The 7th Extended Semantic Web Conference ESWC2010

former European Semantic Web Conference

May 30th – June 3rd 2010 | **Heraklion, Greece**

Let's extend the Semantic Web!

Keynote Speakers:

Sean Bechhofer | University of Manchester, UK
Noshir Contractor | Northwestern University, IL
Aldo Gangemi | CNR-ISTC, IT
Wolfgang Wahlster | DFKI, DE

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Semantic Web In-Use
Stuart Campbell and Sören Auer

This year, ESWC 2010 hosts an exciting scientific program together with a number of interesting side-events. The days before the main conference include the PhD Symposium, The AI Mashup Challenge, and a series of nine full/half day tutorials and nine full/half day workshops. The main conference includes four keynotes from Noshir Contractor, Wolfgang Wahlster, Sean Bechhofer and Aldo Gangemi, and presentations of research papers submitted to the eight research tracks. Additionally, the main program also features an exciting panel discussion on „Linked Data: Now what?", presentations of the latest work in progress during the poster session and demonstrations of current system developments.

This year's conference would not have been possible without the invaluable expertise and enthusiasm of the program co-chairs Grigoris Antoniou and Eero Hyvönen heading an excellent team of track chairs from different research areas: Julita Vassileva and Jie Bao (Social Web), Noshir Contractor and Les Carr (Web Science), Paul Groth and Denny Vrandecic (Web of Data), Andreas Metzger and Elena Simperl (Services and Software), Matthias Wagner and Hans Gellersen (Mobility), Alan Smeaton and Oscar Corcho (Sensor Networks), Jeff Pan and Adrian Paschke (Ontologies and Reasoning), Stuart Campbell and Sören Auer (Semantic Web In-Use), not without the hard work of the event chairs Kalina Boncheva and Nicola Henze (Workshops), Anna Fensel and Aldo Gangemi (Tutorials), Liliana Cabral and Tania Tudorache (Demos/Posters), Annette ten Teije and Heiner Stuckenschmidt (PhD Symposium), Harith Alani and Martin Szomszor (Semantic Web Technologies), Lyndon Nixon and Alexander Wahler (News from the Front: Latest results from EU projects), Carlos Pedrinaci (Panel), and Valentina Prescutti (Publicity Chair). My thanks go also to all the numerous program committee members whose reviewing effort helped ensuring the high quality of the papers presented and the success of the conference. Thanks also to the proceedings chair Yiannis Kompatsiaris for his though job to prepare the proceedings for all the conference tracks.

A special thanks to the STI International's Alexander Wahler and the tireless hardworking team of Lejla Ibralic Halilovic and Charlotte Finkbeiner who helped enormously to organize the event locally, to set up the web site, to do local arrangements and to handle the logistics and financial aspects of the conference. Thanks to all the sponsors without whose financial support ESWC 2010 would not have been possible again this year. Thanks for providing your support in these tough economic times! Thanks also to Manolis Koubarakis as a sponsorship chair ensuring we have a wide sponsor coverage. My large thanks goes to all the participants, speakers and presenters who again this year join their enthusiasm with us to make this conference a success.

Lora Aroyo

Our gratitude goes to the following sponsors:

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Tuesday, 1ˢᵗ June • 09:00-10:30 | Hermes + Apollon

From Disasters to WoW: Using Web Science to understand and enable 21st century multidimensional networks
Noshir Contractor | Northwestern University (USA)
Session Chair: Grigoris Antoniou

Recent advances in Web Science provide comprehensive digital traces of social actions, interactions, and transactions. These data provide an unprecedented exploratorium to model the socio-technical motivations for creating, maintaining, dissolving, and reconstituting multidimensional social networks.
Multidimensional networks include multiple types of nodes (people, documents, datasets, tags, etc.) and multiple types of relationships (co-authorship, citation, web links, etc.). Using examples from research in a wide range of activities such as disaster response, public health and massively multiplayer online games (WoW - the World of Warcraft), Contractor will argue that Web Science serves as the foundation for the development of theories and methods to help advance our ability to understand and enable multidimensional networks.

Noshir Contractor is the Jane S. & William J. White Professor of Behavioral Sciences in the School of Engineering, School of Communication and the Kellogg School of Management at Northwestern University, USA. He is the Director of the Science of Networks in Communities (SONIC) Research Group at Northwestern University. Noshir Contractor is a Programme Director of the Web Science Trust.
He is investigating factors that lead to the formation, maintenance, and dissolution of dynamically linked social and knowledge networks in communities. Specifically, his research team is developing and testing theories and methods of network science to map, understand and enable more effective networks in a wide variety of contexts including communities of practice in business, science and engineering communities, disaster response teams, public health networks, digital media and learning networks, and in virtual worlds, such as Second Life.
His research program has been funded continuously for over a decade by major grants from the U.S. National Science Foundation with additional funding from the U.S. National Institutes of Health (NIH), U.S. National Aeronautics and Space Administration (NASA), the Rockefeller Foundation, and the MacArthur Foundation.

Wednesday, 2nd June • 09:00-10:30 | Hermes + Apollon

The Semantic Product Memory: An Interactive Black Box for Smart Objects
Wolfgang Wahlster | DFKI and Saarland University (DE)
Session Chair: Lora Aroyo

A semantic product memory stores a diary of an individual physical object in a persistent way on an embedded sensor system that is networked by wireless communication to a smart environment. The product monitors itself and its environment. Semantic technologies based on OWL ontologies guarantee interoperability of the product memory across the complete supply chain and lifecycle of smart objects and enable end user access to the product's lifelog.

In this talk, we present the layered architecture together with the representation and inference formalisms used in our SemProM project, funded by the German Ministry of Education and Research (BMBF) with 16 Million Euro. SemProM goes well beyond traditional RFID technology and is the basis for intelligent automation in smart factories, event-driven logistics as well as smart retail and after-sales. Collecting information logs about objects in such smart environments and making it available - for example about an object's origin, location, movements, physical properties, environmental conditions, usage history, as well as warranty and maintenance data - can help enterprises to improve their business processes and create new ones. Existing business process models become more accurate since information taken directly from the point of action can be used to manage or adapt processes in real time for the emerging Internet of Things.

We show how such embedded "black box" event recorders can transform everyday objects like cars, circuit boards, pizzas and drug blister packs into smart products. We show how consumers of smart products can access the lifelogs of products by NFC-enabled smartphones using SemProM's browser and track the complete history of a product in multimodal dialogues. A role-based access control mechanism ensures privacy and security of the SemProM product memories. We will discuss fully operational pilot implementations of semantic product memories developed in the SemProM consortium together with major German companies like SAP, BMW, Siemens, DHL, Globus Retail and Kohl Pharma.

