

DBOnto & ED3

**Semantic Web and Data Integration:
New technologies and applications to industry**



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Goals of Workshop

- **Improve our understanding** of the challenges faced by industry
 - related to data and knowledge management and KR
 - particularly in the area of data integration and semantic technologies
- **Hear about new techniques** that can be applied to these challenges
 - reports on existing projects sponsored by DBOnto, several of which involve collaborations between industry and academic partners
- **Identify areas** where more collaborative research is needed.
 - Aim of DBOnto is to promote interaction with
 - it can fund networking, research visits, and feasibility studies

DBOnto

“A flexible mechanism providing underpinning funding to world leading research groups”

- Attracting and retaining talented young researchers
- Training and career development of our research team
- Supporting outreach activities, including the development and delivery of tutorials, short courses, and summer schools
- **Supporting medium-duration and high-risk exploratory collaborations in order to develop shared understanding and identify promising directions for further investigation**
- **Develop software prototypes and use them to promote industrial and cross-disciplinary engagement**



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DBOnto Partners

EPSRC Engineering and Physical Sciences
Research Council



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SIEMENS

B2i
Healthcare

ORACLE



mpg max planck institut
informatik



unibz

Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

unibz

Fakultät für Informatik
Facoltà di Scienze e Tecnologie informatiche
Faculty of Computer Science



YouGov
What the world thinks



Stanford University



STANFORD
SCHOOL OF MEDICINE

Inria
INVENTEURS DU MONDE NUMÉRIQUE



Health & Social Care
Information Centre

Chemring
Technology Solutions



Computation
Institute



KIT aifb
Karlsruhe Institute of Technology

metaphacts.



POLITECNICO
DI MILANO



**TECHNISCHE
UNIVERSITÄT
DRESDEN**



KAISER PERMANENTE



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DBOnto



ED3: Enabling analytics over Diverse Distributed Datasources

- **To DESIGN an OBDA-based abstraction layer** that supports analytics tools in the acquisition and transformation of relevant data from large, distributed, dynamic, and heterogeneous datasources
- **To DEVELOP a prototypical implementation** of the abstraction layer that provides for easy integration with relevant datasources and analytics tools, and that is sufficiently robust to be deployed in realistic applications
- **To EVALUATE our implementation** in real use-cases provided by our industry partners



THE ALAN TURING INSTITUTE IS THE
UK'S NATIONAL INSTITUTE FOR DATA
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THE ALAN TURING INSTITUTE IS THE
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The Institute's mission is to:

- **undertake data science research** at the intersection of computer science, mathematics, statistics and systems engineering
- **provide technically informed advice** to policy makers on the wider implications of algorithms
- **enable researchers** from industry and academia to work together to undertake research with practical applications
- **act as a magnet** for leaders in academia and industry from around the world to engage with the UK in data science and its applications



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- Is the **national library** of the United Kingdom and the largest library in the world by number of items catalogued.
- A **Grade I listed building**, the library is a major research library, holding around 170 million items
- The Library's collections include around **14 million books**, along with substantial holdings of manuscripts and historical items dating back as far as 2000 BC.
- As a **legal deposit library**, the British Library receives copies of all books produced in the United Kingdom and Ireland, including a significant proportion of overseas titles distributed in the UK.

Schedule

Thursday 26th May

09:45-10:00 Opening & Introduction

10:00-11:00 Industry challenges I: *health and biology*

10:00-10:15 Orsolya Bali, B2i Healthcare - Empowering evidence-based medicine with semantic data analysis

10:15-10:30 Tony Burdett, EBI - Facilitating semantic alignment of EBI services

10:30-10:45 Jamie Ferguson, Kaiser Permanente - Current Challenges in Health Care Enterprises

10:45-11:00 Martin Romacher, Roche - Getting Semantic Technologies into the Business: Major issues and Key Success Factor

11:00-11:30 Coffee & posters/demos

11:30-12:30 Tutorial: "*Trends in Scalable Stream Processing: Parallelism & Programmability*"
([Peter Pietzuch](#), Imperial College)

12:30-14:30 Lunch & posters/demos

14:30-15:30 Tutorial: *Randomised algorithms in databases*
([Graham Cormode](#), University of Warwick)

15:30-16:00 Coffee & posters/demos

16:00-17:30 Industry challenges II: *energy/health*

16:00-16:15 Kejie Li, Biogen - Data challenges in the pharmaceutical industry

16:15-16:45 Laurent Pierre, EDF Energy - The challenges of deploying semantic technologies at EDF

16:45-17:15 Stephan Grimm, Siemens - Semantic-related challenges around data management & analytics

17:15-17:30 Discussion

19:00-22:00 Dinner ([York & Albany](#))



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Schedule

Friday 27th May

09:00-09:15 Review

09:15-10:00 Industry challenges III: *data management infrastructure*

09:15-09:30 Michael Schmidt, Metaphacts - Graph database applications: Mastering the heterogeneity challenges

