

Call for Papers for a Special Section on  
**The Uncertain Web**  
<http://toit.acm.org/CfP.html>



**ACM Transactions on  
Internet Technology**

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### Deadlines

Submission: 15 November 2014  
First decision: 15 January 2015  
Revision: 01 March 2015  
Final decision: 01 May 2015  
Final: 01 June 2015  
Publication: 31 November 2015

### Submission

<http://toit.acm.org/submission.html>  
Please select "Special Section: The Uncertain Web" under Manuscript Type dropdown in the Manuscript Central website.

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Uncertainty, incompleteness, and imprecision are common characteristics of the data that we daily deal with in a wide range of domains and applications including e-Commerce, social and sensor networks, scientific data production and exploration, objects tracking, data integration, location-based services, open linked data, and recently Web of Things. For example, in the e-Commerce domain alone, some recent studies have shown that approximately 65% of products (e.g., properties, cars) that one would find on typical e-Commerce sites (e.g., apartments.com, carpages.ca) are associated with some uncertainty in their basic information (e.g., prices, locations, descriptions, etc.). A common factor to most of these domains is the growing reliance on the World Wide Web as an integrated platform for collecting, storing, processing, managing, querying and servicing this uncertain data to users. The WWW has undoubtedly become an immense sea of interconnected uncertain data sources and uncertain services.

Exploiting these uncertain data sources and uncertain services on top of the WWW to their full potentials still raises many challenges that have been only partially addressed so far. The most important challenges include, among other things:

- Assessing and quantifying (or qualifying) the uncertainty degree associated with a piece of information or a Web service, and ranking data and services efficiently based on their uncertainty as well as on their QoS attributes.
- Modeling that uncertainty and extending current Web modeling languages (e.g., RDF, OWL, micro formats, etc.), standards and access methods (e.g., Web APIs, RESTful and SOAP Web services, SPARQL endpoints, etc.) with the proposed uncertainty models,
- Extending widely adopted (loosely coupled) Web data integration models (e.g., Web services composition, applications and data mashups, etc.) with efficient techniques and solutions to aggregate the uncertainties of integrated data sources and services and compute the uncertainty of final results.

By organizing this special issue, we aim at presenting recent and significant developments in the area of uncertain Web data and services. We seek original and high quality submissions related to (but not limited to) one or more of the following topics:

- Uncertainty models for Web data and Web services
- Models and techniques for uncertainty assessment in Web computing
- Information fusion and inconsistency handling
- Data integration under uncertainty
- Uncertainty cleaning via crowdsourcing
- Uncertain Top-k queries
- Skyline queries over uncertain web data and services
- Uncertain Web data mashups
- Reasoning over uncertain Web data and uncertain services
- Trust and reputation computing under uncertainty
- Efficient models and solutions for querying uncertain Web data and services
- Ranking of uncertain Web data and services
- Formalisms to support uncertainty in Semantic Web / Linked Data languages
- Probabilistic ontologies and their relevance to the Semantic Web/Linked Data
- Extensions of Web protocols to support uncertainty
- Uncertainty in social networks
- Uncertainty and provenance