

IADIS International Conference Applied Computing 2006

CONFERENCE PROGRAM

Saturday 25th, February 2006

08:30-19:00 Welcome Desk

**09:30-10:00 Session O – Opening Session
(Room La Concha)**

OPENING SESSION

Prof. Pedro Isaiás, Ambrosio Goikoetxea and Javier Retegi

**10:00-11:00 Session KL1 – Keynote Presentation
(Room La Concha)**

MINING BUSINESS INTELLIGENCE FROM RAW WEB LOGS

Prof. Ajith Abraham, Chung-Ang University, Republic of Korea

11:00-11:30 Coffee Break

**11:30-12:50 Session FSP 25.1
Mobile Networks and Systems
(Room La Concha)**

THE DISTRIBUTED LOCATION RESOLUTION PROBLEM AND ITS EFFICIENT SOLUTION (F014)

Jörg Roth

PERFORMANCE ANALYSIS OF A SIMPLIFIED CALL ADMISSION CONTROL SCHEME FOR MULTIMEDIA WIRELESS NETWORK (F162)

K. N. Choong, Y. C. Yee, Andy L.Y. Low, S. L. Ng and S. F. Chien
THROUGH THE LOOKING GLASS: SECURITY ISSUES IN VOIP APPLICATIONS (S126)

Patrick C.K. Hung and Miguel Vargas Martin

**11:30-13:10 Session FSP 25.2
e-Commerce Theory And Practice // Payment Systems
(Room Zarauz)**

FINDING “KILLER APPLICATIONS” AND CRITICAL SUCCESS FACTORS IN MOBILE COMMERCE (F084)

Gordon Xu and Jairo A. Gutiérrez

META-KNOWLEDGE IN SUPPLY CHAIN MANAGEMENT (S163)

Annemari Heikkilä, Jussi Kantola, Rainer Breite and Hannu Vanharanta

INTERNET MARKETING USES IN 500 BIGGEST EUROPEAN COMPANIES (S204)

Teresa Borges Tiago, Flavio Borges Tiago, João Pedro Couto and José Cabral Vieira

AIPP: A FAST-COMPLIED E-PAYMENT PROTOCOL (S218)

Salvatore Garruzzo, Giuseppe M.L. Sarnè and Luigi Palopoli

11:30-13:10 Session SP 25.3

Other

(Room Guetaria)

JOINT MAINTENANCE, QUALITY, PRODUCTION SPEED AND PROFIT MODEL FOR PREVENTIVE MAINTENANCE OPTIMIZATION (S054)

Aitor Goti Elordi, Ana Isabel Sánchez Galdón and Aitor Oyarbide Zubillaga

VENDOR SELECTION PROBLEM: NEW FORMULATION AND SOLUTION APPROACH (S197)

Sohail S. Chaudhry, Zhonglin Lei and Shiwei He

MULTI-PARADIGMATIC DEVELOPMENT OF CONTEXT-AWARE APPLICATIONS (S114)

Giovanni Degli Antoni and Hooman Tahayori

TOWARDS A NEW GENERATION OF MULTIMEDIA LEARNING DESIGN AND RESEARCH: BROADENING ESTABLISHED THEORIES OF MULTIMEDIA LEARNING (S096)

Haido Samaras, Thanasis Giouvanakis, Despina Bousiou and Konstantinos Tarabanis

PARASYNTHETIC MORPHOLEXICAL RELATIONSHIPS OF THE SPANISH: LEXICAL SEARCH BEYOND THE LEXICOGRAPHICAL REGULARITYS (S013)

Octavio Santana Suárez, Francisco J. Carreras Riudavets, Jose R. Pérez Aguiar and Juan Carlos Rodríguez del Pino

13:00-14:30 Lunch Break

14:30-15:50 Session FSP 25.4

Evaluation and Assessment

(Room La Concha)

