



# The 10<sup>th</sup> International Conference on Signal Image Technology & Internet Based Systems



November 23 – 27, 2014  
Hotel Semiramis  
Marrakesh - Morocco





# Foreword



The tenth International Conference On Signal-Image Technology & Internet-Based Systems SITIS'13 includes three main tracks SIT, WECA and MIRA. The Web Computing and Application track focuses on issues ranging from information modeling and retrieval techniques to novel concepts, architectures and methodologies for interconnecting information systems. The track on Signal & Image Technologies is aimed at recent developments in digital signal processing, evolutions in audiovisual signal processing, analysis, coding and authentication, and retrieval techniques. The third track, titled "Multimedia Information Retrieval and Application (MIRA), is focused on emerging modeling, representation and retrieval techniques that take into account the amount, type and diversity of multimedia information accessible in distributed computing environment. In addition to the main tracks, the following workshops are included in this your program. They cover many research areas related to the themes of the main track and offer additional discussions forum for participants. They are: Complex Networks (Complex Networks and their Applications), COMI (Color and Multispectral Imaging), KARE (Knowledge Acquisition, Reuse and Evaluation), VICTA (Visions on Internet of Cultural Things and Applications), IEB (Insight on Eye Biometrics), IWSAC (Security Assurance in the Cloud), QUAMUS (Quality of Multimedia Services) UBIS (Ubiquity & Information System), CITIMA (Computational Intelligence Techniques for Industrial and Medical Applications) and BigCvEn (Big Data meets Cloud and Virtualized Environment).

About 230 original submissions were received from around the world. 119 papers are selected for presentation and publication in the conference proceedings. A complete reviewing process was carried out by the different tracks or workshops. Each paper received 2 or 3 reviews, several received up to 5 reviews. Each paper is evaluated based on relevance to track topics, scientific correctness and clarity of presentation.

Our kudos to all the colleagues who have contributed in many different ways to the selection a fine scientific program and exciting social events. We acknowledge the commitment and hard work of the track and workshop chairs who have kept the scientific program in focus and made the discussions interesting and valuable. We recognize the excellent job done by the program committee members and the extra reviewers. They evaluated all the papers on a very tight time schedule. We are grateful for their dedication and contributions. We could not have done it without them.

More importantly, we thank the authors for submitting and trusting their work to the conference. Our gratitude goes to our academic sponsors institutions for their cooperation, support and assistance: the University of Bourgogne, the University of Milan, the Cadi Ayyad University, Laboratoire LE2I (Laboratoire Electronique, Image et Informatique), and Laboratoire LISI (Laboratoire d'Ingénierie des Systèmes Informatiques).

We thank the General chair Prof. Ernesto Damiani for his invaluable and continuing support. Our thanks go to the chair of the local organization committee, Prof.

Abdelazziz Elfazziki and the members of the local organization committee for their help. We thank Dr Luigi Gallo, the workshop program chair, for his commitment and invaluable help managing the workshops and helping with publicity. and the members of the local organization committee for their help, assistance and collaboration. They spare no effort in preparing the events and providing a friendly venue for the conference.

Our most sincere thanks to Dr Mehdi Najib who, with smile and determination, always finds a way to move ahead when unforeseen organization problems arise.

We hope that you enjoy the scientific program of SITIS 2014 and will find it helpful to your future work. Marrakesh is a beautiful city with so much to do and see. We trust you will find the time to enjoy all the wonders of the city, including the most popular and amazing Jamaâ El Fna square. We wish you well.

**On behalf of the SITIS steering committee:**

Dr Richard Chbeir, Dr Albert Dipanda, Dr Kokou Yetongnon

# Conference committees



## General Chairs

Ernesto Damiani, University of Milan, Italy

## Track Chairs

### SIT

Albert Dipanda, University of Burgundy, France

Sebti Foufou, Qatar University, Qatar

### WECA

Gayo Diallo, ISPED, University of Bordeaux, France

Sami Faiz, University of Manouba, Tunisia

Rim Faiz, IHEC, University of Carthage, Tunisia

### MIRA

William Grosky, University of Michigan, USA

Andrea Kutics, International Christian University, Japan

Peter Stanchev, Kettering University, USA

## Workshop Chairs

### BIGCVEn

Sadok Ben Yahia, University of Tunis, Tunisia

Gayo Diallo, University of Bordeaux, France

Ana Roxin, University of Burgundy, France

### CITIMA

Marco Anisetti, University of Milan, Italy

Valerio Bellandi, University of Milan, Italy

Gwanggil Jeon, Incheon National University, Korea

Roberto Sassi, University of Milan, Italy

### CoMI

Pierre Gouton, University of Bourgogne, France

Jean-Baptiste Thomas, University of Bourgogne, France

### Complex networks

Hocine Cherifi, University of Bourgogne, France

### IEB

Maria de Marsico, Sapienza University, Rome, Italy

Maria Frucci, ICAR-CNR, Naples, Italy

Daniel Riccio, Federico II University, Naples, Italy

Gabriella Sanniti di Baja, ICIB-CNR, Naples, Italy

## **IWSAC**

Claudio A. Ardagna, University of Milan, Italy

Marco Anisetti, University of Milan, Italy

Rasool Asal, British Telecommunications, UK/UAE

## **KARE**

Davy Monticolo, University of Lorraine, France

## **QUAMUS**

Hocine Cherifi, University of Bourgogne, France

Mohammed El Hassouni, University of Mohammed V-Agdal, Morocco

## **VICTA**

Angelo Chianese, University of Naples “Federico II”, Italy

Giuseppe De Pietro, ICAR – C.N.R, Italy

## **Steering Committee**

Djamal Benslimane, University of Lyon, France

Richard Chbeir, University of Bourgogne, France

Ernesto Damiani, University of Milan, Italy

Albert Dipanda, University of Bourgogne, France

Roch Glitho, Concordia University, Canada

Vincent Oria, NJIT, USA

Emmanuel Tonye, ENSP, Cameroon

Kokou Yetongnon, University of Bourgogne, France

## **Local Organizing Committee**

**Chair:** Abdelaziz El Fazziki, Cadi Ayyad University, Marrakesh, Morocco

Mohammed Sadgal, Cadi Ayyad University, Marrakesh, Morocco

El Hassan Abdelwahed, Cadi Ayyad University, Marrakesh, Morocco

Mehdi Najib, Cadi Ayyad University, Marrakesh, Morocco

Zahi Jarir, Cadi Ayyad University, Marrakesh, Morocco

**Conference Organizing:** [info@sitis-conf.org](mailto:info@sitis-conf.org)

## **Keynote 1 Computational modelling of biological dynamics using 3D computer vision: application to microbial decomposition in soil.**

by **Olivier Monga**  
IRD, France

### **Abstract:**

Information technology is becoming more and more a key tool to address global life sciences challenges. Within this context, computational biology is a growing area mainly due to the today crucial ecological questions such as for instance carbon sequestration. This talk deals with the simulation of microbial decomposition in soil at microscopic scale using advanced computer vision algorithms to represent 3D soil microstructures. In particular, this issue faces the still open problem of the intrinsic and compact representation of 3D complex natural geometrical structures. Our simulation tools based on graph and Partial Differential Equations are validated using real experimental data. This work belongs to the very first ones aiming at simulating, using real data, microbial decomposition in soil at micro scale (1-5 micron m) by taking into account 3D pore space representation. Such cross roads research can be very valuable for soil science in order to understand better soil microstructure impact on biological dynamics and also to evaluate biological scenarios difficult to implement experimentally. Same as for macroscopic physics versus quantic physics the final challenge is to understand relationships between biological phenomena at microscopic scale and at macroscopic scale. This refers to emerging properties, which is a fundamental issue in life sciences. Our methodology applies for any modelling problem where transformation, transport and diffusion processes occur simultaneously within complex 3D geometrical shapes. Therefore, it can be easily adapted for many other environment and medical applications.