Wolfgang Wahlster is the Director and CEO of the German Research Center for Artificial Intelligence and a Professor of Computer Science at Saarland University (Saarbrücken, Germany). He has published more than 170 technical papers and 8 books on language technology and intelligent user interfaces. His current research includes multimodal and perceptive user interfaces, user modeling, ambient intelligence, and semantic web

services. Professor Wahlster has received numerous honors and awards for his research contributions. He is an AAAI Fellow (elected in 1993), an ECCAI Fellow (since 1999), and a GI Fellow (since 2004). In 1991, he received the Fritz Winter Award, and in 1995, an IST Prize (European Information Society Technologies Prize) for his research on cooperative user interfaces In 2000, he was the first AI researcher to receive the Beckurts Award, one of Germany's most prestigious awards for scientific and technological innovations.

In 2001, the President of the Federal Republic of Germany presented the German Future Prize to Professor Wahlster for his work on language technology and intelligent user interfaces. He was the first computer scientist to receive Germany's highest scientific prize. He was the first German computer scientist elected Foreign Member of the Royal Swedish Academy of Sciences, Stockholm 2003. In 2004, he was elected Full Member of the German National Academy of Sciences Leopoldina, that was founded in 1652, and of acatech, the German Academy of Science and Engineering. In 2008, he was elected Full Member of the Berlin-Brandenburg Academy of Sciences and Humanities, which was founded by Gottfried Wilhelm Leibniz in 1700. In 2006, he has been awarded the Federal Cross of Merit, First Class, the Officer's Cross of the Order of Merit of Germany.

He has also been appointed member of the Research Union „Business - Science" as chief advisor for Information and Communication Technologies by the German government. Since 2009 he is a member of the Executive Steering Board of the EIT ICT Labs of the European Institute of Innovation and Technology (EIT) with its German Co-Location Centre in Berlin.

Wednesday, 2nd June • 20:00 | Hotel Beach

A Pattern Science for the Semantic Web
Aldo Gangemi | CNR Institute of Cognitive Sciences and Technology (IT)

I will present the current state of play with respect to collecting, finding, classifying, and using (design) patterns on the semantic web. The talk will compare historically related work, highlight some successful stories and curious unexpected bottlenecks, and will envision some charming research and development directions from the Web of Data.

Aldo Gangemi graduated in philosophy, and then worked in medical informatics, knowledge engineering, and semantic technologies, including the Semantic Web. He's senior researcher at the CNR Institute of Cognitive Sciences and Technology in Rome, and head of the Semantic Technology Lab. He also co-founded the Laboratory for Applied Ontology. His work on ontology engineering dates back to 1992, when pioneering the application of ontologies to knowledge organization systems in biomedicine.

His current research focuses on pattern-based ontology design, semantic social networks, collaborative modeling, hybridation of NLP, lexical and semantic resources, and metamodels for heterogeneous knowledge integration. He has published more than 100 refereed articles in proceedings of international conferences, journals, and books, and has been involved in several projects funded by the European Union, governmental organizations, and industrial companies (either as research partner or consultant). STLab is responsible for CNR in the EU projects NeOn, IKS, and BONy, and has worked in the seminal ontology-related projects Galen, WonderWeb, OntoWeb, Metokis, and the Eureka project IKF. He has organized several conferences and workshops, and regularly tutors in PhD courses and international schools. Notable research products include the DOLCE ontology, its OWL versions and extensions within the DnS paradigm, e.g. DOLCE+DnS Ultralite, the Ontology Design Patterns (ODP) portal, the Semantic Scout for CNR researchers, etc. In legally-related fields, he has organized workshops on regulatory and legal ontologies, and has made active research on reusable components for legal ontology design, including the Core Legal Ontology. He is member of the advisory boards of ECDC and SEMIC.EU.

Thursday, 3rd June • 09:00-10:30 | Hermes + Apollon

SKOS: Past, Present and Future
Sean Bechhofer | University of Manchester (UK)
Session Chair: Eero Hyvönen

SKOS (Simple Knowledge Organisation System) is a common data model for sharing and linking knowledge organization systems via the Web. Many knowledge organization systems, such as thesauri, taxonomies, classification schemes and subject heading systems, share a similar structure, and are used in similar applications. SKOS captures much of this similarity and makes it explicit, enabling data and technology sharing across diverse applications.

The SKOS data model provides a standard, low-cost migration path for porting existing knowledge organization systems to the Semantic Web. SKOS also provides a light weight, intuitive language for developing and sharing new knowledge organization systems. It may be used on its own, or in combination with formal knowledge representation languages such as the Web Ontology language (OWL). SKOS was published as a W3C Recommendation in August 2009 and is seeing growing take-up in a number of fields including (among others) cultural heritage, economics, astronomy, and local government. SKOS also looks set to play a key role in providing vocabularies for the Data Web through its use in Open Linked Data.
In the talk we will review the history of SKOS, discuss some of its key features, and look to the future.

Sean Bechhofer is a Lecturer in the Information Management Group within the School of Computer Science at the University of Manchester. His interests fall under the broad umbrella of developing middleware and infrastructure to support applications, in particular through the use of semantic technologies. Since joining the School as a researcher in the early 90's, he has worked on a number of key national and international projects developing and using semantic web technologies including GALEN, TAMBIS, WonderWeb, OntoWeb, KnowledgeWeb, OntoGrid, HELIO, NeISS and myExperiment.
Sean is an active participant in W3C's Semantic Web Activity. He was a participant in the WebOnt Working Group, contributing towards the publication of the original OWL Web Ontology Language Specification, in particular providing implementation experience. He also participated in the Semantic Web Deployment Group, acting as an editor for the SKOS Simple Knowledge Organization System Reference published in August 2009.

