information. The contribute in the Computational Intelligence area outlines approximate solutions often produce meaningful results in terms of efficiency and decision-making procedures. Often, benefits of collecting information come from middle-way services (brokering, matchmaking assistance) aimed to enable more interoperability among heterogeneous approaches. The intersection between Computational Intelligence and Semantic Web / Ontology technology opens new significant scenarios in many fields where the representation and management of complex systems is treated, considering also the role of uncertainty, as crucial need for an efficient and coherent resolution of complex problems. The objective of the proposed special issue is to highlight an ongoing research on Computational Intelligence approaches for ontology based- knowledge discovery as well as their applications on various domains.

Topics of interest (not limited to)

- Approximate reasoning in ontology
- Abduction, induction and deduction
- Ontological taxonomy evaluation
- Interoperability in ontologies
- Formal concept analysis
- Web directories as knowledge sources
- Ontologies and the semantic web
- Ontological agents
- Personalizing ontologies with knowledge discovery
- CI-based similarity methods for concept and relation discovery
- Ontology merging, alignment and integration
- Ontology-based retrieval
- Web 2.0 and social networks in ontology
- Ontology models and theories
- Extraction of higher-level ontological knowledge
- Ontological web mining

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