09:30-09:45 Zhe Wu, Oracle - How can RDF and OWL coexist with Property Graph

09:45-10:00 Douglas Santry, NetApp - The Effects of Modern Storage Trends on Databases

10:00-11:00 Breakout sessions

11:00-11:30 Coffee & posters/demos

11:30-12:30 Tutorial: *Ontology based data access (OBDA)*
([Ian Horrocks](#), University of Oxford)

12:30-14:30 Lunch & posters/demos

14:30-15:30 Breakout sessions

15:30-16:00 Future directions & close

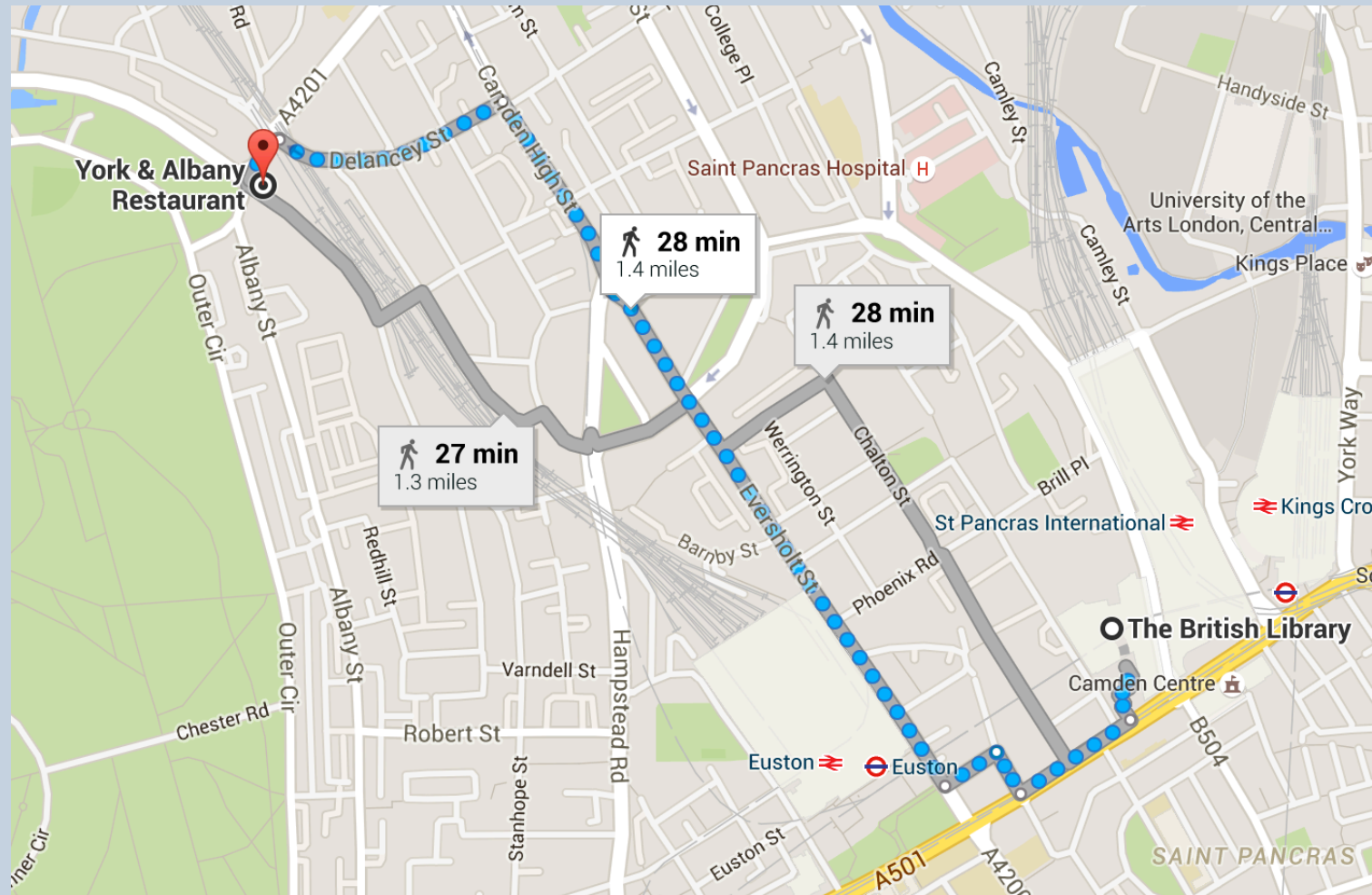
16:00- Excursion (to be confirmed)