RESEARCH PAPERS

Tuesday, 1st June • 11:00-13:00 | Clio + Efterpi + Thalia + Melpo

Semantic Web in Use I
Session Chair: Stuart Campbell

LESS - Template-based Syndication and Presentation of Linked Data for End-users
Sören Auer, Raphael Doehring and Sebastian Dietzold

A Pragmatic Approach to Semantic Repositories Benchmarking
Dhavalkumar Thakker, Taha Osman, Shakti Gohil and Phil Lakin

Facet Graphs: Complex Semantic Querying Made Easy
Philipp Heim, Thomas Ertl and Jürgen Ziegler

Ontology Management in an Event-Triggered Knowledge Network
Chen Zhou, Xuelian Xiao, Jeff DePree, Howard Beck and Stanley Su

Tuesday, 1st June • 11:00-13:00 | Kalia + Erato + Polymnea + Ourania

Ontologies and Reasoning I
Session Chair: Jeff Pan

Assessing the Safety of Knowledge Patterns in OWL Ontologies
Luigi Iannone, Ignazio Palmisano, Alan Rector and Robert Stevens

OWL Reasoning with MapReduce: Calculating the Closure of 100 Billion Triples
Jacopo Urbani, Spyros Kotoulas, Jason Maassen, Frank van Harmelen and Henri Bal

Reasoning-based Patient Classification for Enhanced Medical Image Annotations
Sonja Zillner

A Generic Approach for Correcting Access Restrictions to a Consequence
Martin Knechtel and Rafael Penaloza

Tuesday, 1ˢᵗ June • 14:30-16:00 | Clio + Efterpi + Thalia + Melpo

Web of Data I
Session Chair: Paul Groth

Object Link Structure in the Semantic Web
Weiyi Ge, Jianfeng Chen and Yuzhong Qu.

Hierarchical Link Analysis for Ranking Web Data
Renaud Delbru, Nickolai Toupikov, Michele Catasta, Giovanni Tummarello and Stefan Decker.

ExpLOD: Summary-based Exploration of Interlinking and RDF Usage in the Linked Open Data Cloud
Mariano Consens and Shahan Khatchadourian.

Tuesday, 1ˢᵗ June • 14:30-16:00 | Kalia + Erato + Polymnea + Ourania

Mobility and Sensor Networks I
Session Chair: Matthias Wagner

Finding Your Way through the Rijksmuseum with an Adaptive Mobile Museum Guide
Willem Robert van Hage, Natalia Stash, Yiwen Wang and Lora Aroyo

Incremental Reasoning on Streams and Rich Background Knowledge
Davide Francesco Barbieri, Daniele Braga, Stefano Ceri, Emanuele Della Valle and Michael Grossniklaus

Mobile Semantic-based Matchmaking: a Fuzzy DL Approach
Michele Ruta, Floriano Scioscia and Eugenio Di Sciascio

RESEARCH PAPERS

Wednesday, 2nd June • 11:00-13:00 | Hermes + Apollon

Social Web I
Session Chair: Wolfgang Nejdl

Efficient Semantic-Aware Detection of Near Duplicate Resources
Ekaterini Ioannou, Odysseas Papapetrou, Dimitrios Skoutas and Wolfgang Nejdl

Using Social Media for Ontology Enrichment
Paola Monachesi and Thomas Markus

Acquiring Thesauri from Wikis by Exploiting Domain Models and Lexical Substitution
Claudio Giuliano, Alfio Massimiliano Gliozzo, Aldo Gangemi and Katerina Tymoshenko

OKBook: Peer-to-Peer Community Formation
Xi Bai, Wamberto Vasconcelos and Dave Robertson

Wednesday, 2nd June • 11:00-13:00 | Clio + Efterpi + Thalia + Melpo

Semantic Web in Use II
Session Chair: Sören Auer

Facilitating Dialogue - Using Semantic Web Technology for eParticipation
George Anadiotis, Panos Alexopoulos, Konstantinos Mpaslis, Aristotelis Zosakis, Konstantinos Kafentzis and Konstantinos Kotis

Taking OWL to Athens - Semantic Web Technology Takes Ancient Greek History to Students
Jochen Reutelshoefer, Florian Lemmerich, Joachim Baumeister, Jorit Wintjes and Lorenz Haas

A Web-based Repository Service for Vocabularies and Alignments in the Cultural Heritage Domain
Lourens van der Meij, Antoine Isaac and Claus Zinn

Implementing Archaeological Periods Using CIDOC CRM and SKOS
Ceri Binding

Wednesday, 2nd June • 11:00-13:00 | Kalia + Erato + Polymnea + Ourania

Ontologies and Reasoning II
Session Chair: Adrian Paschke

Reactive Policies for the Semantic Web
Piero Bonatti, Philipp Karger and Daniel Olmedilla

On the Efficiency of Joining Group Patterns in SPARQL Queries
Maria Esther Vidal, Edna Ruckhaus, Tomas Lampo, Javier Sierra, Amadis Martinez and Axel Polleres

Categorize By: Deductive Aggregation of Semantic Web Query Results
Claudia d'Amato, Nicola Fanizzi and Agnieszka Lawrynowicz

Dealing with Inconsistency when Combining Ontologies and Rules Using DL-programs
Jorg Puhrer, Stijn Heymans and Thomas Eiter

Wednesday, 2nd June • 14:30-16:00 | Hermes + Apollon

Software and Services I
Session Chair: Elena Simperl

Measures for Benchmarking Semantic Web Service Matchmaking Correctness
Ulrich Kuster and Birgitta Konig-Ries

A Model of User Preferences for Semantic Services Discovery and Ranking
Jose Maria Garcia, David Ruiz and Antonio Ruiz-Cortes

RESEARCH PAPERS

Web of Data II
Session Chair: Denny Vrandecic

A Node Indexing Scheme for Web Entity Retrieval
Renaud Delbru, Nickolai Toupikov, Michele Catasta and Giovanni Tummarello

Combining Keyword Translation with Structured Query Answering for Efficient Keyword Search
Gunter Ladwig, Thanh Tran, Lei Zhang and Haofen Wang

A Comparative Study of Keyword Search, Query Completion, Result Completion and Faceted Search
Thanh Tran. Usability of Schema-agnostic Search Paradigms

Mobility and Sensor Networks II
Session Chair: Oscar Corcho

Replication and Versioning of Partial RDF Graphs
Bernhard Schandl

A Hybrid Model and Computing Platform for Spatio-Semantic Trajectories
Zhixian Yan, Christine Parent, Stefano Spaccapietra and Dipanjan Chakraborty

Modeling and Querying Metadata in the Semantic Sensor Web: the Model stRDF and the Query Language stSPARQL
Manolis Koubarakis and Kostis Kyzirakos

Thursday, 3rd June • 11:00-13:00 | Hermes + Apollon

Social Web II
Session Chair: Steffen Staab

The Impact of Multifaceted Tagging on Learning Tag Relations and Search
Fabian Abel, Daniel Krause and Ricardo Kawase

Semantics, Sensors, and the Social Web: The Live Social Semantics experiments
Martin Szomszor, Ciro Cattuto, Wouter Van den Broeck, Alain Barrat and Harith Alani

