

**Proceedings of the First  
International Workshop on  
Finance and Economics on  
the Semantic Web  
(FEOSW 2012)**

**Held at the 9th Extended  
Semantic Web Conference  
(ESWC 2012)**

**May 28th, Heraklion, Greece**

## Preface

The 1st International Workshop on Finance and Economics on the Semantic Web (FEOSW 2012) will be held in Crete in conjunction with 9th Extended Semantic Web Conference (ESWC 2012).

FEOSW is unique in targeting both Semantic Technologies and Financial and Economic Research, providing an opportunity for researchers in both fields to exchange opinions and experiences or delving into further needs in both domains on how to foster the development of financial information through new Semantic Technologies breed such as Linked Data. The aim of the workshop is to harness the benefits for different fields bringing along both research directions. In the following, we will discuss where the main synergies can be found.

“There are three ways to make a living in this business: be first, be smarter, or cheat”. These are words quoted by fictional character John Tuld, in “Margin Call”, a 2011 American independent drama film written and directed by J.C. Chandor about a loosely-modeled on Lehman-Brothers investment bank collapse during the financial crisis of 2007-2008. The movie ponders on how financial information, particularly historical volatility levels and excessive leverage in a firm assets (in this case, Mortgage Based Securities (MBS)) can lead to the destruction of the firm. Interestingly enough, the alarm is fired by a trader who accidentally checks a number of financial models and finds out what has been happening recently in the firm and how critical is the risk they are taking. Even though, the movie is fiction, it clearly shows and discusses a very key issue in the last economic downturn: financial information is not widespread, it is difficult to interpret and it should be more accessible and understandable not only for the financial markets experts but also for the layman investor.

In FEOSW, we would like to discuss how Semantic Technologies can provide a formal and powerful basis to make financial information more understandable and easy to interpret for Information Systems. Recent evolutions of these technologies, such as Linked Data provide a solid underlying framework to manage, store and query financial information more efficiently. Shifting from 10-K reports with confusing Balance Sheets and Income Statements (these being enforced through XBRL by the Securities Exchange Commission (SEC) in a near future) to RDF-based reports will enable intelligent management of vital information and markets, together with a broad lattice of financial extraction and reasoning services that could foster a new era for smart financial systems.

Many hearty thanks to all our contributors and participants at FEOSW 2012 and also the Programme Committee whose very valuable and insightful feedback has resulted in a challenging and fruitful collection of papers, posters and demos, providing added value to current leading edge research.

We are positive that the FEOSW series of workshops will continue over time in future Semantic Technologies related events and they will be able to bridge the gap between current financial information caveats and new emerging technologies which could impact dramatically in the state of the art, marshaling a new era for Financial and Economic Information Management.

Finally, we want to thank you for their support to the Ministry of Economy and Competitiveness with FLORA project (TIN2011-27405) and SoftLab group of University Carlos III of Madrid. Also, a special gratitude to Dr. Sean O'Riain from DERI for accepting our invitation and participate as keynote speaker of FEOSW 2012.

May 2012

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# Organization

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## Sponsorship



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# Keynote Speaker Talk

**Title:**

Towards the construction of Financial Data Spaces: Challenges, Approaches and Trends

**Abstract:**

The advent of Open Data and regulatory adopted standards such as XBRL, have hastened the availability of semantically rich Business and Financial data for general consumption. Market pressures, competition and the do-more-with-less philosophy demands increasing levels of flexibility when dealing with data and its interoperability. Familiar with integrated views of corporate data, enterprises are now expected to flexibly cater for different information views that move beyond their traditional boundaries. Lacking full semantic integration this emergent Data Space perspective better represents a data co-existence environment, where traditional data management strategies have to be re-visited. This talk will cover major challenges and report on practical experiences and insights gained from the implementation of financial data space components such as search and query, multilingual knowledge access and regulatory auditability. Lastly we will touch on developments relating to business standards activity, EU legislation, emergent areas and remaining challenges.

**Keynote Bio:**

Sean O'Riain is Lead of the DERI eBusiness Unit. Before joining DERI Sean was a senior research with Hewlett Packard's Semantic Infrastructure Research Group, Galway, Ireland focusing on semantic based content analytics. His research interests include the use of Web Science (Linked Data, provenance, entity consolidation), natural language query mechanism for Linked Data, business taxonomic standards (XBRL) for enhanced semantic information access and Linked Data technology adoption patterns within enterprises. Sean's Masters and Doctoral topics relate to distributed information retrieval and business filings content analysis.

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