

W3C Workshop on the Web of Things – Expression of Interest

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Dear Workshop organisers,

I would like to express my interest in attending the upcoming W3C Workshop on the Web of Things. I am a Postdoctoral Researcher / Adjunct Lecturer and Project Leader at The INSIGHT Centre for Data Analytics – formerly Digital Enterprise Research Institute (DERI) – National University of Ireland, Galway.

For the past four years I have been involved on a number of research projects in the areas of Semantic Web applied to stream data management, graph-based stores, federated query processing, cloud computing, and event detection in semantic streams. These projects have provide valuable contribution for the Web of Thing, as they focus on enabling a seamless integration of sensor generated data and other data collections, and they have received great recognition by the Semantic Web and semantic sensor networks communities.

One example is the RDF On the Go (<http://rdfonthego.googlecode.com/>), a fully-fledged RDF storage and SPARQL query processor for mobile devices. Another recent accomplishment is the Continuous Query Evaluation over Linked Streams (CQELS), an approach that provides a scalable query processing model for unified stream data in RDF format and Linked Open Data. Scalability in CQELS is achieved by state-of-the-art techniques for efficient data storage and query processing, combined with a novel and adaptive cost-based query optimisation algorithm for dynamic data sources, such as sensor streams. CQELS has been recently extended to support parallel continous queries execution in Cloud enviroments for a even more scalable solution. The CQELS algorithm is integrated into a middleware for developing semantic sensor applications. A live demonstration is online (<http://lsm.deri.ie/>), and it currently handles data from over 100,000 sensors which can be accessed, processed, combined, and used in high level applications.

I have a strong publication record, with over 30 papers in international journals and conferences. One publication was awarded the best demo award at the International Semantic Web Conference (ISWC) in 2010. I am actively involved in the research community by participating in conference organisations and program committees. For the past two years, I have co-chaired the Evaluation and Experiments Track at ISWC – a novel idea that is attracting a lot of interest by fellow researchers. I have also organised the DESWEB 2013 workshop. I am regularly invited to program committees of top international conferences/workshops like WWW, ISWC, ESWC, WSDM, ODBase, WISE, MDM, DBSocial, DESWEB, and SSN. I also act as reviewer to top international journals like ACM Transactions on Information Systems, Journal of Web Semantics, Journal of Web Engineering, Journal of Autonomous Agents and Multi-Agent Systems and International Journal on Semantic Web and Information Systems. I am also a member of the W3C Community Group on RDF Stream processing.

The topic of this upcoming workshop is of great insterest to me. It will be a great opportunity to discuss with fellow researchers in the areas about the potential of open standards, like RDF/SPARQL, for Web of Things applications. If you have any questions or require more information, please do not hesitate to contact me. Thank you for your consideration.

Sincerely,

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