Representing Distributed Groups with dgFOAF
Felix Schwagereit, Ansgar Scherp and Steffen Staab

Guarding a Walled Garden - Semantic Privacy Preferences for the Social Web
Philipp Karger and Wolf Siberski

Thursday, 3rd June • 11:00-13:00 | Clio + Efterpi + Thalia + Melpo

Semantic Web in Use III
Session Chair: Sebastian Hellmann

Generating Innovation with Semantically Enabled TasLab Portal
Pavel Shvaiko, Alessandro Oltramari, Roberta Cuel, Davide Pozza and Giuseppe Angelini

Interactive Relationship Discovery via the Semantic Web
Philipp Heim, Steffen Lohmann and Timo Stegemann

Context-driven Semantic Enrichment of Italian News Archive
Andrei Tamilin, Luciano Serafini, Bernardo Magnini, Christian Girardi, Roberto Zanoli and Mathew Joseph

Put in Your Postcode, Out Comes the Data: A Case Study
Tope Omitola, Igor Popov, Yang Yang and Christos Koumenides

RESEARCH PAPERS

Thursday, 3rd June • 11:00-13:00 | Kalia + Erato + Polymnea + Ourania

Ontologies and Reasoning III
Session Chair: Fabio Ciravegna

GeoWordNet: a Resource for Geo-spatial Applications
Fausto Giunchiglia, Vincenzo Maltese, Feroz Farazi and Biswanath Dutta

Aligning Large SKOS-like Vocabularies: Two Case Studies
Anna Tordai, Jacco van Ossenbruggen, Guus Schreiber and Bob Wielinga

Entity Reference Resolution via Spreading Activation on RDF-Graphs
Joachim Kleb and Andreas Abecker

Natural Language Interface to Ontologies: Combining Syntactic Analysis and Ontology-based Lookup through the User Interaction
Danica Damljanovic and Milan Agatonovic

Thursday, 3rd June • 14:30-16:00 | Hermes + Apollon

Software and Services II
Session Chair: Carlos Pedrinaci

Efficient Semantic Event Processing: Lessons Learned in User Interface Integration
Heiko Paulheim

Towards Practical Semantic Web Service Discovery
Martin Junghans and Sudhir Agarwal

Usage Policies for Document Compositions
Sebastian Speiser

Natural Language Interface to Ontologies: Combining Syntactic Analysis and Ontology-based Lookup through the User Interaction
Danica Damljanovic and Milan Agatonovic

Web of Data III
Session Chair: Yannis Tzitzikas

An Unsupervised Approach for Acquiring Ontologies and RDF Data from Online Life Science Databases

Mohammad S. Mir, Steffen Staab and Isabel Rojas

Leveraging Terminological Structure for Object Reconciliation

Jan Noessner, Mathias Niepert, Christian Meilicke and Heiner Stuckenschmidt

Improving the Performance of Semantic Web Applications with SPARQL Query Result Caching

Michael Martin, Jörg Unbehauen and Sören Auer

DEMONSTRATIONS

Tuesday, 1st June • 11:00-13:00 | Hermes + Apollon

Session Chairs: Liliana Cabral, Tania Tudorache

Collaborative Semantic Points of Interests
Max Braun, Ansgar Scherp and Steffen Staab

DSMW: Distributed Semantic MediaWiki
Hala Skaf-Molli, Gérôme Canals and Pascal Molli

PoolParty - SKOS Thesaurus Management utilizing Linked Data
Thomas Schandl and Andras Blumauer

GoNTogle: a Tool for Semantic Annotation and Search
Giorgos Giannopoulos, Nikos Bikakis, Theodore Dalamagas and Timos Sellis

6. BioNav: An Ontology-based framework to discover semantic links in the Cloud of Linked Data
Maria Esther Vidal, Louiqa Raschid, Natalia Marquez, Jean Carlo Rivera and Edna Ruckhaus

Rapid Prototyping a Semantic Web Application for Cultural Heritage: the Case of Mantic
Glauco Mantegari, Matteo Palmonari and Giuseppe Vizzari

Hey! Ho! Let's go! Explanatory music recommendations with dbrec
Alexandre Passant and Stefan Decker

Making the Semantic Data Web easily writeable with RDFauthor
Sebastian Tramp, Norman Heino, Sören Auer and Philipp Frischmuth

A Knowledge Infrastructure for the Dutch Immigration Office
Ronald Heller, Freek van Teeseling and Menno Gülpers

OntoFrame S3: Semantic Web-based Academic Research Information Portal Service Empowered by STAR-WIN
Seungwoo Lee, Mikyoung Lee, Pyung Kim, Hanmin Jung and Won-Kyung Sung

Session Chairs: Liliana Cabral, Tania Tudorache

StarLion: Auto-Configurable Layouts for Exploring Ontologies
Stamatis Zampetakis, Yannis Tzitzikas, Asterios Leonidis and Dimitris Kotzinos

Publishing Math Lecture Notes as Linked Data
Catalin David, Michael Kohlhase, Christoph Lange, Florian Rabe, Nikita Zhiltsov and Vyacheslav Zholudev

What's new in WSMX?
Srdjan Komazec and Federico Facca

A Software Tool for Visualizing, Managing and Eliciting SWRL Rules
Saeed Hassanpour, Martin O'Connor and Amar Das

Verifying and Validating Multi-Layered Models with OWL FA Toolkit
Nophadol Jekjantuk, Jeff Z. Pan and Gerd Gröner

PossDL --- A Possibilistic DL Reasoner for Uncertainty Reasoning and Inconsistency Handling
Guilin Qi, Qiu Ji, Jeff Pan and Jianfeng Du

TrOWL: Tractable OWL 2 Reasoning Infrastructure
Edward Thomas, Jeff Z. Pan and Yuan Ren

PHD SYMPOSIUM

Monday, 31st May • 09:00-18:00 | Apollon

Session Chairs: Annette ten Teije, Heiner Stuckenschmidt

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09:00 -10:30 Knowledge Extraction

Concept Extraction Applied to the Task of Expert Finding | Georgeta Bordea

Computational and Crowdsourcing Methods for Extracting Ontological Structure from Folksonomy | Huairen Lin and Joseph Davis

Exploring the Wisdom of the Tweets: Towards Knowledge Acquisition from Social Awareness Streams | Claudia Wagner

11:00 -13:00 Knowledge Representation and Reasoning

A Contextualized Knowledge Framework for Semantic Web | Mathew Joseph

Debugging the Missing is-a Structure of Networked Ontologies | Qiang Liu and Patrick Lambrix