FORMAL VERIFICATION OF TLS HANDSHAKE AND EXTENSIONS FOR WIRELESS NETWORKS (F006)

Llanos Tobarra, Diego Cazorla, Fernando Cuartero and Gregorio Díaz

INFORMATION AND COMMUNICATION TECHNOLOGY ADOPTION BY HEALTHCARE PROFESSIONALS: AN OVERVIEW OF THEORETICAL MODELS AND THEIR APPLICATION (F146)

Marie-Pierre Gagnon

TUNING FLOW CONTROL ON ADVANCED SWITCHING (S148)

Eva M. García, Antonio Robles-Gómez, Aurelio Bermúdez, Rafael Casado and Francisco J. Quiles

14:30-16:10 Session FSP 25.5

Data Mining

(Room Zarauz)

THE EFFECT OF THE USED RESAMPLING TECHNIQUE AND NUMBER OF SAMPLES IN CONSOLIDATED TREES' CONSTRUCTION ALGORITHM (F017)

Ibai Gurrutxaga, Olatz Arbelaitz, Jesús M. Pérez, José I. Martín and Javier Muguerza

INCREMENTAL MAINTENANCE OF ASSOCIATION RULES UNDER SUPPORT THRESHOLD CHANGE (F121)

Mohamed Anis Bachtobji and Mohamed Salah Gouider

A TOOL FOR ECONOMIC PLANS ANALYSIS BASED ON EXPERT KNOWLEDGE AND DATA MINING TECHNIQUES (S029)

M. Baglioni, B. Furlletti and F. Turini

MULTIVARIATE DATA VISUALIZATION IN SOCIAL SPACE (S185)

Karin Juurikas, Ants Torim and Leo Võhandu

16:00-16:30 Coffee Break

**16:30-18:30 Tutorial
(Room La Concha)**

EVOLUTIONARY MULTIOBJECTIVE OPTIMIZATION: REVIEWS, PERSPECTIVES AND APPLICATIONS
Prof. Ajith Abraham, Chung-Ang University, Republic of Korea and Dr. Crina Grosan, Computer Science Department of Babes-Bolyai University, Romania

Sunday 26th, February 2006

08:30-19:00 Welcome Desk

**09:00-10:50 Session FSP 26.1
Parallel and Distributed Systems
(Room La Concha)**

SOLVING THE SANTA FE BAR PROBLEM TO REPLICATE DISTRIBUTED DATABASES (F095)
Călin Ovidiu Cenan and Horea Adrian Greblă
AN APPLICATION OF AUTONOMOUS DECENTRALIZED ARCHITECTURE TO AN IC CARD TICKET SYSTEM (F176)
Akio Shiibashi, Daiken Usuki, Yosuke Sugiyama and Kinji Mori
FREE DISTRIBUTION PARALLEL SPARSE SOLVERS. APPLICATION TO LAMBDA MODES EQUATION (F110)
Omar Flores Sánchez and Vicente E. Vidal Gimeno
EVALUATION OF INSTRUCTION SETS FOR SUPERSCALAR EXECUTION (S156)
Virginia Escuder Cabañas, Raúl Durán Díaz and Rafael Rico López

**09:00-10:30 Session FSP 26.2
Software Engineering
(Room Urgull)**

J-DATS: JAVA - DATA ABSTRACTION TESTING SYSTEM (S161)
Virginia Escuder Cabañas and Miguel Ángel Quintans Rojo
VIEWS DISTRIBUTED LIFECYCLE MANAGEMENT APPROACHES USING ASPECT ORIENTED PROGRAMMING (F190)
Hamid Mcheick, Hafedh Mili, Hamdan Msheik, Aymen Sioud and Salah Sadou
DESIGN AND IMPLEMENTATION OF A CENTRALIZED ARCHITECTURE FOR TESTING DISTRIBUTED REAL-TIME SYSTEMS (S196)
Shoukat Hayat Siddiquee and Abdeslam En-Nouaary
MODEL-BASED CODE GENERATION WITH TREE CONSTRUCTION (S022)
Zoltán László and Balázs Simon