### **References:**

- O. Monga. Defining and computing stable representations of volume shapes from discrete trace using volume primitives: application to 3D image analysis in soil science. *Image and Vision Computing* 25 (2007) 1134-1153.
- Monga, F. Ngom, J.F. Delerue. Representing geometric structures in 3D tomography soil images: application to pore space modeling. *Computers & Geosciences*; Vol. 33, issue 9 (2007).
- O. Monga, M. Bousso, V. Pot, P. Garnier. 3D geometrical structures and biological activity: application to microbial soil organic matter decomposition in pore space" *Ecological Modeling* 216 (2008).
- O. Monga, M. Bousso, V. Pot, P. Garnier. Using pore space 3D geometrical modelling to simulate biological activity: impact of soil structure. *Computers and Geosciences*, 35 (2009).
- F. Ngom, O. Monga, M. Ould Mohamed. "3D segmentation of soil micro-structures using generalized cylinders. *Computers & Geosciences*, 2012.

- Ngom N. F., Garnier P., Monga Olivier, PETH S. Extraction of three-dimensional soil pore space from microtomography images using a geometrical approach. *Geoderma*, 2011, 163 (1-2), p. 127-134. ISSN 0016-7061
- D. Nguyen-Ngoc, B. Leye, O. Monga, P. Garnier, N. Nunan. Modeling microbial decomposition in real 3D soil structures using partial differential equations. *International Journal of geosciences*, 2013, 4, 15 26, <http://dx.doi.org/10.4236/ijg.2013.410A003>
- O. Monga, P. Garnier, V. Pot, E. Coucheney, N. Nunan, W. Otten, C. Chenu. Simulating microbial degradation of organic matter in a simple porous system using the 3D diffusion based model MOSAIC. *Biogeosciences*, 11, 2201–2209, 2014, [www.biogeosciences.net/11/2201/2014/](http://www.biogeosciences.net/11/2201/2014/)



**Biography:** Olivier MONGA is research director at IRD (France) formerly at INRIA (France). His research field is computer vision and its applications to complex system modeling. He gets his PhD degree in 1988 under the supervision of Pr. Olivier Faugeras and his habilitation to conduct researches in 1993 under the supervision of Pr. Nicholas Ayache, at the university Paris 11 (Orsay). He published over 100 papers in international journals and conferences and wrote a reference book. (<http://scholar.google.com/citations?user=IVEXVW0AAAAJ&hl=fr>). He was the founding director of sino-french laboratory LIAMA and the initiator and manager of European pilot projects ANFAS and SIMES. Recently, he brought a major contribution to ANR project MEPSOM which was selected as key project by ANR SYSCO program (Complex system mathematical modeling). (2009-2013, [http://www.dailymotion.com/video/x10iw8u\\_projetmepsom\\_tech](http://www.dailymotion.com/video/x10iw8u_projetmepsom_tech))

## **Keynote 2 Epidemics on networks**

by Piet F. A. Van Mieghem  
Delft University of Technology

### **Abstract:**

After a brief introduction to complex networks, I will focus on SIS epidemics on networks. Besides the spread of biological viruses, epidemics also occur in digital networks under the disguise of malware or under the more positive inclination of information diffusion in (social) networks. From a fundamental point of view, epidemic processes on networks belong the "simplest" dynamic processes on networks, where the interplay between the process on and the topology of the network can be studied and understood. We will show why SIS epidemics on networks are so interesting.





**Biography:** Piet F. A. Van Mieghem is professor at the Delft University of Technology with a chair in telecommunication networks and chairman of the section Network Architectures and Services (NAS) since 1998. His main research interests lie in the modelling and analysis of complex networks (such as biological, brain, social, infrastructural, etc. networks) and in new Internet-like architectures and algorithms for future communications networks. He is the author of four books:

Performance Analysis of Communications Networks and Systems, Data Communications Networking, Graph Spectra for Complex Networks and Performance Analysis of Complex Networks and Systems. Currently, he serves on the editorial board of the OUP journal of Complex Networks and Computer Communications. Professor Van Mieghem received a Master and Ph. D. degree in Electrical Engineering from the K.U.Leuven (Belgium) in 1987 and 1991, respectively. Before joining Delft, he worked at the Interuniversity Micro Electronic Center (IMEC) from 1987 to 1991. During 1993 to 1998, he was a member of the Alcatel Corporate Research Center in Antwerp where he was engaged in performance analysis of ATM systems and in network architectural concepts of both ATM networks (PNNI) and the Internet. He was a visiting scientist at MIT (department of Electrical Engineering, 1992-1993) and a visiting professor at UCLA (department of Electrical Engineering, 2005) and at Cornell University (Center of Applied Mathematics, 2009). He was member of the editorial board of Computer Networks (2005-2006), of the IEEE/ACM Transactions on Networking (2008-2012) and of the Journal of Discrete Mathematics (2012-2014).

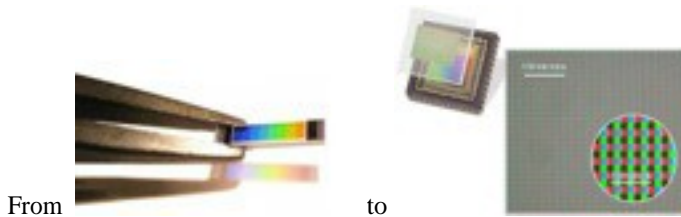
## **Tutorial COLOR SHADES® spectral filters arrays: a new dimension for multispectral imaging**

by **Thierry Berthou**  
SILIOS, France

### **Abstract:**

Custom 2D Spectral filter arrays to replace standard Bayer matrices for imagers is an emerging technology for multispectral imaging. They allow to downsize multispectral cameras and systems while keeping their advantages compared to standard RGB cameras. SILIOS Technologies is developing such spectral filters arrays based on its Color Shades® technology. The first part of the talk will present the technology and its evolution from spectrometry, with lower constraints, to multispectral imaging. The second part will show the developments made at SILIOS Technologies for multispectral imaging, the advantages of these spectral filters arrays and the progress and current development to improve the capacities of the technology as well as the next steps of evolution. The Color Shades® technology allows to choose the wavelengths range, the number of different wavelengths between 2 to 16, the size and shape of each filter. Applied to spectrometry, it offers the possibility to realize applications dedicated