Scalable and Parallel Reasoning in the Semantic Web | Jacopo Urbani

Two Phase Description Logic Reasoning for Efficient Information Retrieval | Zsolt Zombori

14:30 -16:00 Poster Session

A Framework towards Sustaining Scalable Community- Driven Ontology Engineering | Danny Cheng

Visualization of Large Datasets using Semantic Web Technologies | Suvodeep Mazumdar

RDFVector: An Efficient and Scalable Schema for Semantic Web Knowledge Bases | James McGlothlin

Towards Pattern-based Knowledge about Ontological Resource reuse | Cristina Sarasua

Remember I Have Seen This: How Can I Re-find It? | Samur Araujo

Using Semantic Web and Relational Learning in the Context of Risk Management | Thomas Fischer

Semantic Technologies used in the Data Analysis Process:
Measuring Customer Satisfaction in Context | Clemens Forster

K-MORPH: Knowledge Morphing via Reconciliation of Contextualized Sub-ontologies | Sajjad Hussain

Semantic Meta-search Engine for Tool Integration in VLEs | Adolfo Ruiz-Calleja

16:30 - 18:00 Other Topics

Global Semantic Graph as an Alternative Information and Collaboration Infrastructure |
Yan Shvartzshnaider

Towards Trust in Web Content Using Semantic Web Technologies | Qi Gao

The Semantic Gap of Formalized Meaning | Sebastian Hellmann

TUTORIALS

Tutorial 1a | Efterpi | **Sunday, 30st May • 09:00-13:00**
Essential HCI for the Semantic Web - Theory
Daniela Petrelli, Matthew Rowe & Aba-Sah Dadzie

Tutorial 1b | Efterpi | **Sunday, 30st May • 14:30-18:00**
Essential HCI for the Semantic Web - Practice
Daniela Petrelli, Matthew Rowe & Aba-Sah Dadzie

Tutorial 2 | Polymnea | **Sunday, 30st May • 09:00-18:00**
Extreme Design (XD): Pattern-based Ontology Design
Valentina Presutti, Eva Blomqvist, Francois Sharffe

Tutorial 3 | Thalia | **Sunday, 30st May • 09:00-18:00**
3rd LarKC Early Adopters Tutorial
Mick Kerrigan, Emanuele Della Valle, Frank van Harmelen, and Michael Witbrock

Tutorial 4 | Melpo | **Sunday, 30st May • 09:00-13:00**
Tutorial on Scalable OWL Reasoning for Linked Data
Jeff Z. Pan, Axel Polleres, Aidan Hogan

Tutorial 5 | Melpo | **Sunday, 30st May • 14:30-18:00**
Integrating Ontologies and Rules in a Semantic Business: From Policies to Operation
Thomas Eiter, Stijn Heymans, Luis Polo, Adeline Nazarenko

Tutorial 6 | Kalia | **Sunday, 30st May • 11:00-16:00**
Evaluation of Semantic Web Technologies
Raúl García-Castro, Ulrich Küster, Jérôme Euzenat, Giorgos Stoilos

Tutorial 7 | Kalia | **Sunday, 30st May • 16:30-20:00**
An Introduction to the Semantic Web Rule Language
Martin O'Connor

Tutorial 8 | Erato | **Sunday, 30st May • 09:00-13:00**
Linked Data, Life Sciences, and RDF Stores
Jans Aasman

Tutorial 9 | Erato | **Sunday, 30st May • 14:30-18:00**
Implementation of Large Scale Knowledge Infrastructures in Organizations Using Semantics
Geert Rensen, Jan Verbeek, Jeroen van Grondelle, Ronald Heller, Freek van Teeseling, Wijnand Brouwer

WORKSHOPS AND WORKSHOPS SUMMARY

Workshop 1 | Clio | **Monday, 31st June • 09:00-13:00**
SFSW'10 - 6th Workshop on Scripting for the Semantic Web
G. A. Grimnes, S. Auer, G.T. Williams

Workshop 3 | Efterpi | **Monday, 31st June • 09:00-18:00**
ORES10 - Ontology Repositories and Editors for the Semantic Web
M. d'Aquin, A. Garcia Castro, C. Lange, K. Viljanen

Workshop 4 | Thalia | **Monday, 31st June • 09:00-18:00**
IRMLeS'2010 - Inductive Reasoning and Machine Learning on the Semantic Web
C.d'Amato, N. Fanizzi, M. Grobelnik, A. Lawrynowiz, V. Svatek

Workshop 5 | Ourania | **Monday, 31st June • 09:00-18:00**
NeFoRS 2010: New Forms of Reasoning for the Semantic Web: Scalable & Dynamic
Stefano Ceri, Emanuele Della Valle, Jim Hendler, Zhisheng Huang

Workshop 6 | Kalia | **Monday, 31st June • 09:00-13:00**
APRESW2010 - Adaptation, Personalization and Recommendation in the Semantic Web
I. Cantador, P. Mika, D. Vallet, J. C. Cortizo, F. M. Carrero

Workshop 7 | Kalia | **Monday, 31st June • 09:00-18:00**
LUPAS 2010 - Linking of User Profiles and Applications in the Social Semantic Web
F. Abel, E. Herder, G-J. Houben, E. Leonardi

Workshop 8 | Erato | **Monday, 31st June • 09:00-13:00**
SPOT2010 Second Int. Workshop on Trust and Privacy on the Social and Semantic Web
P. Kaerger, D. Olmedilla, A. Passant, A. Polleres

Workshop 9 | Polymnea | **Monday, 31st June • 09:00-18:00**
SemWiki2010 - 5th Workshop on Semantic Wikis Linking Data and People
C. Lange, J. Reutelshoefer, S. Schaffert, H. Skaf-Molli

Workshop 10 | Melpo | **Monday, 31st June • 09:00-18:00**
SPBM10 - 5th Int. Workshop on Semantic Business Process Management
N. Stojanovic, M. Hepp, B. Norton

Kalia + Erato + Polymnea + Ourania | **Thursday, 3rd June • 14:30-16:00**
Workshops Summary
Session Chairs: Kalina Boncheva and Nicola Henze