11:00 - 11:30 Coffee Break

**11:30-12:40 Session FSP 26.3
Networking
(Room Urgull)**

REDUCING NETWORK LATENCY ON CONSISTENCY MAINTENANCE ALGORITHMS IN DISTRIBUTED NETWORK GAMES (F172)
Kyung Seob Moon, Vallipuram Muthukumarasamy and Anne Thuy-Anh Nguyen
A SOURCE ADDRESS REPUTATION SYSTEM TO COMBATING CHILD PORNOGRAPHY AT THE NETWORK LEVEL (S123)
Munish Chopra, Miguel Vargas Martin, Luis Rueda and Patrick C. K. Hung
INTENTION MODELING: A SEMIOTIC VIEW (S112)
Lezan Hawizy, Iain W Phillips and John H. Connolly

11:30-13:20 Session FSP 26.4

**Algorithms
(Room LaConcha)**

AN EFFICIENT ALGORITHM FOR COMPUTING COMMON DOUBLE-VERTEX DOMINATORS (F011)
Maxim Teslenko, Elena Dubrova and Hannu Tenhunen
PERFORMANCE PREDICTION OF FUTURE GENERATION COMPUTER SYSTEMS (F050)
Andreas Boklund and Stefan Christiernin
MONEY BASED MAINTENANCE MODEL CONSTRAINED MULTI-OBJECTIVE OPTIMIZATION (F073)
Aitor Goti Elordi, Ana Isabel Sánchez Galdón and Aitor Oyarbide Zubillaga
INTERVAL REDUNDANT ANALOG NUMBER SYSTEM (S111)
Nophakhun Srimanatham and Athasit Surarerks

11:30-12:30 Session FP 26.5

**Usability Issues
(Room Gross)**

THE ROLE OF USABILITY IN THE COMPETITIVENESS OF HIGHER EDUCATION INSTITUTIONS (F139)
Atilano Suarez, Rui Silva Moreira and Eurico Carrapatoso
PROTOTYPING A MULTI-LAYERED HELP - A USER INVOLVED EXPLORATORY DESIGN (F188)
Linn Gustavsson Christiernin, Marie Gustafsson, Annika Olsson and Andreas Boklund

13:00-14:30 Lunch Break

**14:30-15:30 Session KL2 – Keynote Presentation
(Room La Concha)**

WOMBAT: A WORLDWIDE OBSERVATORY OF MALICIOUS BEHAVIORS AND ATTACK THREATS.
Prof. Marc Dacier, Institut Eurecom, France

**15:30-16:30 POSTER SESSION
(Room Ondorreta)**

WEB SERVICES ORIENTED ARCHITECTURE FOR THE IMPLEMENTATION OF LEARNING OBJECTS DISTRIBUTED REPOSITORIES (P020)
Salvador Otón Tortosa, M^a Lourdes Jiménez Rodríguez, Roberto Barchino Plata, José Ramón Hilera González and José María Gutiérrez Martínez
SECURITY IN EMBEDDED SYSTEMS (P102)
Jesús Lizarraga, Roberto Uribeetxeberria, Urko Zurutuza and Miguel Fernández
AN ARCHITECTURAL MODEL FOR MEDICAL DIAGNOSIS (P116)
Ma. Eugenia Cabello, Isidro Ramos and Jose A. Carsí
INTEGRATION OF SPATIAL DATA TYPES AND OPERATORS INTO RELATIONAL DBMS: A SURVEY (P157)
Paolino Di Felice and Luigi Pomante
PARSING SYSTEMC: AN OPEN-SOURCE, EASY TO EXTEND PARSER (P165)
C. Brandolese, P. Di Felice, L. Pomante and D. Scarpazza

