

DEXA 2015

valencia



Cover: Hall of columns at the Llotja



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A short history of DEXA

At the time DEXA was founded, many important international database conferences were already established, e.g.: SIGMOD, PODS, VLDB, ICDE, EDBT,...

These were mainly treating theoretical topics. Against this background, DEXA was established as a conference dealing also with database as reflected in applications. This was the reason for its name: «International Conference on Database and Expert Systems Applications». The success of the first DEXA in 1990 confirmed that: There actually was a need for a conference dealing with applications, and DEXA could fill that gap perfectly.

For this first DEXA, out of approximately 250 paper submissions, we accepted less than 100 papers. Five years later, we started a second experiment, because during the review process we had seen many submitted papers which were very good, but not mature enough for a conference with high standards. On the other hand, many of the papers we unfortunately had to reject were very promising and worth publishing and being discussed within an international forum. That was the reason why we founded the DEXA Workshops in 1995. Later, many other conferences have successfully copied this concept.

The first DEXA took place at the Technical University of Vienna in 1990. It was dedicated to provide an international forum for the presentation of applications in the field of database and expert systems, for the exchange of ideas and experience, and for defining requirements for future systems and applications in these fields.» DEXA 1990 was a great success. This is why the DEXA association was founded, to organize yearly conferences in the following cities:

1991 Berlin (Germany); **1992** Valencia (Spain); **1993** Prague (Czech Republic); **1994** Athens (Greece); **1995** London (UK); **1996** Zurich (Switzerland); **1997** Toulouse (France); **1998** Vienna (Austria); **1999** Florence (Italy); **2000** Greenwich (UK); **2001** Munich (Germany); **2002** Aix en Provence (France); **2003** Prague (Czech Republic); **2004** Zaragoza (Spain); **2005** Copenhagen (Denmark); **2006** Krakow (Poland); **2007** Regensburg (Germany); **2008** Turin (Italy); **2009** Linz (Austria); **2010** Bilbao (España); **2011** Toulouse (France); **2012** Vienna (Austria); **2013** Praga (Czech Republic); **2014** Munich (Germany); **2015** Valencia (Spain).

Year after year, PC chairs, PC members, reviewers and last but not least all authors and participating scientists give their best to ensure that DEXA is a well-known event, characterized by its balance between theory and applications, with an excellent international reputation.

For twenty five years, the DEXA association has continuously extended the original scope of the DEXA congress, adding emerging and innovative scientific tendencies by hosting DEXA workshops. In 1994, the idea of DEXA workshops was suggested by A Min Tjoa and Roland R. Wagner. DEXA workshops are designed for stimulating and facilitating an active exchange, interaction, and comparison of approaches, methods and ideas about very specific (both theoretical and applicative) topics in the general area of information science. In 1995 the first DEXA workshop took place together with the DEXA conference in London.



1991 Berlin (Germany)



1992 Valencia (Spain)

Conferences hosted by DEXA 2015

Apart from the main DEXA conference, the DEXA 2015 congress hosts the following:

DaWaK conference

(DataWarehousing and Knowledge Discovery)

Since 1999, the objective of DaWaK is to provide a forum for discussing results and experiences of research, development and deployment of solutions for data warehousing, knowledge discovery and related applications.

EC-Web conference

(Electronic Commerce and Web Technologies)

Since 2000, the main objective of EC-Web is to bring together international researchers and practitioners interested in electronic commerce and Web technologies, and to assess current methodologies and new research directions, spanning computer science economics, business administration, law, and other disciplines.

EGOVIS conference

(Electronic Government and the Information Systems Perspective)

Since 2002 EGOVIS intends to assess the state of the art in e-government/governance and to provide guidance for research, development and application in this fast-moving field. EGOVIS includes scientific papers, posters, panels, project presentations and a PhD student colloquium.

HoloMAS conference

(Applications of Holonic and Multi-Agent Systems)

In the years 2000-2003, Valdimir Marik organized HoloMAS as DEXA workshops.