CONFERENCE EVENTS

Monday, 31st May 2010 • 14:30 - 18:00 | Clio

AI Mashup Challenge
Session Chairs: Adrian Giurca, Brigitte Endres-Niggemeyer,
Christoph Lange, Lutz Maicher, Pascal Hitzler

sponsored by Elsevier

Tuesday, 1st June 2010 • 16:30 - 18:00 | Hermes + Apollon

Panel Discussion: „Linked Data: Now what?"
Session Chair: Carlos Pedrinaci

Noshir Contractor | Northwestern University, US
Dieter Fensel | STI Innsbruck, AT
Tom Heath | Talis Information Ltd, UK
Sören Auer | University of Leipzig, DE

Tuesday, 1st June 2010 • 19:00 - 21:00 | Club Aquarius

**Poster/Demo Paper Presentations and AI Mashup Challenge
with buffet reception**

sponsored by LarKC

NEWS FROM THE FRONT: Latest Results from EU Projects
Session Chairs: Lyndon Nixon, Alexander Wahler

Project Presentations:
SYNC3 | sync3.eu
PAPYRUS | ict-papyrus.eu
ALIVE | ist-alive.eu
MOST | most-project.eu
SemsorGrid4Env | semsorgrid4env.eu
SEALS | seals-project.eu
LarKC | larkc.eu
INSEMTIVES | insemtives.eu
WeKnowIt | weknowit.eu
COIN | coin-ip.eu
e-LICO | e-lico.eu

Wednesday, 2nd June • 18:15-19:30 | Orpheas

Matchmaking Session for News from the Front projects
Session Chair: Lyndon Nixon

Wednesday, 2nd June • 20:00 | Hotel Beach

Conference BBQ Dinner

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Supporters

University of Athens http://en.uoa.gr/

The idea of establishing a University in Greece emerged alongside with the Greek War of Independence, also known as the Greek Revolution. The National and Kapodistrian University of Athens, officially founded in April 14th, 1837, is the first University not only of Greece but both the Balkan peninsula and the Eastern Mediterranean region.

KMI http://kmi.open.ac.uk/

The Knowledge Media Institute (KMi) was set up in 1995 in recognition of the need for the Open University to be at the forefront of research and development in a convergence of areas that impacted on the OU's very nature: Cognitive and Learning Sciences, Artificial Intelligence and Semantic Technologies, and Multimedia. We chose to call this convergence Knowledge Media.

Knowledge Media is about the processes of generating, understanding and sharing knowledge using several different media, as well as understanding how the use of different media shape these processes.

Diamond Sponsor

Be Informed   http://www.beinformed.nl/

Be Informed is an independent software supplier specialising in solutions for complex and knowledge-intensive business processes. Using our software, organisations improve their interactions with customers, streamline working processes and achieve substantial gains in efficiency.

Be Informed has been developed to enable organisations to respond quickly to changes in their business environment such as changing customer wishes, technological developments or the need to implement new legislation. To do this, Be Informed offers a suite of products that enables organisations to:
• design, manage and analyse all aspects of their business;
• straight through processing of complex cases;
• support manual handling of services (decision support and case management);
• context-specific delivery of information and knowledge;
• apply knowledge in e-forms, dossiers and applications.

Platin Sponsor

Ontotext   http://www.ontotext.com/

Ontotext is the developer of several outstanding products and major contributor to open-source platforms. It is a proven, competent and cost-effective, partner in:
• Development of tools and solutions based on semantic technologies
• Software engineering, performance optimization, ontology design
• Analysis, evaluation, feasibility studies based on cutting-edge expertise

The technology delivers real-world applications in Web Services and Enterprise Application Integration, Knowledge Management and Textmining, Business Intelligence, Media Research, and Life sciences. Ontotext carries out research in: NLP, information retrieval, ontology design and management, knowledge representation and reasoning, semantic web services and business process management (BPM). It is taking part in research projects with total budget of more than 100 million EURO. As a member of W3C we are involved in the development of the vision and the standards powering the development of the web.

SPONSORS & SUPPORTERS

STI Innsbruck   http://www.sti-innsbruck.at/

The Semantic Technology Institute (STI) Innsbruck was founded as DERI Innsbruck in 2002 by Univ.-Prof. Dr. Dieter Fensel, and has since developed into a challenging and very dynamic research institute of approximately 60 people. Current research involves an international network of other institutes in Asia, Europe and the USA, as well as ties to global industry partners.

STI Innsbruck is a founding member of STI International, a collaborative association of leading European and world wide institutions semantic technology development.

Student Travel Grant Sponsor

SOA4All   http://www.soa4all.eu/

SOA4All will help to realize a world where billions of parties are exposing and consuming services via advanced Web technology. We will provide a comprehensive framework and infrastructure that integrates four complimentary and revolutionary technical advances into a coherent and domain independent service delivery platform:

• Web principles and technology as the underlying infrastructure for the integration of services at a world wide scale.
• Web 2.0 as a means to structure human-machine cooperation in an efficient and cost-effective manner.
• Semantic Web technology as a means to abstract from syntax to semantics as required for meaningful service discovery.
• Context management as a way to process in a machine understandable way user needs that facilitates the customization of existing services for the needs of users.

PhD Symposium and Reception Sponsor

LarKC   http://www.larkc.eu/

LarKC is to develop the Large Knowledge Collider (LarKC, for short, pronounced "lark"), a platform for massive distributed incomplete reasoning that will remove the scalability barriers of currently existing reasoning systems for the Semantic Web.

Best Paper Award Sponsor: Main Track

FORTH http://www.ics.forth.gr/

Since its establishment in 1983, the Institute of Computer Science at FORTH has had a relatively long history and recognized tradition in conducting basic and applied research, developing applications and products, providing services, and playing a leading role in Greece and internationally, in the fields of Information and Communication Technologies. It is the top rated research institute in Greece in the area of ICT, and represents Greece within the ERCIM network of European ICT institutes. Its Information Systems Laboratory combines expertise in knowledge representation and reasoning, database systems, web-based information systems and conceptual modelling, and is one of the leading research groups in the area of the semantic web.

USB-Stick Sponsor

IMC Technologies S.A. http://www.imc.com.gr/

IMC Technologies S.A. is an award-winning, ISO certified technology and consulting SME founded in 2004 with headquarters in Athens, Greece. IMC is the leader in the Greek market in the areas of knowledge management, semantic technologies and eParticipation. We provide highly specialized products and services to the public and private sector across several industries.

Our vision is to commercialize advanced research that makes an impact to everyday business practices. Our entrepreneurial principles that drive our evolution are the quest for excellent technology solutions, the pursuit of fresh and innovative ideas, the continuous investment in research and development and our commitment to the fulfilment of our customers' business goals.