**15:30-16:30 Doctoram Consortium
(Room Gross)**

16:30-17:00 Coffee Break

17:00-18:40 Session SP 26.6

**Security
(Room La Concha)**

SMART CARD BASED CERTIFICATION SYSTEM (S028)
Goran Pantelić, Željko Škrnjug and Slobodan Bojanić
**COMPUTATIONAL INTELLIGENCE FOR LIGHT WEIGHT
INTRUSION DETECTION SYSTEMS (S117)**
Crina Grosan, Ajith Abraham and Monica Chis
**DIDFAST.PN: DISTRIBUTED INTRUSION DETECTION
AND FORECASTING MULTIAGENT SYSTEM USING
POSSIBILISTIC NETWORK (S158)**
Farah Jemili, Montaceur Zaghoud and Mohamed Ben Ahmed
**HYBRID DIGITAL WATERMARKING FOR COLOR
IMAGES BASED ON WAVELET TRANSFORM (S178)**
*Toshiro Akiyama, Fumiaki Motoyoshi, Osamu Uchida and
Shohachiro Nakanishi*
**DENIAL OF SERVICE ATTACKS AGAINST 802.11 DCF
(S194)**
Bo Chen and Vallipuram Muthukumarasamy

17:00-18:40 Session FSP 26.7

**Payment Systems
(Room Gross)**

OSGI-BASED GATEWAY REPLICATION (F169)
Jonas Thomsen
**ASPECTS OF DISTRIBUTED FILE SYSTEMS
CONSIDERING CPU PERFORMANCE WITH LUSTRE
(F187)**
Nima Namaki and Christian Jiresjö
**BENEFITS OF ALTERNATIVE NETWORK TOPOLOGIES
FOR COTS LINUX CLUSTERS (S189)**
Christian Jiresjö and Andreas Boklund
**REAL-TIME STEREO COMPUTATION IN SHEET
HYDROFORMING PROCESSES (S168)**
*A. Izaguirre, N. Arana, J. Barbarias, C. García, A. Aginagalde, J. A.
Esnaola*

Monday 27th, February 2006

08:30-13:00 Welcome Desk

09:00-09:50 Session FSP 27.1

**Grid Computing // Virtual Reality
(Room Guetaria)**

**A PROPOSAL OF GRID MIDDLEWARE ARCHITECTURE
FOR MEDICAL IMAGE MANAGEMENT (F023)**
Marcos López Sanz, Esperanza Marcos and José Luis Bosque
**COMPUTER PROGRAMMING OF LAPAROSCOPIC
SURGICAL WORKSTATION (LSW) FOR LAPAROSCOPIC
SURGICAL SIMULATION (S031)**
*José Blas Pagador Carrasco, Francisco Miguel Sánchez Margallo,
Samuel Rodríguez Bescós, Valentín Masero Vargas and Jesús Usón
Gargallo*

09:00-09:50 Session FSP 27.2

**Software Engineering
(Room Urgull)**

**METAPROGRAMMING INFRASTRUCTURE FOR
SOFTWARE DEVELOPMENT (F048)**
Zoltán László and Tibor Sulyán
**MEASURING AGILITY AND ADOPTABILITY OF AGILE
METHODS: A 4-DIMENSIONAL ANALYTICAL TOOL (S081)**
Asif Qumer and Brian Henderson-Sellers

09:00-09:40 Session SP 27.3

Semantic Web (Room Gross)

**SEMTEK: AN ADVANCED RESEARCH PROJECT ABOUT
AGENTS' THEORY APPLIED TO THE CONTEXT
SEMANTIC ADAPTATION (S098)**
*Aitor Urbieto Artetxe, Carlos Gómez Díez, Guillermo Barrutieta
Anduiza, Marta González Rodríguez, Joseba Abaitua, JosuKa Díaz
Labrador and Carlos Lamsfus Franco*
**JSEM-HP: A TOOL FOR THE DEVELOPMENT OF
ADAPTIVE EVOLUTIONARY HYPERMEDIA SYSTEMS
(S119)**
*Fernando Molina Ortiz, Nuria Medina Medina and Lina García
Cabrera*

