

## Open PhD position (KRR group @ VU)

The Knowledge Representation and Reasoning group, headed by Prof. Frank van Harmelen at the VU University Amsterdam is looking for an enthusiastic PhD student for a 4 year full time position on the project *Pragmatic Semantics for the Web of Data* funded by the Dutch Science Foundation NWO.

WHAT WE OFFER: A world-class research team in semantic technologies, a stimulating work environment, and life in a vibrant and multicultural city that always ranks among the highest on the quality of life indexes.

WHAT WE LOOK FOR: A talented and motivated individual with a thorough background in Computer Science and/or Artificial Intelligence. We are particularly looking for students with experience with formal logical methods, the ability to turn theories into practical programs and an interest in validating their theories empirically in practical applications.

PROJECT DESCRIPTION: The Web of Data (WoD) connects data in a similar way as the WWW connects documents. Atomic data-units called resources are connected via typed links with arbitrary resources anywhere on the Web, together forming a gigantic graph of linked data. The meaning of the types can be fixed using standardised ontology languages such as RDFS and OWL. The semantics of these languages are based on logical paradigms that were designed for small and hand-made knowledge bases, and come with classical model-theory for assigning truth to formulas, and entailment based on this truth. However, in highly complex, dynamic, context-dependent, opinionated, contradictory and multi-dimensional networks as the WoD, such classical semantics are insufficient, as they are one-dimensional, often prone to logical fallacies, and usually intractable.

On the Web in general, and the Web of Data in particular, every bit of information is context-dependent, biased towards a particular viewpoint, opinionated, dated, uncertain or vague. **The WoD is a market-place of ideas, not a database, and has to be dealt with accordingly.** We have to adapt the formal semantics of existing formalisms to the new requirements. The goal of this project is to develop such novel semantic paradigms for dealing with the complex character of the Web of Data by integrating market-place formalisms such as optimization of truth into the semantics of the standard representation languages.

More information is available on: <http://altsemantics.wordpress.com/>

### REQUIREMENTS

- A Master in Computer Science, Information Sciences, Artificial Intelligence, Logic or a related field
- Genuine interest in addressing real-world problems.

APPOINTMENT, SALARY, LOCATION: The appointment will be at the VUA, starting at Sep 1 2012 at the earliest. <http://tinyurl.com/VU-personnel-guide> contains a review of working conditions at the VU.

INTERESTED? For more information please contact Dr. Stefan Schlobach <k.s.schlobach@vu.nl>. Please send your application to Elly Lammers <elly.lammers@vu.nl> by email before 15 June 2012.