compact spectrometers and for imaging it brings multi-spectral capabilities to standards imagers. The Color Shades® technology brings a new dimension to spectral imaging thanks to its full versatility in terms of wavelengths choices, choice of the position of each different color- pixel in the matrix and to the possibility to match one filter per pixel. The Color Shades® Custom Bayer matrix is realized on a thin fused silica substrate which is reported face down on the sensitive part of the imager to avoid crosstalk. The current realizations are for the visible range (400 – 700nm) and the Near Infrared range (700-1000nm). The first matrices were made with 20x20µm<sup>2</sup> ranges and 4 wavelengths (RGB plus one NIR). The current realizations concern also 20x20µm<sup>2</sup> range pixels but with 7 visible range wavelengths and one NIR band and the future developments will lead to come down to imagers' pixel size (i.e.  $\leq 5 \mu\text{m}$ ). Color Shades®



**Biography:** Thierry Berthou received the Engineering degree in optics from Ecole Nationale Supérieure de Physique de Marseille (now Centrale Marseille), France, in 1990. Between 1990 and 1992, as a development engineer and project manager, various optical complex systems and simulators such as an all-weather detection system and an image recognition system for a packet sorting robot were developed. Between 1993 and 1995 he was R&D Manager and led six projects

within EUREKA, MAST, THERMIE, HYDROACARB, BRITE-EURAM programs. Since 1996 he has been Sales & Export Sales Manager for companies working in the fields of Radars, semiconductors and optics industries. He joined SILIOS in 2005 where he has been Project leader of a EUROSTARS project and Principal Investigator of 2 FP6-IST projects. He has authored more than 10 communications in various technological fields (corrosion inspection by Eddy-currents, Lithography using laser beam Interference, Diffractive Optics).

# Conference Program



## Monday Nov 24

SIT	Time	ROOM 1	ROOM 2	ROOM 3
Social Event	08:30 - 09:00	Opening Ceremony Room 1		
Session 1	09:00 - 10:00	Keynote 1 (Olivier Monga) Room 1		
Break	10:00 - 10:30	Coffee break		
Session 2	10:30 - 12:30	S1 - SIT	S1 - COMPLEX	BigCVEn & UBIS
Social Event	12:30 - 14:00	Lunch break		
Session 3	14:00 - 16:00	S1 - WeCa	S2 - COMPLEX	COMI
Break	16:00 - 16:30	Coffee break		
Session 4	16:30 - 18:30	S1 - MIRA	S3 - COMPLEX	
Social Event	19:00 - 19:30	Welcome reception		

08:30 – 18:00

**Registration**

08:30 – 09:00

**Opening Ceremony**

09:00 – 10:00

**Keynote**

**Computational modelling of biological dynamics using 3D computer vision: application to microbial decomposition in soil**

**Olivier Monga**

*Chaired by Albert Dipanda*

10:00 – 10:30

**Coffee Break**

## Tracks

Nov, 24

### Track SIT

#### Signal and Image Technology

Time / Room Session

**S1-SIT: Classification - Pattern recognition**

*chair: Albert Dipanda (University of Bourgogne, France)*

**44 Multiclass Classification of Weld Defects in Radiographic Images Based on Support Vector Machines**

*Faiza Mekhalfa, Nafaa Nacereddine*

**10:30–12:30  
Room 1**

**108 Weighted Combination of Naive Bayes and LVQ Classifier for Fongbe Phoneme Classification**

*Fréjus A.A. Laleye, Eugène C. Ezin, Cina Motamed*

**119 Belief Function Classification with Conflict Management: Application on Forest Image**

*Ahmed Samet, Eric Lefèvre, Sadok Ben Yahia*

**166 A Case Study on Back-End Voice Activity Detection for Distributed Speech Recognition System Using Support Vector Machines**

*Azzedine Touazi, Mohamed Debyeche*

**12:30–14:00**

**Lunch break**

**Nov, 24**

**Track WECA**  
**Web Computing and Application**

**Time / Room Session**

**S1-WECA: Data Semantics and Semantic Web**

*Chair: Gayo Diallo, (University of Bordeaux, France)*

**47 CEDAR: Efficient Reasoning for the Semantic Web**

*Samir Amir, Hassan Ait-Kaci*

**93 A Semantic Web Approach in the Implementation of a Linked Data Portal Using a CMS**

**14:00–16:00**

**Room 1**

*Eleni Giannopoulou, Nikolas Mitrou, Konstantinos Chimos, Theodoros Karvounidis, Christos Douligeris*

**169 Conversation Analysis on Social Networking Sites**

*Rami Belkaroui, Rim Faiz, Aymen Elkhilfi*

**204 Gist of Text Extraction**

*Khaoula Mahmoudi, Sami Faiz*

**16:00 – 16:30**

**Coffee break**

**Nov, 24**

**Track MIRA**

**Multimedia Information Retrieval and Applications**

**Time / Room Session**

**S1-MIRA: Multi-Media Signal Processing & Applications**

*Chair: Andrea Kutics (International Christian University, Japan)*

**69 Discovering Similarities for Content-Based Recommendation and Browsing in Multimedia Collections**

*Taras Lehinevych, Nikolaos Kokkinis-Ntrentis, Giorgos Siantikos, A. Seza Dogruöz, Theodoros Giannakopoulos, Stasinou Konstantopoulos*