10:00-11:00 Session KL3 – Keynote Presentation

(Room La Concha)

FREE SOFTWARE AND THE GNU/LINUX SYSTEM
Prof. Richard Stallman, Free Software Foundation, USA

11:00-11:30 Coffee Break

11:30-12:50 Session FSP 27.4

**Technologies for e-Learning
(Room La Concha)**

**GENERATION, MANAGEMENT AND PUBLICATION OF
XML-BASED E-QUESTIONNAIRES (F223)**
*Jaime Urquiza-Fuentes, Rafael Calvo-García, Raquel Hijón-Neira
and J. Ángel Velázquez-Iturbide*
**GUIDELINES IN SELECTING AN E-LEARNING
DEVELOPMENT MODEL (F174)**
Alta van der Merwe and Daleen Maneschijn
**WEB, LOG ANALYSIS AND SURVEYS FOR TRACKING
UNIVERSITY STUDENTS (S035)**
Raquel Hijón-Neira and J. Ángel Velázquez-Iturbide

11:30-13:10 Session FSP 27.5

**Intelligent Systems // Ubiquitous Computing
(Room Urgull)**

**AUTOMATICALLY PREDICTING DOMINANT AND
SUBMISSIVE PERSONALITY TYPES FROM TEXT (F003)**
Marco De Boni, M. Benjamin Dias and Robert Hurling
**AN APPROACH TO LOGIC PROGRAMMING WITH TYPE-1
FUZZY MODELS USING PROLOG (F155)**
Ossi Nykänen
**BIO-INSPIRED COORDINATION BY KNOWLEDGE
DIFFUSION (S024)**
Michael Cebulla
**CONCEPT MODEL OF AN OBJECT DETECTING MOBILE
ROBOT (ODMR) IN A HOME INDOOR ENVIRONMENT
(S160)**
Robin Persson, Stefan Mankefors-Christiernin and Andreas Boklund

11:30-13:20 Session FSP 27.6

**WWW Applications
(Room Gross)**

**FCVW - A FEDERATED COLLABORATIVE VIRTUAL
WORKSPACE (F219)**
*Ivan Tomek, Elhadi Shakshuki, Anita Peng, Rebecca Gong, Alex Koo
and Rick Giles*
**A FORM-BASED APPROACH FOR APPLICATION
DEVELOPMENT BY WEB SERVICE INTEGRATION (S008)**
*Takeshi Chusho, Ryouyusuke Yuasa, Shinpei Nishida and Katsuya
Fujiwara*
**REMOTE PROCESS MONITORING USING MOBILE WEB
CLIENTS (S228)**
A. Martí, J.C. Campelo, J.V. Capella, R. Ors and A. Perles
**HIERARCHICAL SUMMARIZATION OF WEB PAGES
(S061)**
Kou Takahashi, Takao Miura and Isamu Shioya
A RICH CLIENT FOR CSCW (S227)
Elhadi Shakshuki, Helen Lei and Ivan Tomek

13:00-14:30 Lunch

15:00 Conference Tour and Dinner

The conference tour and dinner will include a visit to **Getxo** and **Bilbao** (with a guided visit on foot through **Old Bilbao**).

The Conference Dinner will be held at the *Cider House*.

Tickets for this can be bought at the welcome desk.