2000 Greenwich (Londres)



2001 Munich (Germany)



Since 2003, DEXA hosts HoloMAS as a bi-annual conference with a focus on holonic and multi-agent systems that provide a novel paradigm for managing, modeling and supporting complex systems in industrial domains such as manufacturing, resource allocation, production planning and air traffic.

TrustBus conference

(Trust and Privacy in Digital Business)

Since 2004 the objectives of TrustBus are the following: The Internet and the WWW have created a tremendous opportunity to conduct business electronically the lack of trust in electronic procedures as well as the diversity of threat to users' privacy are major inhibitors for a full deployment of digital business. TrustBus therefore features papers, work-in-progress reports, and industrial experience descriptions of advances in all areas of digital business applications related to trust and privacy.

Globe conference

(Data Management in Grid and P2P systems)

Since 2008 the main objective of this international conference is to present the latest results in research and applications, to identify new issues, and to shape future directions, in the fields of Grid and Peer-toPeer Computing Scalable distributed systems. Special attention is paid to applications or systems that manage heterogeneous data at scale, by dynamic networks of peers.

ITBAM Conference

(International Conference on Information Technology in Bio- and Medical Informatics)

Since 2010 the main focus of ITBAM is on a wide range of interdisciplinary tasks for designing and deploying database technology to support applications in life sciences, biomedicine and healthcare.

The conference provides a forum for the exchange of ideas and effective interaction among researchers, developers and users from related fields. In addition to regular conference contributions, also short papers and posters presenting work in progress are featured.

Alongside these conferences, DEXA-2015 also hosts the following workshops: **BIOKDD** (Biological Knowledge Discovery and Data Mining), **HRMS** (Human Resources Management Systems), **ATEM 2015** (Artificial Intelligence Techniques for Power Systems and Energy Markets), **IPCK-FF** (Integrated Processing, Control and Knowledge Systems for Sustainable Production in Farms and Forests), **ISSASiM** (Information Systems for Situation Awareness and Situation Management), **KD-CloudApps** (Knowledge Discovery and Cloud Computing Applications), **NoSQL-Net** (NoSQL Databases, Emerging Database Technologies and Applications), and **TIR** (Text-based Information Retrieval).



2012 Vienna (Austria)



Valencia, Spain (DEXA 2015)

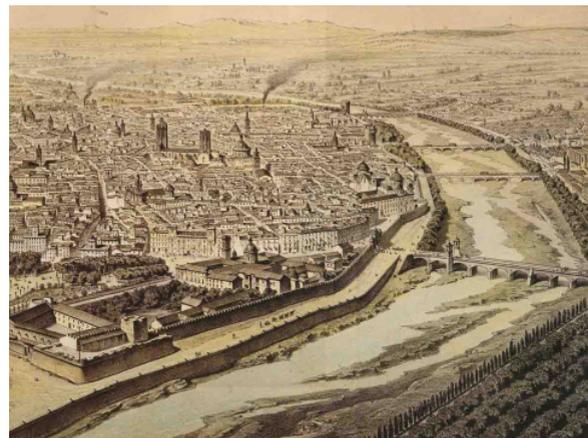
The inhabitants

As proper Mediterranean people, València's inhabitants are open and friendly. To help you all acknowledge, we are pasting some sentences from Vicente Boix's description of XIX Century Valencians: "The sons of this pleasant city are joyful, purposeful, satirical, malicious, and bear no high regards for strange celebrities. They loaf around scarcely or abundantly; pleased to dedicate as many hours possible to enjoyable conversations; their gatherings are frivolous, but are varied and happy (...). Their generosity knows no boundaries. They easily forgive and forget their enemies. They all consider themselves superior. Skilful and gifted with penetration, they are suitable for arts and literature: not many of them are dedicated to profound and philosophical studies." This is not more than a *cliché*, an imprecise generalisation, but it can be meaningful.