**16:30–18:30**

**Room 1**

**122 User Perspectives on Semantic Linking in the Audio Domain**

*Danish Nadeem, Roeland Ordelman, Robin Aly, Franciska de Jong*

**155 Identification of Spatio-Temporal Outliers through Minimum Spanning Tree**

*Emanuele Cipolla, Filippo Vella*

**182 EMERGSEM: Emergent Semantic and Recommendation System for Image Retrieval.**

*Damien E. Zomahoun, Kokou Yetongnon*

**19:00–19:30**

**Welcome reception**

# Workshops

Nov, 24

## COMPLEX Complex Networks

Time / Room Session

### S1-COMPLEX

*Chair: Hocine Cherifi (University of Bourgogne, France)*

#### Invited Talk : Self healing networks

*Antonio Scala (The Institute of Complex Systems (CNR), Italy)*

#### 66 How Heavy-Tailed is the Distribution of Global Cargo Ship Traffic?

*Michael T. Gastner, César Ducruet*

10:30–12:30  
Room 2

#### 79 Universal Properties for Urban Street Networks

*A. Paolo Masucci, Elsa Arcaute, Jiaqiu Wang, Erez Hatna, Michael Batty*

#### 31 Uncovering the Structure of Criminal Organizations by Community Analysis: The Infinito Network

*Francesco Calderoni, Carlo Piccardi*

#### 71 Identifying a Criminal's Network of Trust

*Pritheega Magalingam, Asha Rao, Stephen Davis*

Nov, 24

## Joint BIGCVEn - UBIS Big Data meets Cloud and Virtualized Environment Ubiquity & Information System

Time / Room Session

### S1-BIGCVEn-UBIS

*Chairs: Sadok Ben Yahia (University of Tunis, Tunisia),*

*Abdelaziz El Fazziki (Cadi Ayyad University, Morocco)*

#### 83 A Massively Parallel Processing for the Multiple Linear Regression

*Moufida Rehab Adjout, Faouzi Boufares*

#### 126 Acceleration of Single Inserts for Columnar Databases --An Experiment on Data Import Performance Using SAP HANA

*Frederik Kramer, Hendrik Müller, Klaus Turowski*

10:30–12:30  
Room 3

#### 134 Partial Restreaming Approach for Massive Graph Partitioning

*Ghizlane Echbarthi, Hamamache Kheddouci*

#### 137 Mobile Cloud Middleware: Smart Behaviour for Adapting Cloud Services

*Hind Bangui, Said Rakrak*

#### 237 The Programmable Cloud Network: Delay Measurement application

*Mounir Azizi, Redouane Benaini, Mouad Ben Mamoun*

#### 32Towards a Framework for Context-Aware Mobile Information Systems

*Zineb Aarab, Rajaa Saidi, Moulay Driss Rahmani*

12:30–14:00

Lunch break

Nov, 24

## COMPLEX Complex Networks

Time / Room Session

### S2-COMPLEX

*Chair: Antonio Scala (The Institute of Complex Systems (CNR), Italy)*

**148 New Lower Bounds for the Fundamental Weight of the Principal Eigenvector in Complex Networks**

*Cong Li, Huijuan Wang, Piet Van Mieghem*

**138 Identifying Influential Nodes in Bipartite Networks Using the Clustering Coefficient**

*Jessica Liebig, Asha Rao*

**14:00–16:00  
Room 2**

**42 Distribution and Dependence of Extremes in Network Sampling Processes**

*Konstantin Avrachenkov, Natalia M. Markovich, Jithin K. Sreedharan*

**150 Modeling Multi-topic Information Diffusion in Social Networks Using Latent Dirichlet Allocation and Hawkes Processes**

*Julio Cesar Louzada Pinto, Tijani Chahed*

**115 Time to Metastable State in SIS Epidemics on Graphs**

*Ruud van de Bovenkamp, Piet Van Mieghem*

**116 Evaluating the Accuracy and Efficiency of Complex Network Classification Algorithms**

*Margaret Bray, Vicki Hertzberg*

Nov, 24

## CoMI Colour and Multispectral Imaging

Time / Room Session

### S1-COMI

*Chair: Jean-Baptiste Thomas (University of Bourgogne, France)*

**96 Second Order Stationarity and Spatiochromatic Properties of Natural Images**

*Edoardo Provenzi, Julie Delon, Yann Gousseau, Baptiste Mazin*

**157 Does Dehazing Model Preserve Color Information?**

*Jessica El Khoury, Jean-Baptiste Thomas, Alamin Mansouri*

**14:00–16:00  
Room 3**

**172 Mapping Vineyard Foliage Density with Multispectral Proxidection Imagery**

*M.A. Bourgeon, J.N. Paoli, G. Jones, S. Vilette, C. Gée*

**238 Change Detection in Urban Land Cover Using Landsat Images Satellites: A Case Study in Algiers Town**

*Rafik Bouhennache, Toufik Bouden, Ahmed Abdmalik Taleb*

**240 Analysis of Colorimetric Stationary Criterion: Application to Colour Image Quantization**

*Pierre Gouton, Amadou T. Sanda, Rémi Kouassi*

16:00–16:30

Coffee break

Nov, 24

# COMPLEX

## Complex Networks

Time / Room Session

### S3-COMPLEX

*Chair: Carlo Picardi (Politecnico di Milano, Italy)*

**49 Co-evolutionary Dynamics in Social Networks: A Case Study of Twitter**

*Demetris Antoniadis, Constantine Dovrolis*

**143 Weighted Alpha-Rate Dominating Sets in Social Networks**

*Danica Vukadinovic Greetham, Anush Poghosyan, Nathaniel Charlton*

**16:30–18:30**

**Room 2**

**153 Community Sentiment on Environmental Topics in Social Networks**

*Borut Sluban, Jasmina Smailovic, Matjaž Juršič, Igor Mozetic, Stefano Battiston*

**197 Emergence of Cooperation in Competitive Environments**

*Marco Alberto Javarone, Antonio Emanuele Atzeni*

**56 Bursting Activity Spreading through Asymmetric Interactions**

*Tomokatsu Onaga, Shigeru Shinomoto*

**19:00 –19:30**

**Welcome reception**

# Tuesday Nov 25

Session 1	09:00 - 10:00	Keynote 2 (Piet F.A. Van Mieghem) Room1		
Break	10:00 - 10:30	Coffee break		
Session 2	10:30 - 12:30	S2 - SIT	S4 - COMPLEX	CITIMA
Break	12:30 - 14:00	Lunch break		
Session 3	14:00 - 16:00	S2 - WeCa	S5 - COMPLEX	KARE & IWSAC
Break	16:00 - 16:30	Coffee break		
Session 4	16:30 - 18:30			
Social Event	20:30 - 23:00	Conference Banquet		

08:30 – 18:30

**Registration**

09:00 – 10:00

**Keynote 2**

**Epidemics on networks**

**Piet F.A. Van Mieghem**

**Chaired by Hocine Cherifi**

10:00 – 10:30

**Coffee Break**

## Tracks

Nov, 25

### Track SIT

#### Signal and Image Technology

Time / Room Session

**S2-SIT:Face Recognition and detection**

*Chair: Jean Baptiste Thomas (University of Bourgogne, France)*

**29 Adaptive Thresholds for Robust Face Detection with a Short Cascade of Classifiers**

*J.L. Lisani*

**10:30–12:30  
Room 1**

**192 Face Recognition System Using Gabor Features and HTK Toolkit**

*Zineb Elgarrai, Othmane El Meslouhi, Hakim Allali, Mustapha Kardouchi, Sid-Ahmed Selouani*