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AI Mashup Challenge Sponsor

Elsevier   http://www.elsevier.com/

Elsevier is the world's leading provider of scientific, technical and medical (STM) information, tools and resources. A global company based in Amsterdam, Elsevier partners with scientists, researchers, healthcare providers, educators and decision-makers in academic institutions, governments and corporations to help them find, evaluate and use information. Our breadth of content is unparalleled, spanning virtually every STM field in the world. Using innovative technology, we deliver our content through tools that help our customers be more productive and successful in their work. ScienceDirect our premium online portal delivers the worlds' leading journals electronically to over 11 million readers in 200 countries.

Elsevier is looking at how in the contemporary scientific environment we can meet the real challenge to provide efficient access: eliminating research obstacles by creating a new kind of knowledge ecosystem that is integrated, intelligent, trustworthy and open to innovative applications.

Video Recording Sponsor

Pascal 2   http://www.elsevier.com/

The PASCAL Network of Excellence has created a distributed institute pioneering principled methods of pattern analysis, statistical modeling, and computational learning as core enabling technologies for multimodal interfaces that are capable of natural and seamless interaction with and among individual human users. The resulting expertise has been applied to problems relevant to both multi-modal interfaces and cognitive systems. PASCAL2 will enable a refocusing of the Institute towards the emerging challenges created by the ever expanding applications of adaptive systems technology and their central role in the development of large scale cognitive systems. Furthermore, the funding will enable the Institute to engage in technology transfer through an Industrial Club to effect rapid deployment of the developed technologies into a wide variety of applications, while undertaking a brokerage of expertise and public outreach programme to communicate the value and relevance of the achieved results.

Best Paper Award: In-Use Track

NoTube   http://www.notube.tv/

NoTube is the first project to focus on TV content as a medium for personalized interaction. The overall result of this project will be twofold:
• Architecture, Services and Models for Personalized Access of TV Content
• Three showcase implementations that demonstrate the use of this architecture to realize challenging use cases with different combinations of NoTube services and models.

Gold Sponsors

Ontorule   http://ontorule-project.eu/

Ontorule (ONTOlogies meet business RULEs) is a large-scale integrating project (IP) partially funded by the European Union's 7th Framework Programmen under the Information and Communication Technologies (ICT) Call 3 (ICT-231875).
Leading vendors of knowledge-based systems and a handful of top research institutions join their efforts to develop the technology that will empower business policies in the enterprise of the future. Two large companies are the test-beds that ensure the success and business impact of the technology produced by ONTORULE.

Silver Sponsors

DERI   http://www.deri.ie/

DERI is a Centre for Science, Engineering and Technology (CSET) established in 2003 with funding from the Science Foundation Ireland. After nearly five years of operation DERI has become an internationally recognised institute in semantic web research, education and technology transfer which directly contributes to the Irish government's plan of transforming Ireland into a competitive knowledge economy. As a CSET, DERI brings toge-ther academic and industrial partners to boost innovation in science and technology, with its research focused on the Semantic Web.

SPONSORS & SUPPORTERS

Franz Inc.   http://www.franz.com/

Franz Inc. was founded in early 1984 as a vehicle to produce and sell Macsyma. While that never developed into a business, Franz Inc. did sell Franz Lisp while working on their own Common Lisp implementation. Franz Lisp died out in the 80s as Common Lisp became more popular. Today, they sell Allegro Common Lisp, which is a direct descendant of the Common Lisp they developed in the mid-80s, and a series of products like AllegroCache built on it. In late 2004, Franz began a development program focused on delivering scalable RDF database technologies for the Semantic Web, also known as Web 3.0. The product, AllegroGraph, is built on many of the highly optimized technologies found in Allegro CL and AllegroCache and was a natural extension for Franz's technology stack. The release of AllegroGraph 2.2 in August 2007 has propelled Franz to a leading role as supplier of commercial, persistent and scalable RDF Graph Database products. In addition to AllegroGraph's ability to process billions of RDF triples, AllegroGraph also supports SPARQL, Full Text Search, RDFS++, and Prolog reasoning from Java or Common Lisp applications.

IOS Press   http://www.iospress.nl/

IOS Press (co-)publishes around 100 international journals, ranging from computer science and mathematics to medicine and the natural sciences and 100-125 book titles a year. 2010 sees the launch of the new journal Semantic Web. Commencing its publishing activities in 1987, IOS Press services a variety of scientific and medical communities in all parts of the world. IOS Press is a fast growing publishing company, which follows the developments in publishing closely. All journals are available online and an online book platform was launched in 2006.

Talis   http://www.talis.com/

The Talis Platform is an open technology platform for mass collaboration and human-centric and information-rich applications. A platform for semantic applications, it combines Semantic Web, information retrieval, collective intelligence and behavioral mining technologies. Provides data management, organization and analysis components that can learn and understand patterns of behavior and present them through an API to be interwoven appropriately into any application. Interaction with the Talis Platform is via a suite of RESTful Web services.

Yahoo! Research

http://research.yahoo.com/

The mission of Yahoo! Research is to develop the world-class science that will deliver the next generation of businesses to the company. The scientists focus on data-driven analysis, high-quality search, algorithms and economic models. Yahoo! manages many of the largest and richest data repositories in the world, and researchers mine insights from these giant collections, individually and collectively, maintaining the privacy of the users while setting new standards for user value. Yahoo! believes in an open culture of collaboration with peers from academic and research institutions. Yahoo! provides an academic setting with a focus on simultaneously publishing scientific work of the highest standard while driving a research agenda with significant impact on the company. At the same time, they follow the Yahoo! tradition of a great work environment with first-rate benefits and amenities, the freedom to exercise creativity in pursuit of a goal, and a fun, focused setting with world-class colleagues.

Phaistos Networks AE

http://www.phaistosnetworks.gr/

Registration Sponsor

seekda GmbH

http://seekda.com/

seekda GmbH is an Austrian spin-off company of the Digital Enterprise Research Institute (DERI Innsbruck) at the University of Innsbruck. seekda was built on the results of the European Union funded DIP, and Austrian IT-IT (Österreichische Forschungsförderungsgesellschaft mbH) RW2 projects. The corporate headquarter is located in Innsbruck, Austria. seekda developed the first global Web Service Search Engine based on focused crawling, allowing access to publicly available Web Services and currently indexes and monitors over 27K Web Services from over 7K service providers.

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Other Sponsors

Chapman & Hall/CRC Press - Taylor & Francis http://www.crcpress.com/

Chapman & Hall/CRC Press - Taylor & Francis publishes cutting-edge computer science books for researchers, academicians, and computer scientists. A sample of our recent semantic web titles will be on display during the conference.