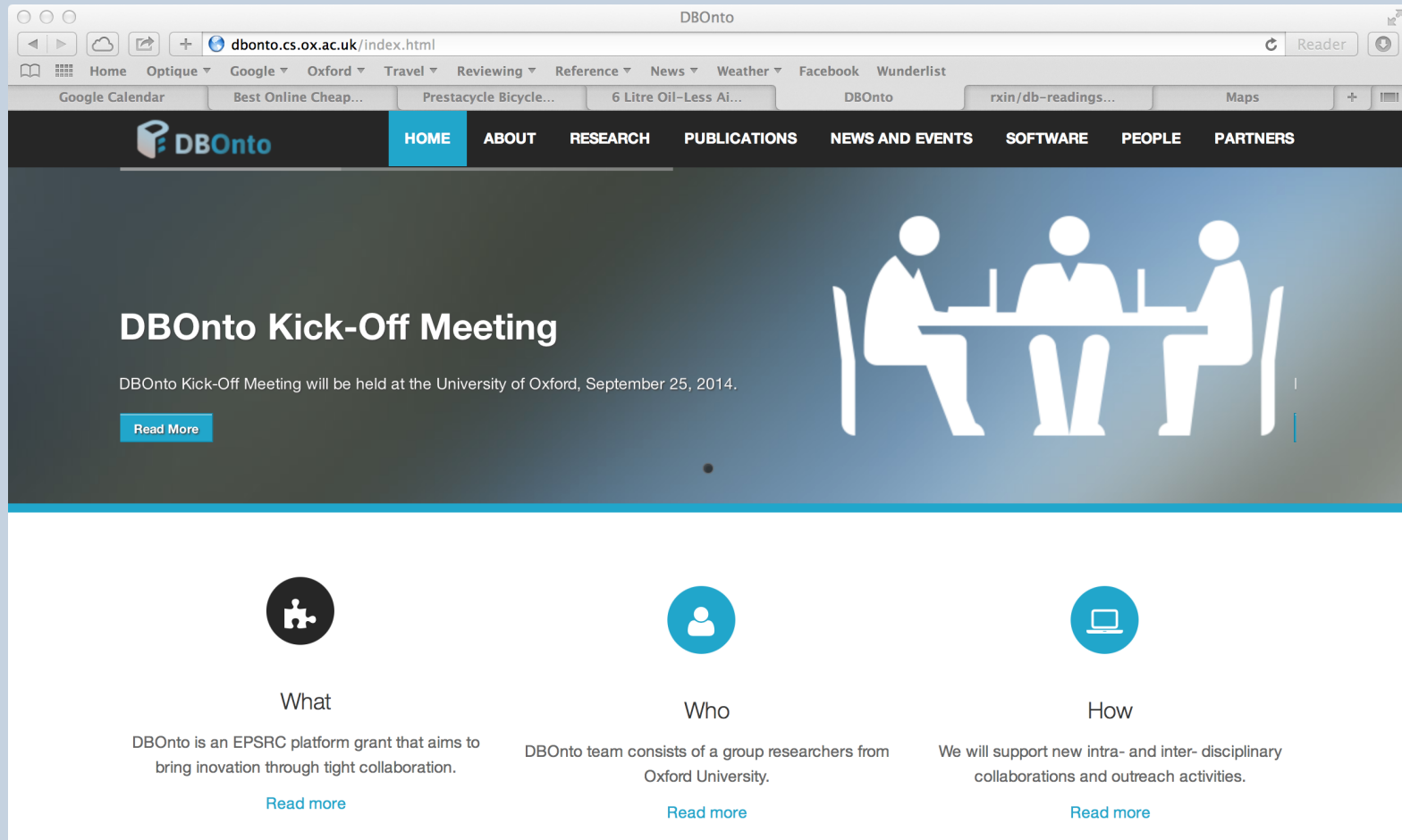
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Dinner – York & Albany



dbonto.cs.ox.ac.uk



The screenshot shows a web browser window with the address bar displaying `dbonto.cs.ox.ac.uk/index.html`. The browser's tab bar shows several open tabs, including "Google Calendar", "Best Online Cheap...", "Prestacycle Bicycle...", "6 Litre Oil-Less Ai...", "DBOnto", "rxin/db-readings...", and "Maps". The website's navigation bar includes the DBOnto logo and links to HOME, ABOUT, RESEARCH, PUBLICATIONS, NEWS AND EVENTS, SOFTWARE, PEOPLE, and PARTNERS. The main content area features a large banner for the "DBOnto Kick-Off Meeting" with the text "DBOnto Kick-Off Meeting will be held at the University of Oxford, September 25, 2014." and a "Read More" button. Below the banner, there are three columns of information:

- What**: DBOnto is an EPSRC platform grant that aims to bring innovation through tight collaboration. [Read more](#)
- Who**: DBOnto team consists of a group researchers from Oxford University. [Read more](#)
- How**: We will support new intra- and inter- disciplinary collaborations and outreach activities. [Read more](#)



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THANK YOU



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