**7 Face Detection and Tracking from Image and Statistics Gathering**

*Dmitry Mikhaylov, Anton Samoylov, Peter Minin, Alexey Egorov*

**136 A Novel Image Texture Fusion Scheme for Improving Multispectral Face Recognition**

*Faten Omri, Sebti Fofou*

**12:30 – 14:00**

**Lunch break**



Nov, 25

## Track WECA

### Web Computing and Application

Time / Room Session

#### S2-WECA: Ontologies and Context-Aware Systems

*Chair: Sami Faiz (University of Manouba, Tunisia)*

14:00–16:00

Room 1

**89 Consistency Evaluation of RDF Data: How Data and Updates are Relevant**

*Pierre Maillot, Thomas Raimbault, David Genest, Stéphane Loiseau*

**99 Towards a Model-Driven Requirements Specification of Context-Aware Services**

*Boudjemaa Boudaa*

**170 Interaction Protocols Adaptation Based Coordination for Business Processes**

*Wassim Chtourou, Mahdi Abdelkafi, Lotfi Bouzguenda*

12:30–14:00

Lunch break

## Workshops

Nov, 25

### COMPLEX

#### Complex Networks

Time / Room Session

#### S4-COMPLEX

*Chair: Piet Van Mieghem Delft (University of Technology, The Netherlands)*

**40 Anomalous Shattered Fragmentation Transition in the Coevolving Multiplex**

*Maxi San Miguel, Marina Diakonova, Víctor Eguíluz*

**212 Missing Data in Multiplex Networks: A Preliminary Study**

*Rajesh Sharma, Matteo Magnani, Danilo Montesi*

**132 Calling and Texting: Social Interactions in a Multidimensional Telecom Graph**

*Matteo Zignani, Christian Quadri, Silvio Bernardinello, Sabrina Gaito, Gian Paolo Rossi*

**65 Connected Components and Credential Hopping in Authentication Graphs**

*Aric Hagberg, Nathan Lemons, Alex Kent, Joshua Neil*

**211 Reachability-Based Robustness of Network Controllability under Node and Edge Attacks**

*Deven Parekh, Derek Ruths, Justin Ruths*

**154 The Behavior of Load Balancing Strategies with Regard to the Network Structure in Distributed Computing Systems**

*Mahdi Abed Salman, Cyrille Bertelle, Eric Sanlaville*

10:30–12:30

Room 2

Nov, 25

# CITIMA

## Computational Intelligence Techniques for Industrial and Medical Applications

Time / Room Session

### S1-CITIMA

*Chair: Valerio Bellandi (University of Milan, Italy)*

**162 Multi-objective, Energy-Aware GPGPU Design Space Exploration for Medical or Industrial Applications**

**10:30–12:30**

*Pascal Libuschewski, Peter Marwedel, Dominic Siedhoff, Heinrich Müller*

**Room 3**

**233 Improvement of Implicit Residual DPCM for HEVC**

*Kibaek Kim, Gwanggil Jeon, Jechang Jeong*

**235 Computer Vision Based Method to Detect Fire with Color Variation in Temporal Domain**

*Ung Hwang, Jechang Jeong, Gwanggil Jeon*

**12:30–14:00**

**Lunch break**

Nov, 25

# COMPLEX

## Complex Networks

Time / Room Session

### S5-COMPLEX

*Chair: Maxi San Miguel IFISC University of the Balearic Islands Spain*

**34 Network Approach for Detecting Macroeconomic Instability**

*Ruggero Grilli, Gabriele Tedeschi, Mauro Gallegati*

**179 The Shifting Discourse of the European Central Bank: Exploring Structural Space in Semantic Networks**

**14:00–16:00**

*Adina Nerghes, Ju-Sung Lee, Peter Groenewegen, Iina Hellsten*

**Room 2**

**140 Community Structure and Dynamics of the Industry Sector-Specific**

**International-Trade-Network**

*Yuichi Ikeda, Hiroshi Iyetomi, Takayuki Mizuno, Takaaki Ohnishi, Tsutomu Watanabe*

**105 Synchronization Network of Global Foreign Exchange and Equity Markets**

*Hideaki Aoyama, Irena Vodenska, Yoshi Fujiwara, Hiroshi Iyetomi*

Nov, 25

# Joint KARE – IWSAC

## Acquisition, Reuse and Evaluation Security Assurance in the Cloud

Time / Room Session

### **S1-KARE-IWSAC**

*Chairs: Davy Monticolo (University of Lorraine, France),  
Marco Anisetti(University of Milan, Italy)*

**149 A Semantic Wiki to Share and Reuse Knowledge into Extended Enterprise**  
*Inaya Lahoud, Davy Monticolo, Vincent Hilaire*

**104 A Semantic HUB within the Future of PLM**

*Bertrand Marconnet, Frédéric Demoly, Samuel Gomes*

**14:00–16:00**  
**Room 3**

**85 Towards a MDE Approach for the Establishment of a Contract Service Level  
Monitoring by Third Party in the Cloud Computing**

*Adil Maarouf, Abderrahim Marzouk, Abdelkrim Haqiq, Mahmoud El Hamlaoui*

**231 Towards a Linked Data Vocabulary for the Certification of Software  
Properties**

*Francesco Di Cerbo, Samuel Paul Kaluvuri, Frederic Motte, Bassem Nasser,  
Willis X. Chen, Stuart Short*

**16:00–16:30**

**Coffee break**

# Wednesday Nov 26

Slot	Time	ROOM 1	ROOM 2	ROOM 3
Session 1	08:30 - 10:00	Tutorial (Thierry Berthou) Room1		
Break	10:00 - 10:30	Coffee break		
Session 2	10:30 - 12:30	S3 - SIT	S1 - IEB	
Break	12:30 - 14:00	Lunch break		
Session 3	14:00 - 16:00	S4 - SIT	S2 - IEB	
Break	16:00 - 16:30	Coffee break		
Session 4	16:30 - 18:30	S2 - MIRA & SIT	S3 - WeCa	

08:30 – 18:30  
09:00 – 10:00

## Registration

## Tutorial

**COLOR SHADES® spectral filters arrays: a new dimension for multispectral imaging**

**Thierry Berthou**

*Chaired by Jean Baptiste Thomas*

10:00 – 10:30

**Coffee Break**

## Tracks

Nov, 26

### Track SIT

### Signal and Image Technology

Time / Room	Session
<b>10:30–12:30</b> <b>Room 1</b>	<b>S3-SIT:Medical imaging</b> <i>chair: Mustafa Kardouchi (Moncton University, Canada)</i>
	<b>78 Accurate Detection of Non-Iris Occlusions</b> <i>Michal Haindl, Mikuláš Krupicka</i>
	<b>141 Accurate Blood Cells Segmentation through Intuitionistic Fuzzy Set Threshold</b> <i>Cecilia Di Ruberto, Lorenzo Putzu</i>
	<b>55 Adaptive Model-Based Mammogram Enhancement</b> <i>Michal Haindl, Václav Remeš</i>
	<b>95 Osteoporosis Diagnosis Using Fractal Analysis and Support Vector Machine</b> <i>Abdessamad Tafrouti, Mohammed El Hassouni, Hechmi Toumi, Eric Lespessailles, Rachid Jennane</i>
<b>68 Parametric Modeling of Band Powers for Electroencephalographic Signals</b> <i>Rafik Djemili, Aissa Belmeguenai, Lamine Talbi</i>	
<b>12:30–14:00</b>	<b>Lunch break</b>

Nov, 26

## Track SIT Signal and Image Technology

Time / Room

Session

14:00–16:00  
Room 1

### S4-SIT: Theory and methods

*Chair: Olivier Monga (IRD, France)*

#### 36 Combination of OC-LBP and Longest Run Features for Off-Line Signature Verification

*Yasmine Serdouk, Hassiba Nemmour, Youcef Chibani*

#### 50 Optimization of the Compression Ratio of the Modified Algorithm of Decomposition Electromyographic Signals by a Superimposed Coding