Wednesday 28th, February 2006

08:30-13:30 Welcome Desk

09:00-10:30 Session FSP 28.1

**Applied Information Systems
(Room Gross)**

**DECISION SUPPORT SYSTEM FOR WEIGHTING
BALANCED SCORECARD PERFORMANCE MEASURES
(F066)**

Myung Ho Sohn and Ho Seok Moon

**TRAFFIC CONTROL SENSOR NETWORKS: A
PREDICTIVE APPROACH (F067)**

Miguel Sánchez and Juan-Carlos Cano

**TERMS EXTRACTION AND KNOWLEDGE MATCHING
APPLYING A DIAGNOSIS AID SYSTEM (F091)**

Jamel Kolsi, Lamia Hadrich Belguith and Abdelmajid Ben Hamadou

09:00-10:50 Session FSP 28.3

**Case Studies And Applications
(Room La Concha)**

**A COMPARISON OF ASPECT ORIENTED SOFTWARE
DEVELOPMENT TECHNIQUES FOR DISTRIBUTED
APPLICATIONS (F080)**

Hamid Mcheick, Hafedh Mili, Amel El-Kharraz and Salah Sadou

**IMPLEMENTING WATSON-CRICK FINITE AUTOMATA IN
JAVA (F083)**

Marcelino Campos, Tomás A. Pérez and José M. Sempere

**USING MULTIPLE PROCESS MODELS TO CREATE
REFERENCE MODELS FOR SOA FRAMEWORKS (F217)**

Balbir Barn, Hilary Dexter, Samia Oussena and Jim Petch

**RECOGNIZING WELL-FORMED IMPLEMENTATION
INTENTIONS IN A COMPUTER-BASED HEALTH
IMPROVEMENT SYSTEM (S004)**

Marco De Boni, Robert Hurling and David L. Hunt

11:00-11:30 Coffee Break

11:30-12:40 Session FSP 28.4

**XML and Other Extensible Languages
(Room La Concha)**

FUZZY QUERYING OF SEMI-STRUCTURED DATA (F183)

A. Campi, S. Guinea and P. Spoletini

**USING XML TO INTEGRATE INFORMATION FROM
HETEROGENEOUS DATABASES (S090)**

Roberto Berjón Gallinas, Ana María Feroso García and María

José Gil Larrea

**PERSEMAN: AN EXTENSIBLE, RST BASED AND
PERSONALIZED SEMANTIC ADAPTATION ENGINE (S093)**

*Eneko Taberna, Iñaki Garrido, Guillermo Barrutieta, Ainhoa Serna
and Gorka Berjón*

11:30-12:50 Session FSP 28.5

**Bioinformatics
(Room Urgull)**

**A COMPUTATION SCHEME BASED ON RANDOM
BOOLEAN NETWORKS ON THE CRITICAL LINE (F010)**

Elena Dubrova and Hannu Tenhunen

**EVOLUTIONARY ALGORITHMS FOR FINDING
INTERPRETABLE PATTERNS IN GENE EXPRESSION
DATA (F122)**

Carlos Cano, Armando Blanco, Fernando García and Francisco J. López

**AN ONTOLOGY-DRIVEN SIMILARITY PROVIDING
RELIABLE PROTEIN FAMILY RECOGNITION (S135)**

Fernando Garcia, Francisco J. Lopez, Carlos Cano and Armando Blanco

11:30-12:40 Session FSP 28.6

**Agent Systems and Applications
(Room Gross)**

**COMPARING BEHAVIOR IN AGENT MODELLING TASK
(F222)**

José Antonio Iglesias, Agapito Ledezma and Araceli Sanchis

**AGENT-BASED WATER/WASTE WATER CONTROL
SYSTEM ARCHITECTURE (S147)**

*Francisco Maturana, Radhika Kotina, Raymond Staron, Pavel Tichý
and Pavel Vrba*

**ADAPTATIVE SYSTEMS BY REIFICATION IN JAVA-
BASED MOBILE AGENT SYSTEMS: A SURVEY (S210)**

Angel Hernandez-Bravo and Jesus Carretero

**13:10 Best Paper Awards Ceremony and Closing Session
(Room La Concha)**

Prof. Pedro Isaias, Prof. Ambrosio Goikoetxea and Inaxio Oliveri