The city

Our city lies in the centre of the gulf of València, adjacent to the Turia's old riverbed. Its waters were diverted in 1958 on to a new riverbed built in the south of the city due to periodic floods as a consequence of the irregular Mediterranean hydrological regime, which can deliver very heavy rains in autumn. So were the ones occurred in October 1957. Currently, the former river-

The walled city at the Turia river





Turia river park

declared National Park by the autonomous regional government in 1986.

Given its great ecological value, it is home to many water birds which either nest in it all year long, or utilise it in their migratory cycles. The Devesa del saler (Grassland) is a strip of land with pines and ancient dunes separating the *Albufera* from the sea. *El Palmar* is a small old island in the *Albufera*.

València has a population of 786.424 inhabitants, and its metropolitan area, 1.550.885.

It is the centre of a vast irrigation farmland known as *l'Horta* (vegetable garden), which was initiated by the Romans and

bed has been transformed into a 9 kilometre long park.

Around 10 kilometres south of the city lays the *Albufera*, acquired by the city to the Spanish Crown in 1911. It is a huge lake with a surface of close to 2.100 hectares, surrounded by an extension of 14.100 hectares of marshlands dedicated to rice farming. It was officially de-



The Albufera lake

expanded by the Muslims, who established the *Tribunal de les Aigües* (Water Courts) to deal with irrigation related conflicts amongst farmers. This tribunal, declared by UNESCO as Intangible Cultural Heritage, has been gathering at the same place, the Cathedral's Apostles door, every Thursday at noon for over 1000 years (where the door of the great mosque used to be).

Currently, the city relies on a service based economy. However, it retains an industrial



El Palmar island

base, which amounts to 5,5% of the city's employment. Agricultural activities, so important in the past, currently just make up for 1,9% of the population.

A little bit of history

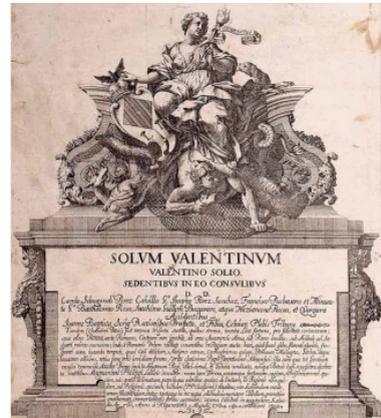
Our city was founded in 138 B.C, as a roman colony, under the rule of consul Decimus Junius Brutus, with the name of Valentia. It was first founded on a river island of the Turia River at about four kilometres from the sea.

In 711, groups of African Muslims invaded the peninsula and occupied the city, which name was pronounced as Balansiya. Over the years, the city acquired the status of capital of a Taif Kingdom. Muslim domination marked Valencian culture deeply, as we can still witness in toponymy, in many words and expressions of its own language, in the names of many products of its Horta (Farm), ...

In 1238, Christian king Jaume I of Aragon, Count of Barcelona and Lord of Montpellier, conquered the city, then followed by the full kingdom of València. With its territories, he constituted an independent kingdom with its own laws and a parliament entirely formed by aristocrats, clerics and the bourgeoisie.

The Kingdom adopted Catalan as its own and official language due to the Catalan origin of the Christians who repopulated vast areas of the country, especially around the coast side. The Kingdom was then ruled by the descendants of Jaume I until its extinction in the year 1410.

Many Muslims remained in the Kingdom, treated as servants to work the land. They converted forcefully or voluntarily to Christianity, but generally kept on practicing their



The city's origins

The Valldiga gate, in the arab wall



language, religion and traditions under the protection of lords or landowners until they were finally expelled for religious reasons in 1609. Their expulsion left many villages in the Kingdom practically inhabited, as well as impoverishing many of its lords. The number of expelled is estimated in 120.000. The Jewish minority, protected by the kings, prospered in its own neighbourhoods, although being subject to stricter laws and sporadic assaults and pillages. They were also expelled in 1492, under the same religious grounds, by Ferdinand of Aragon and Isabelle of Castille (the Catholic Kings). Jews converted to Christianity were not directly expelled, but were continuously persecuted by the Inquisition. If the Inquisition considered they had secretly practiced their former religion, they were condemned to be burnt alive and their properties to be distributed amongst the Inquisition and the King.