*Aimé Joseph Oyobé-Okassa, Pierre Elé*

#### 189 A Frequency Domain Processor for Real-Time CDVS Keypoints Extraction

*Giorgio Lopez, Ettore Napoli, Antonio G.M. Strollo*

#### 45 Robust Speaker Verification Using a New Front End Based on Multitaper and Gammatone Filters

*Fedila Meriem, Harizi Farid, Bengherabi Messaoud, Amrouche Abderrahmene*

16:00–16:30

Coffee break

Nov, 26

## Joint Track SIT - MIRA Signal and Image Technology Multimedia Information Retrieval and Applications

Time / Room

Session

16:30–18:30  
Room 1

### S2-MIRA: Multi-Media Signal Processing & Applications

*Chair: Albert Dipanda (University of Burgundy, France)*

#### 53 Mining Melodic Patterns in Large Audio Collections of Indian Art Music

*Sankalp Gulati, Joan Serrà, Vignesh Ishwar, Xavier Serra*

#### 51 Image Annotation Fusing Content-Based and Tag-Based Technique Using Support Vector Machine and Vector Space Model

*Shan-Bin Chan, Hayato Yamana, Duy-Dinh Le, Shin'Ichi Satoh, Hayato Yamana*

#### 199 Game with a Purpose for Tagging Emotions in Dialect Arabic Speech

*Miriam Rizkallah, Omar Abdulaal, Menah El Bastawisy, Injy Hamed, Slim Abdennadher*

#### 220 Fast Intra Mode Decision for HEVC

*Wenjie Xiang, Canhui Cai, Zhangxin Wang, Huanqiang Zeng, Jing Chen*

Nov, 26

## Track WECA

### Web Computing and Application

Time / Room

Session

16:30–18:30  
Room 2

#### **S3-WECA: Advanced Information Systems and Computing**

*Chair: Manuel Núñez (University of Complutense de Madrid, Spain)*

#### **107 Private Video Streaming Service Using Leveled Somewhat Homomorphic Encryption**

*Yacine Ichibane, Youssef Gahi, Zouhair Guennoun, Mouhcine Guennoun*

#### **178 A Methodology for Aiding Users to Design and Model Cloud Computing Architectures**

*Alberto Núñez, Pablo C. Cañizares, Manuel Núñez*

#### **186 PTTAC: Passive Testing Tool for Asynchronous Systems**

*María Azahara Camacho Magriñán, Mercedes G. Merayo, Inmaculada Medina-Bulo*

#### **215 Combination of Hierarchical and Cooperative Models of an IDS for MANETs**

*Sara Chadli, Mohamed Emharraf, Mohammed Saber, Abdelhak Ziyayat*

## Workshops

Nov, 26

### IEB

#### Insight on Eye Biometrics

Time / Room

Session

10:30–12:30  
Room 2

#### **S1-IEB**

*Chair: Gabriella Sanniti di Baja (ICIB-CNR, Italy)*

#### **156 Image Segmentation Scrutiny by Eye Tracking**

*Virginio Cantoni, Alessandra Setti*

#### **223 Implementation of Unsupervised Statistical Methods for Low-Quality Iris Segmentation**

*Meriem Yahiaoui, Bernadette Dorizzi, Emmanuel Monfrini*

#### **188 Contact Lens Detection and Classification in Iris Images through Scale Invariant Descriptor**

*Diego Gragnaniello, Giovanni Poggi, Carlo Sansone, Luisa Verdoliva*

#### **82 Fake Iris Detection: A Comparison between Near-Infrared and Visible Images**

*Fernando Alonso-Fernandez, Josef Bigun*

12:30–14:00

Lunch break

Nov, 26

# IEB

## Insight on Eye Biometrics

Time / Room

Session

**S2-IEB**

*Chair: Maria de Marsico (Sapienza University, Italy)*

**14:00–16:00**  
**Room 2**

**139 Gender and Age Categorization Using Gaze Analysis**

*Virginio Cantoni, Marco Porta, Chiara Galdi, Michele Nappi, Harry Wechsler*

**222 Person Identification using Eye Movements and Post Saccadic Oscillations**

*Darius Darius Vitonis, Dan Witzner Hansen*

**35 Periocular Recognition by Detection of Local Symmetry Patterns**

*Anna Mikaelyan, Fernando Alonso-Fernandez, Josef Bigun*

**146 Using Contrast and Directional Information for Retinal Vessels Segmentation**

*Maria Frucci, Daniel Riccio, Gabriella Sanniti di Baja, Luca Serino*

**16:00–16:30**

**Coffee break**

# Thursday Nov 27

Slot	Time	ROOM 1	ROOM 2	ROOM 3
Session 1	10:30 - 12:30	S5 - SIT	VICTA	
Break	12:30 - 14:00	Lunch break		
Session 1	14:00 - 16:00	S6 - SIT	QUAMUS	
Session 2	16:00 - 16:30	Coffee break		

08:30 – 18:30 **Registration**  
 10:00 – 10:30 **Coffee Break**

## Tracks

Nov, 27

### Track SIT

#### Signal and Image Technology

Time / Room	Session
	<p><b>S5-SIT:Image processing I</b>  <i>Chair: Ernesto Damiani (University of Milan, Italy)</i>  <b>74 Edge And Junction Detection Improvement Using The Canny Algorithm With A Fourth Order Accurate Derivative Filter</b>  <i>Andrea Arovitola, Luigi Gallo</i>  <b>63 A Genetic Based Algorithm For Automatic Motif Detection Of Periodic Patterns</b>  <i>Abdelbar Nasri, Rachid Benslimane, Aziza Ouaazizi</i></p>
<b>10:30–12:30 Room 1</b>	<p><b>112 Foreground-Background Segmentation Based On Codebook And Edge Detector</b>  <i>Mikaël Ange Mousse, Eugène Cokou Ezin, Cina Motamed</i>  <b>185 Region Similarity Measures For Automatic Detection Of Building Roofs From Orthophotoplans</b>  <i>Abdellatif El Idrissi, Youssef El Merabet Y, Yassine Ruichek, Cyril Meurie, Abderrahmane Sbihi, Ahmed Moussa</i>  <b>67 On The Quality Evaluation Of Spectral Image Processing Algorithms</b>  <i>Hilda Deborah, Noël Richard, Jon Yngve Hardeberg</i></p>
<b>12:30–14:00</b>	<b>Lunch Break</b>



## Track SIT

### Signal and Image Technology

Time / Room

Session

14:00–16:00  
Room 1

#### **S6-SIT:Image processing II**

*Chair: Albert Dipanda (University of Bourgogne, France)*

#### **110 A Case Based Approach for an Intelligent Route Optimization Technology**

*Takashi Kawabe, Takaaki Motomura, Masaki Suzuki, Yukiko Yamamoto, Setsuo Tsuruta, Yoshitaka Sakurai, Rainer Knauf*