Seals-Semantic Evaluation at Large Scale http://about.seals-project.eu/

The goal of the SEALS project is to provide an independent, open, scalable, extensible and sustainable infrastructure (the SEALS Platform) that allows the remote evaluation of semantic technologies thereby providing an objective comparison of the different existing semantic technologies. This will allow researchers and users to effectively compare the available technologies, helping them to select appropriate technologies and advancing the state of the art through continuous evaluation.

The SEALS Platform will provide an integrated set of semantic technology evaluation services and test suites. They will be used in two public and worldwide evaluation campaigns. The results of these evaluation campaigns will be used to create semantic technology roadmaps identifying sets of efficient and compatible tools for developing large-scale semantic applications.

Semsphere http://www.semsphere.com/

Semsphere offers a comprehensive semantic technology training and certification program which has been developed in consideration of the needs and requirements of IT companies and professionals. As a result our core certifications, specialized courses, and tailored education programs precisely meet the demands of the business IT world and enjoy an excellent reputation regarding their contents, quality, strategic usefulness, pragmatism and applicability.
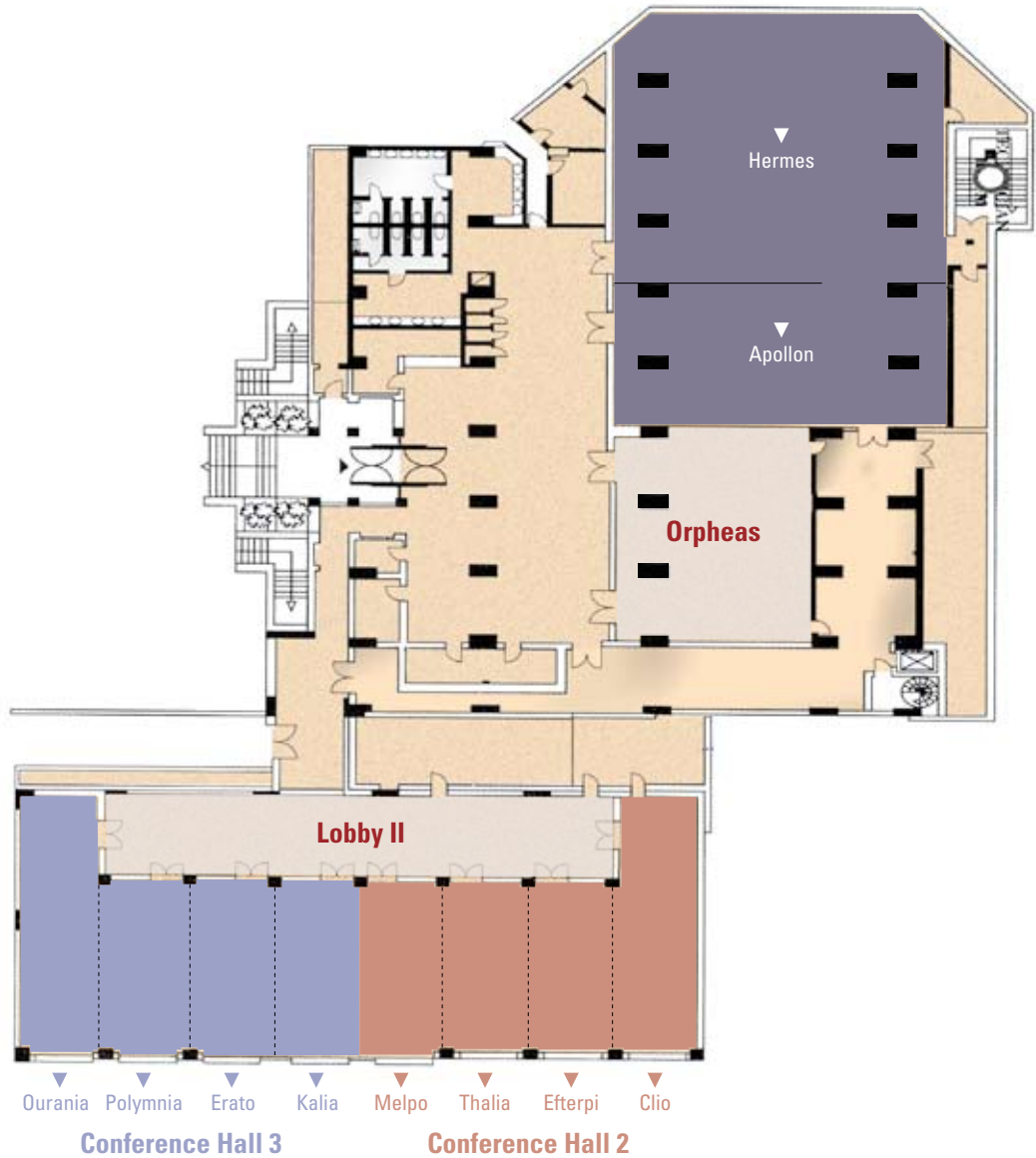
NOTES

NOTES

![Logo] **CONFERENCE VENUE**

Hermes

Apollon

Orpheas

Lobby II

▼ ▼ ▼ ▼   ▼ ▼ ▼ ▼
Ourania Polymnia Erato Kalia   Melpo Thalia Efterpi Clio

Conference Hall 3   **Conference Hall 2**

General

1. Main Entrance
2. Main Building
3. Reception
4. Main Pool A
5. Waterfall - Waterslide
6. Main Pool B
7. Children's Pool

Restaurants & Bars

8. Main Restaurant
9. Self Service /
   Snack Bar & Restaurant
10. Mini Restaurant
11. Beach Bar & Restaurant
12. Taverna „Artemis"
13. Gourmet Restaurant
    „Fontana Amorosa"
14. Ouzeri
15. Villas Restaurant
16. Main Bar
17. Pool Bar
18. Wine Bar „Cellar"
19. Night Club „Aquarius"

Sports & Recreation Facilities

20. Beach
21. Watersports Centre - Diving Center
22. Tennis Courts
23. Mini Golf
24. Fitness Center, Sauna
25. Indoor Pool
26. Amphitheatre
27. Mini Club
28. Children's Facilities

Various

29. Conference Centre
30. Cretan Art Shops
31. Aldemar Shop, Shopping Arcade,
    Jewellery, Boutique, Coiffure
32. Mini Market
33. Bridge Room
34. Games Room
35. Internet Corner
36. TV-DVD Room
37. Church
38. Parking
39. Platforms

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