Between the 14th and 15th Centuries, València was an important centre for international gothic painting. The Museum of Fine Arts keeps several altarpieces of that age. The 15th Century is called the Golden Century of Valencian history and culture.



Museo de Bellas Artes (The Fine Arts Museum)

The city was so rich during this period, that it would lend huge amounts of money to the kings (one of the causes of its future decadence). Its city authorities built some of the most important monuments we have. Economic relations and cultural development allowed the city to turn into the entry point to the rest of the peninsula of movements

such as the Italian Renaissance, printers –València was home, in 1474 to the printing of the considered first literary work ever printed, titled *Obres e troves en lahor de la Verge Maria*, of which a copy is kept in the library of the Universitat de València. Literature in the own language also flourished. One of the best European poets, Ausiàs March, or his relative Joanot Martorell, author of a chivalric romance, *Tirant*

lo Blanch, which was translated to several languages and considered by some as one of the first ever modern novels. Jaume Roig, a king's doctor, wrote *El Spill, o llibre de les dones*, a satire against all women except his mother and his wife. Sor Isabel de Villena, abbess of the Trinity Convent and of aristocratic origins, composed a "*Vita Christi*" for her nuns, which was later printed by desire of the Queen. During a long period, the city also had a huge brothel known as el Partit, or la Pobla de les Fembres Pecadrius, (village of sinful women) which was walled and contained little houses separated by gardens, to which the entrance was only allowed unarmed. It got to be admired by all travellers and known in the whole of Europe.



Torres de Serrans, historic document

During the 18th Century, and due to a new inherited dispute which grew into an international conflict known as the War of the Spanish Succession, Felipe V, the beginner of the Bourbon Dynasty, punished the Catalan-Aragonese Kingdoms which had sided with the pretender of the Habsburg Dynasty.

In 1707, València's sovereign institutions were abolished, and with them its own laws, territorial and political organisation, weights and measures, all replaced by the uses and habits from Castille. The use of the own language, one which is shared with Catalunya and Illes Balears, was prohibited, and was never taught in schools again until 1982.

The 19th Century brought the disappearance of the several kingdoms and the unification of the Spanish State.

Currently, and after the 1936 war and the death of Franco, the dictator, Valencia received in 1982, and under the denomination of Valencian Community, a certain degree of administrative autonomy and hence recovering the names of its ancient institutions les Corts (parliament) and la Generalitat (government).



Torres de Serranos

Valencia's center preserves a great heritage of historic monuments, among which some Roman, Visigothic and Mussulman ones stand out: the *Almoína* (house of alms), the *Almirall* (Christian Almirante baths built in the 14th century in mussulman style), the *Almodí* (Almudín, an ancient gothic three-naved wheat store, conserves popular 17th century paintings), the *Torres de Serranos* and *Torres de Quart* (two city gates, finished in 1398 and 1460 as part of the city's defense wall), the *Llotja* (largest secular gothic building in Spain, with magnificent helicoidal columns, used for notary contracting and silk merchandizing, Unesco world heritage since 1996), the *Palau de la Generalitat* (richly decorated gothic and renaissance style governmental building), the *Basílica de la Mare de Déu dels Desemparats* (constructed between 1652 and 1666, with

Basílica de la Mare de Déu dels Desemparats and the cathedral



Historic Monuments, Museums and Places to Visit

breath-taking al-fresco paintings in its dome), the *Seu* (gothic and baroque style cathedral dating back to 12th century), the *Micalet* (Bell tower of the cathedral, emblematic city tower), the *Santa Caterina* (13th century church at the other end of the Plaza de la Reina), the *Calle de la Paz* (prettiest street in town, opened in 19th century upon remains of the Jewish quarter), *Sant Joan del Mercat*, (gothic and baroque style church, still damaged from last century's civil war), the *Mercado Central* (largest market hall in Spain) and the *Mercado Colón* (refurbished modernist market), the *Aduana* (antique neo-classic customs duty building, now the Pal-