#### **127 Speed Estimation Using Stereoscopic Effect**

*François Bourzeix, Omar Bourja, Mohammed Ayoub Boukhris, Najia Es-Sbai*

#### **129 Improved SPIHT Algorithm**

*Humberto de Jesús Ochoa Domínguez, Vianey Guadalupe Cruz Sánchez, Osslan Osiris Vergara Villegas*

## Workshops

Nov, 27

### VICTA

#### Visions on Internet of Cultural Things and Applications

Time / Room

Session

10:30–12:30  
Room 2

#### **S1-VICTA**

*Chair: Angelo Chianese (University of Naples "Federico II")*

#### **76 The Museum Week Event: Analyzing Social Network Interactions in Cultural Fields**

*Antoine Courtin, Brigitte Juanals, Jean-Luc Minel, Mathilde de Saint Léger*

#### **133 A Context-Aware Framework for Cultural Heritage Applications**

*Francesco Colace, Massimo De Santo, Luca Greco, Saverio Lemma, Marco Lombardi, Vincenzo Moscato, Antonio Picariello*

#### **145 SmaCH: A Framework for Smart Cultural Heritage Spaces**

*Angelo Chianese, Francesco Piccialli*

#### **151 A Biologically Inspired Model for Analyzing Behaviours in Social Network Community and Cultural Heritage Scenario**

*Salvatore Cuomo, Pasquale De Michele, Ardelio Galletti, Giovanni Ponti*

#### **168 Design and Preliminary Evaluation of a Touchless Interface for Manipulating Virtual Heritage Artefacts**

*Giuseppe Caggianese, Luigi Gallo, Giuseppe De Pietro*

**181 ICT Solutions for the OR.C.HE.S.T.R.A. Project: From Personalized Selection to Enhanced Fruition of Cultural Heritage Data**

*Francesco Barile, Davide Maria Calandra, Antonio Caso, Daniela D'Auria, Dario Di Mauro, Francesco Cutugno, Silvia Rossi*

**12:30–14:00**

**Lunch break**

**Nov, 27**

**QUAMUS**  
**Quality of Multimedia Services**

**Time / Room**

**Session**

**S1-QUAMUS**

*Chair: Mohammed El Hassouni (University of Mohammed V-Agdal, Rabat)*

**214 Towards Understanding and Modeling Audiovisual Saliency Based on Talking Faces**

*Naty Ould Sidaty, Mohamed-Chaker Larabi, Abdelhakim Saadane*

**147 On Color Image Quality Assessment Using Natural Image Statistics**

*Mounir Omari, Mohammed El Hassouni, Hocine Cherifi,*

*Abdelkader Ait Abdelouahad*

**60 Impact of Retainability Failures on Video Quality of Experience**

*Weiwei Li, Hamood Ur-Rehman, Mark Chignell, Alberto Leon-Garcia, Leon Zucherman, Jie Jiang*

**98 Exploring User Behavior and Preferences in the Wild with Mobile Apps: Lessons Learned from Four Case Studies**

*Sebastian Möller, Tilo Westermann, Justus Beyer, Ralf Reichmuth*

**57 Seeing is Believing and Vice Versa: Investigation of the Altered Perception during Subjective Assessment of Streaming Multimedia**

*Péter András Kara, László Bokor, Sándor Imre*

**14:00–16:00**  
**Room 2**

**16:00–16:30**

**Coffee Break**

# Venue



## About Morocco

Morocco, officially the kingdom of Morocco is located in the north of Africa. The five largest city are (Casablanca, Rabat, Marrakech, Agadir and Fes), the capital is Rabat. It has a coast on the Atlantic Ocean that reaches past the Strait of Gibraltar into the Mediterranean Sea.

## Climat

The climate is Mediterranean, which becomes more extreme towards the interior regions where it is mountainous. The terrain is such that the coastal plains are rich and accordingly, they comprise the backbone for agriculture. Forests cover about 12% of the land while arable land accounts for 18%.

## Wildlife

Morocco is known for its wildlife biodiversity. Birds represent the most important fauna. The avifauna of Morocco includes a total of 454 species, of which five have been introduced by humans, and 156 are rare or accidental.

## About Marrakesh

It is the fourth largest city in the country after Casablanca, Rabat and Fes, and is the capital of the mid-southwestern region of Marrakesh-Tensift-El Haouz. Located to the north of the foothills of the snow-capped Atlas Mountains.

Marrakesh is the most important of Morocco's four former imperial cities (cities that were built by Moroccan Berber empires). The region was inhabited by Berber farmers from Neolithic times, but the actual city was founded in 1062 AD by Abu Bakr ibn Umar, chieftain and cousin of Almoravid king Yusuf ibn Tashfin. In the 12th century, the Almoravids built many madrasas (Koranic schools) and mosques in Marrakesh that bear Andalusian influences. The red walls of the city, built by Ali ibn Yusuf in 1122-1123, and various buildings constructed in red sandstone during this period, have given the city the nickname of the "Red City" or "Ochre City". Marrakesh grew rapidly and established itself as a cultural, religious, and trading center for the Maghreb and sub-Saharan Africa; Jemaa el-Fnaa is the busiest square in Africa.

After a period of decline, the city was surpassed by Fes, but in the early 16th century, Marrakesh again became the capital of the kingdom. The city regained its preeminence under wealthy Saadian sultans Abu Abdallah al-Qaim and Ahmad al-Mansur, who embellished the city with sumptuous palaces such as the El Badi Palace (1578) and restored many ruined monuments. Beginning in the 17th century, the city became popular among Sufi pilgrims for Morocco's seven patron saints, who are entombed here. In 1912 the French Protectorate in Morocco was established and T'hami El Glaoui became Pasha of Marrakesh and held this position nearly

throughout the duration of the protectorate until the role was dissolved upon independence of Morocco and the reestablishment of the monarchy in 1956. In 2009, Marrakesh mayor Fatima Zahra Mansouri became the second woman to be elected mayor in Morocco. For more information about Marrakesh: <http://en.wikipedia.org/wiki/Marrakesh>

### **Travel**

Menara International Airport serves as the main airport for the city and receives flights from Europe and neighboring Arab countries. A toll-paying motorway connects Marrakech with Casablanca. CTM coaches (intercity buses) and various private lines run services to most notable Moroccan towns as well as a number of European cities, from the Gare Routière on Rue Bab Doukkala in downtown Marrakech. Marrakesh is the southern terminus of the ONCF, the Moroccan railway network, and Marrakesh is well served by trains heading to Tangier, Rabat, Casablanca, and Fes. The train station is located on Avenue Hassan II. The ONCF owned "Supratours" bus company serves towns not served by the train. The bus timetable coordinates with the train timetable and the bus terminal is right beside the station.

