



**ISWC 2010**

**Shanghai, China**

**07/11/10-11/11/10**

<http://iswc2010.semanticweb.org>

# ISWC metadata and tools

- Conference data on the Semantic Web Dog Food website
  - In RDF, SPARQL endpoints
  - Interlinked with DBpedia
  - Interlinked with DBLP
- Number of browsers and explorers
  - <http://iswc.mobi/>
  - Faceted Explorer: <http://iswc2010.semsol.org/>

# ISWC metadata and tools



More than 500 participants

ISWC 2010 at KEG

# Ontology Matching workshop

- 29 submissions, 7 accepted full papers, 24%
- 13 posters presented in 2 poster sessions
- Tordai et al.: Empirical Analysis of Mapping Compositions
- Trojahn et al.: Consistency driven argumentation for alignment agreement
- Damova et al.: Mapping the central LOD ontologies to PROTON upper-level ontology

# Ontology Alignment Evaluation Initiative 2010

- Support by SEALS platform
- 6 tracks
  - Benchmark track
  - Anatomy track
- 15 participants

# Ontology Alignment Evaluation Initiative 2010

- Conference track
  - 8 participants
  - 4 evaluation methods

matcher	confidence threshold	Prec.	Rec.	FMeas.
AgrMaker	0.66	.53	.62	.58
AROMA	0.49	.36	.49	.42
ASMOV	0.22	.57	.63	.60
CODI	*	.86	.48	.62
Ef2Match	0.84	.61	.58	.60
Falcon	0.87	.74	.49	.59
GeRMeSMB	0.87	.37	.51	.43
SOBOM	0.35	.56	.56	.56
<i>SOMM</i> <sub>1</sub>	*	.81	.43	.56
<i>SOMM</i> <sub>2</sub>	*	.80	.48	.60

# Workshop on Ontology Patterns 2010

- Keynote by Chris Welty
- 3 accepted papers
- 5 accepted patterns
- Pattern writing session
  - Ordered Lists
  - Situation Classification
  - Multiple Alternative Classification Criteria

Better

Semantics

Better Web

1 SWIG 2010





# Keynotes

- Schraefel's talk about SW applications in broader perspective
- Sandhaus' talk about nytimes.com and its using semantic technologies
  - Reasoning for news
  - Freebase for instance matching
- Haugen: Open Graph protocol

# Research track

- Gröner et al.: Semantic Recognition of Ontology Refactoring
  - Semantic instead of syntactic comparison of different ontology versions
  - Based on DL reasoning (Diff algorithm)
  - Abstract level → refactoring patterns
  - Classification of refactoring patterns
    - Extract class, extract subclass, inline class

# Research track

- Packer et al.: Forgetting Fragments from Evolving Ontologies
  - Semantic web in MAS
  - In order to increase performance large ontologies can be reduced
  - RoboCup Rescue → RoboCup OWLRescue
    - Models the effects of an earthquake on virtual city
    - Time-critical environment
  - Forgetting approach:
    - Evaluate concepts in the ontology
    - Select a fragment of the concept
    - Remove the fragment so that ontology remains consistent

# Research track

- Parundekar et al.: Linking and Building Ontologies of Linked Data
  - Exploiting existing equivalence statements at data level for schema level (linked data → linked ontologies)
  - Generation of hypotheses: correspondences of restriction classes
  - *Attribute Type Alignment Pattern?*
  - *Association rules?*

# Research track

- Jain et al.: Ontology Alignment for Linked Open Data
  - *Motivation* for schema-integration need: querying into LOD
  - Discovering correspondences with `rdfs:subClassOf` relation
  - BLOOMS approach:
    - Removing property restrictions, individuals and properties
    - Construction of BLOOMS forest for each class name
      - Wikipedia pages as senses and its categories using Wikipedia category hierarchy → trees
    - Comparison of BLOOMS forests
    - Post-processing – alignment API and reasoner
  - Evaluation:
    - Very good in LOD schema alignment (Dbpedia, Jamendo, Dbtunes, SW Conference corpus)
      - Very good results
    - Other benchmarks – quite well

# Research track

- Lependu et al.: Optimize First, Buy Later: Analyzing Metrics to Ramp-up Very Large Knowledge Bases
  - \_ How to cope with very large Kbs?
    - NCBO Resource index using all ontologies from BioPortal
      - \_ 22 different repositories of resources, 3.5 millions of data annotated with 16 billions annotations
      - \_ 100 different repositories, 50 millions of data, 100 billions annotations
    - **Materialization of inferred annotations**
  - \_ Results of Optimization:
    - instead of week, less than one hour in the first case
  - \_ Techniques: analyze data distribution and ontology evaluation for proper **partitioning**
  - \_ Current benchmarks do not consider different number, variety and evolution of ontologies
  - new benchmark: synthesized data representing biomedicine
  - \_ They show that **materialization** costs **load-time** while it is faster for **query-time** (size and depth of ontologies)

# Research track

- Halpin et al.: When owl:sameAs isn't the Same: An Analysis of Identity in Linked Data
- Riess et al.: EvoPat - Pattern-Based Evolution and Refactoring of RDF Knowledge Bases
- *Wang et al.: Measuring the dynamic bi-directional influence between content and social networks*

# SW In-Use track

- Hu et al.: A Case Study of Linked Enterprise Data
  - Enterprise data have unique requirements
    - Support for business decisions, personal space
  - Main principle: process-driven vs. data-driven or community-driven
- Tudorache et al.: Will Semantic Web Technologies Work for the Development of ICD-11?
  - Classification system of diseases
  - Using WebProtege and OWL



# Poster session

- Blum et al.: Generating RDF for Application Testing
- *David J.: Linked data from your pocket: The Android RDFContentProvider*
- *Le-Phuoc et al.: RDF On the Go: An RDF Storage and Query Processor for Mobile Devices*

# The 10<sup>th</sup> ISWC

October 23-27, 2011

Koblenz, Germany

Abstracts due: June 16, 2011

Submissions due: June 23, 2011