The Llotja



Renaissance angels in the cathedral

(medieval and also more modern art), the *Museo de Ceràmica* in the *Palacio del Marqués de Dos Aguas* (high quality collection of preciousities from 14th century to the present in opulent marble facade building with alabaster portal), the *Institut Valencià d'Art Modern* (IVAM, with impressive collections of modern art), the *Patriarca* (precious complex of

ace of Justice), *La Trinitat*, *Sant Doménec* and Convent del Carme (antique cloisters), *Sant Nicolau* and *Sant Martí* (medieval parochial church houses with spectacular interiors and facades), and the *Universitat-Estudi General* (founded in 15th century, today in neo-classicist style, with beautiful interior cloister).

Other must-see museums are the *Bellas Artes*



Central market

renaissance church with al-fresco paintings, cloister with italian marble columns, and separate chapel with various cult objects, among them flamish 16th century tapestry), and the *Casa Benlliure* (lovely artist's residence with enchanting interior). Also worth visiting are the many different bridges that cross the old (now green) river bed, as well as other abundant gardens such as the wonderful *Botànic*, the *Glorieta* with its tall trees, the neighboring *El Parterre* with its statue of the famous king Jaume I, the large *Jardins del Real (Viveros)*, and the enchanting *Monforte*. And next to the harbor are the old, atmospheric fishing villages of *el Grau*, *el Cabanyal*, *el Canyameler* and *la Malvarrosa*.

Museo de Ceràmica in the Palacio del Marqués de Dos Aguas



More recent attractions include the *Bioparc* zoo, the *Oceanogràfic* (aquarium), the prestigious concert hall *Palau de la Música*, and the Valencian architect Santiago Calatrava's complex of the *Ciutat de les Arts i les Ciències* (City of Arts and Sciences), the *Hemisfèric* (Hemispheric), and the opera building *Palau de les Arts*.



The fishing villages and the beach



City of Arts and Sciences

Universitat de València – Estudi General

In 1245, King Jaume I obtained permission from Pope Innocent IV to establish a Studium Generale. However, it was not until October 1499 that the aldermen of Valencia drew up the Constitution of the future university, the *Estudi General* (General Study), authorised by a papal bull issued by the Valencian Pope Alexander VI on 23 January 1501 and by a royal privilege granted by Fernando II (Ferdinand the Catholic) on 16 February 1502. The uni-

versity developed as the city grew and became an inextricable part of it, creating places for the teaching and diffusion of culture. Initially devoted to the study of medicine, the humanities, theology and law, it became a modern, multi-disciplinary university with links to the main international networks of science and education.

It has four main campuses – Blasco Ibáñez, Tarongers, Ontinyent and Burjassot-Paterna – and numerous delegations, associated institutions and specific premises. Among them is the historic building of *La Nau* (The Ship), in which many public events are organised and which contains the his-

Cloister of the Universitat-Estudi General



toric Library, with 1,392,793 volumes and bibliographic treasures that include valuable incunabula and magnificent Renaissance manuscripts from the library of the Valencian King Alfonso the Magnanimous, who was also King of Naples. There is also the López Piñero Institute of History and Medicine, located in a restored 18th-century building, the Cerveró Palace; and the Botanic Garden near the Quart Towers, founded in 1567 as a herb garden for medical studies; and the Astronomical Observatory in the Science Park Research Institutes in Burjassot, one of the oldest observatories in Spain.

Universitat Politècnica de València

Valencia Polytechnic University began in 1968/69 with the creation of Valencia Polytechnic Institute, comprising four institutions: Agronomic Engineers' Technical School, Architecture Technical School, Highway, Canal and Port Engineers' Technical School and Industrial Engineers' Technical School. The *Universitat Politècnica de València* was created officially on 11 March 1971. The Fine Arts Faculty was incorporated in 1978. The university has three campuses, Vera, Alco and Gandia, and fifteen other university organisations, including ten technical schools, three faculties and two polytechnic schools. There are also three associated institutions (Florida Universitaria, Berklee College of Music and Escuela Universitaria Ford España).