### **Trips from Marrakech**

Many tourists take a trip from Marrakech to visit the valley of the Ourika River in the Atlas Mountains or the valley of the Draa River in the south near the Sahara desert, but also to Middle Atlas Mountains: Waterfalls of Beni Mellal, and to Essaouira on the Atlantic ocean.

### **What to visit in Marrakesh**

#### **Medina**

Like the other oldest cities of Morocco the médina of Marrakech abounds in riches and is also labyrinthian. A multitude of small souks there is found: Debbaghine, Chouari (wood basket makers and turners), Haddadines (ironworkers), Cherrathines (saddlers), and Nejjarines (carpenters).

#### **Jamaâ El Fna**

Jamaâ El Fna is a place located at Marrakech beside the Koutoubia mosque. This tourist high place attracts unceasingly more than 1 million visitors come to attend the spectacles animated by the snake charmers, the adjusters of monkeys, the storytellers, the musicians and other artists popular (plays, drawing with henna, etc...). The intensity of these spectacular and original activities led in favor of the inscription of this place by UNESCO in 2001 as world oral Patrimoine, the first of the kind on a worldwide scale.

#### **Madrassa Ben Youssef**

The Ben Youssef Madrasa was an Islamic college in Marrakech and was named after the Almoravid sultan Ali ibn Yusuf (reigned 1106–1142), who expanded the city and

its influence considerably. The college was founded during the period of the Marinid (14th century) by the Marinid sultan Abu al-Hassan and allied to the neighboring Ben Youssef Mosque. The building of the madrasa, as it is now, was (re-)constructed by the Saadian Sultan Abdallah al Ghalib (1557–1574). It is the largest Medrasa in all of Morocco.

### **Saadian tombs**

The Saadian tombs in Marrakech date back from the time of the sultan Ahmad al-Mansur (1578-1603). The tombs were only recently discovered (in 1917) and were restored by the Beaux-arts service. The tombs have, because of the beauty of their decoration, been a major attraction for visitors of Marrakech.

### **El Badi Palace**

El Badi Palace (meaning the incomparable palace) is located in Marrakech, Morocco, and it consists nowadays of the remnants of a magnificent palace built by the Saadian king Ahmad al-Mansur in 1578.

The original building is thought to have consisted of 360 rooms, a courtyard of 135m by 110 m and a pool of 90 m by 20 m, richly decorated with Italian marbles and large amounts of gold imported from Sudan.

### **Bahia Palace**

It was built in the late 19th century, intended to be the greatest palace of its time. The name means 'brilliance'. As in other buildings of the period in other countries, it was intended to capture the essence of the Islamic and Moroccan style. There is a 2 acre (8,000 m<sup>2</sup>) garden with rooms opening onto courtyards.

### **Menara Garden**

It is a vast bored olive contains a gigantic basin dating from XIIIe century (Almohades). A charming house going back to 1869 (Alaouites), is drawn up on the edge of the basin it constitutes a beautiful sight with the reflection of the Atlas mountains on the surface of the basin.

### **Majorelle Garden**

The Majorelle garden: Create by the French painter Jacques Majorelle (1920 -1962), it abounds a fauna and an exuberant flora. This enchanter place was repurchased by the Yves Saint Laurent dressmaker.

### **Koutoubiya**

The Koutoubia Mosque is the largest mosque in Marrakech. The minaret was completed under the reign of the Almohad Caliph Yaqub al-Mansur (1184-1199) and was used as model for the Giralda of Seville then for the Hassan Tower of Rabat. The name is derived from the Arabic al-Koutoubiyyin for librarian, since it used to be surrounded by sellers of manuscripts. It is considered the ultimate structure of its kind. The tower is 69 m (221 ft) in height and has a lateral length of 12.8 m (41 ft).

## **Cuisine and drinks**

### **About moroccan cuisine**

Moroccan cuisine has long been considered as one of the most diversified cuisines in the world. This is a result of the centuries long interaction of Morocco with the outside world. The cuisine of Morocco is a mix of Berber, Spanish, Corsican, Portuguese, Moorish, Middle Eastern, Mediterranean, and African cuisines. The cuisine of Morocco has been influenced by the native Berber cuisine, the Arabic Andalusian cuisine brought by the Moriscos when they left Spain, the Turkish cuisine from the Turks and the Middle Eastern cuisines brought by the Arabs, as well as Jewish cuisine.

### **Spices**

Spices are used extensively in Moroccan food. While spices have been imported to Morocco for thousands of years, many ingredients, like saffron from Tiliouine, mint and olives from Meknes, and oranges and lemons from Fez, are home-grown. Chicken is the most widely eaten meat in Morocco. The most commonly eaten red meat in Morocco is beef; lamb is preferred, but is relatively expensive. Couscous is the most famous Moroccan dish along with pastilla, tajine, and harira. The most popular drink is green tea with mint. The tea is accompanied with hard sugar cones or lumps.



*Enjoy! Looking Forward to SITIS 2015*



	Sunday 23/11/2014	Monday 24/11/2012	Tuesday 25/11/2012	Wednesday 26/11/2012	Thursday 27/11/2012						
		Registration (08:30 - 18:00)	Registration (08:30 - 18:00)	Registration (08:30 - 18:00)	Registration (08:30 - 18:00)						
08:30 - 09:00		Opening Ceremony Room1			Tutorial Thierry Berthou Room 1						
09:00 - 09:30		Keynote 1 Olivier Monga Room 1		Keynote 2 Piet F.A. Van Mieghem Room 1							
09:30 - 10:00											
10:00 - 10:30		Coffee Break			Coffee Break						
10:30 - 11:00		S1 - SIT Room1	S1 - COMPLEX Room2	BigCVEn & UBIS Room3	S2 - SIT Room1	S4 - COMPLEX Room2	CITIMA Room3	S3 - SIT Room 1	S1 - IEB Room2	S5 - SIT Room 1	VICTA Room 2
11:00 - 11:30											
11:30 - 12:00											
12:00 - 12:30											
12:30 - 13:00		Conference Lunch			Conference Lunch		Conference Lunch		Conference Lunch		
13:00 - 13:30											
13:30 - 14:00											
14:00 - 14:30		S1 - WeCa Room 1	S2 - COMPLEX Room 2	COMI Room3	S2 - WeCa Room 1	S5 - COMPLEX Room 2	KARE & IWSAC Room 3	S4 - SIT Room 1	S2 - IEB Room 2	S6 - SIT Room 1	QUAMUS Room 2
14:30 - 15:00											
15:00 - 15:30											
15:30 - 16:00											
16:00 - 16:30	Registration and welcome coffee	Coffee Break			Coffee Break		Coffee Break		Coffee Break		
16:30 - 17:00		S1 - MIRA Room 1	S3 - COMPLEX Room 2				S2 - MIRA & SIT Room 1	S3 - WeCa Room 2	That's all Folks!		
17:00 - 17:30											
17:30 - 18:00											
18:00 - 18:30											
Social Event		19:00 - 19:30 Welcome reception		20:30 - 23:00 Conference Banquet							

Tracks

Workshops

Keynotes-Tutorial

Conference & social