UPV Campus

Gastronomy

Valencian gastronomy is based on a Mediterranean diet of meat and fish and large quantities of vegetables, legumes and fruit, together with olive oil. It is partly influenced by Moslem cuisine, especially in desserts and confectionery, with much use of almonds and honey.

Starters include grilled cuttlefish, mussels, clams, molluscs and fish. València is the home of *paella*, a name that comes from the broad, shallow pan in which it is



The paella

cooked. Originally it was prepared for special occasions. It is made with rice cooked with chicken and rabbit, green beans and Lima beans, and also snails. The same pan is used to make *fideuà*, with noodles instead of rice, and usually including fish.

The excellent vegetables grown in València are used, raw, to make delicious salads. They may also be fried in olive oil in many ways, grilled (on a hot metal griddle) or boiled. The most typical boiled vegetables are potatoes,

onions, chard and green beans, together with others that depend on the season, served with a dressing of oil and vinegar. This was and perhaps still is the traditional dinner for many Valencians.

Traditional Valencian cuisine includes dishes connected with festive events throughout the year.

The Valencian climate produces excellent red and white wines and *cava* (a special sparkling wine) with Designation of Origin. A fortified wine that is very popular in Valencia is *mistela*, a sweet wine that generally accompanies desserts. There is also *orxata*, a refreshing beverage made from tigernuts, which can only be grown in soil with special characteristics, as in Alboraià, a town near València, where it is grown with Designation of Origin.



The orange, symbol of València

La Albufera and El Palmar are two good places in which to enjoy some of the typical dishes of València, such as *paella*, *arròs a banda*,

all-i-pebre d'anguiles, (with potatoes, peppers, garlic and eels) and *suquet de peix* (fish in the same sauce as the previous dish).

Festivals

The city's main festival used to be *Corpus Christi*, paid for by the municipality, and its religious procession still takes place now. The monumental monstrance is carried from the Cathedral, preceded by representations of biblical figures and saints, and before them there are giants and dwarfs, *les roques* (venerable triumphal carriages, some over 200 years old) and various ancient dances. The most interesting is the dance of *la Moma i els Momos*, representing the fight and victory of virtue over the seven deadly sins.

The festival of Corpus Christi, with its excessive religious connotations, was displaced some time ago by the *Falles de Sant Josep* (Saint Joseph's Fallas), a secular celebration for the general public, a boisterous, multitudinous festival lasting several days in March, with much consumption of gunpowder in *traques*, *masclètades* and *castells* (events with fireworks), and *passacarrers*, processions with music and with people wearing traditional costume. The *fallas* are large or small combustible structures with sculptural figures. They used to be installed in a single night, but



Ever-present fireworks

that is impossible now because of their huge size and complexity. After four days of festivities, they are burned on the night of the 19th of March. The large central figures used to be made using craft techniques, with *papier mâché* covering a framework of slender, flexible wooden rods. Now they are cut out of blocks of expanded polystyrene, and resin and fibreglass are also used. However, modern technology may provide new possibilities, because research conducted by Valencia Polytechnic University has recently led to the presentation of a new material consisting basically of sawdust, rice straw and water, which may be used for this purpose.

Another interesting festival is that of the Valencian saint Vicent Ferrer, in which stages are set up with images of the saint and performances of his many miracles, presented in Valencian by groups of children.

Back cover: Torres de Quart

More information, for your interest

<http://web.iti.upv.es/~hendrik/Valencia/vlc/VALENCIA-pictures.pps>

<http://www.dexa.org/history>

<http://dexa-gallery.faw.at/main.php>

<https://www.facebook.com/pages/DEXA-Society/139778796115704>

<https://goo.gl/S56u63>



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