

**IASTED International Conference  
Communication Systems and Networks  
~ CSN 2002 ~  
Benalmádena, Málaga, Spain  
September 9-12, 2002**

**PROGRAM**

**SPONSORS**

The International Association of Science and  
Technology for Development (IASTED)  
• Technical Committee on Communications

**CONFERENCE CHAIR**

C.E. Palau Salvador  
Polytechnic University of Valencia, Spain

**LOCATION**

Hotel Torrequebrada  
Avda. del Sol s/n  
29630 Benalmádena-Costa  
Málaga, Spain

Tel: +34 952 44 6000  
Fax: +34 952 44 5702  
E-mail: [reservas@torrequebrada.com](mailto:reservas@torrequebrada.com)  
Web: <http://www.torrequebrada.com/>

**INTERNATIONAL PROGRAM COMMITTEE**

A. Agarwal - Concordia Univ., Canada	Z. Ghassemlooy - Hallam Univ., UK
S. Al-Araji - Scientific-Atlanta Inc., USA	J.C. Guerri - Polytechnic Univ. of Valencia, Spain
N.D. Alexandru - Technical Univ. "Gh. Asachi" IASI, Romania	K. Hamdi - Univ. of Essex, UK
A. Almeida - IST Lisboa, Portugal	J. Jang - Dongeui Univ., Korea
Z. Arnavut - State Univ. of New York-Fredonia, USA	K. Jin - Dongeui Univ., Korea
A.H. Banihashemi - Carleton Univ., Canada	A.G. Kanatas - National Tech. Univ. of Athens, Greece
I. Barbancho-Perez - Univ. of Málaga, Spain	G. Lee - Iowa State Univ., USA
G. Bi - Southeast Univ., PRC	J.G. Lalinde - EAFIT Univ., Colombia
U. Biader Ceipidor - Univ. La Sapienza, Italy	G. Lee - Iowa State Univ., USA
A.C. Boucouvalas - Bournemouth Univ., UK	W.M. Lippe - Univ. of Muenster, Germany
R. Boutaba - Univ. of Waterloo, Canada	C. Lu - Nanyang Technological Univ., Singapore
D. Brueckmann - Univ. of Wuppertal, Germany	C. Macian - Univ. of Stuttgart, Germany
J.B. Carruthers - Boston Univ., USA	V. Makios - Univ. of Patras, Greece
E. Casilari - Univ. of Málaga, Spain	S. Naik - Univ. of Waterloo, Canada
S. Chandran - URSI, Malaysia	L. Nguyen - Univ. of Nebraska - Lincoln, USA
H.-H. Chang - Chinese Military Academy, PRC	T. O'Farrell - Univ. of Leeds, UK
B. Cong - California State Univ., Fullerton, USA	E. Panayirci - Isik Univ., Turkey
E. Del Re - Univ. of Florence, Italy	S. Pupolin - Univ. of Padova, Italy
L. Deneire - IMEC/Wireless Systems Group, Belgium	S. Safavi-Naeini - Univ. of Waterloo, Canada
A.E. El-Mahdy - Technical College Cairo, Egypt	M.P. Sanchez Fernandez - Carlos III Univ. of Madrid, Spain
M. Esteve - Polytechnic Univ. of Valencia, Spain	F. Sandoval Hernandez - Univ. of Málaga, Spain
R. Fantacci - Univ. of Florence, Italy	L. Vandendorpe - Catholic Univ. of Louvain, Belgium
R. Feick - Tech. Univ. Federico Santa Maria, Chile	Y. Wang - Univ. of Texas at Dallas, USA
B. Forssell - Norwegian Univ. of Science and Technology, Norway	E. Yazgan - Hacettepe Univ., Turkey
G. Fortino - Univ. of Calabria, Italy	D.F. Yuan - Univ. of Michigan, USA
A. Garcia-Armada - Carlos III Univ. of Madrid, Spain	A.F.M. Zain - College Univ. of Technology Tun Hussein Onn, Malaysia
E. Garcia-Palacios - Queen's Univ. of Belfast, Ireland	W. Zhuang - Univ. of Waterloo, Canada
	A.M. Zoubir - Curtin Univ. of Technology, Australia

## PROGRAM OVERVIEW

### **Monday, September 9, 2002**

- 10:30-13:30 Registration (*Alboran Foyer*)
- 13:30-14:00 Welcome Address (*Alboran I*)
- 14:00-17:30 Tutorial – Multimedia Communication Systems: Techniques, Standards, and Networks (*Alboran IV*)
- Session 1 – Coding, Equalization, and Modulation in Telecommunication Systems I (*Alboran I*)
- Session 2 – Data Networks I (*Mediterraneo III*)
- 15:30-16:00 Coffee Break (*Alboran Foyer*)
- 17:45-22:00 Optional Tour – Mijas Village (*Hotel Lobby*)

### **Tuesday, September 10, 2002**

- 09:00-13:00 Session 3 – Mobile IP (*Alboran I*)
- Session 4 – CDMA Systems (*Mediterraneo III*)
- 11:00-11:30 Coffee Break (*Alboran Foyer*)
- 14:00-17:30 Session 5 – Signal Processing for Telecommunications (*Alboran I*)
- Session 6 – Optical Communications (*Mediterraneo III*)
- 16:00-16:30 Coffee Break (*Alboran Foyer*)
- 19:45 Dinner Banquet (*Garden Area*)

### **Wednesday, September 11, 2002**

- 09:00-11:30 Session 7 – Data Networks II (*Alboran I*)
- Session 8 – Public Wireless Networks (*Mediterraneo III*)
- 10:00-10:30 Coffee Break (*Alboran Foyer*)
- 14:00-16:30 Session 9 – Special Session on Security and Management in Data Networks and Mobile Communications (*Alboran I*)
- Session 10 – Wireless Networks I (*Mediterraneo III*)
- 15:00-15:30 Coffee Break (*Alboran Foyer*)

### **Thursday, September 12, 2002**

- 09:00-11:30 Session 11 – Coding, Equalization, and Modulation in Telecommunication Systems II (*Alboran I*)
- Session 12 – Wireless Networks II (*Mediterraneo III*)
- 10:00-10:30 Coffee Break (*Alboran Foyer*)

### **Friday, September 13, 2002**

- 08:00-19:45 Optional Tour – City of Granada and the Alhambra Palace (*Hotel Lobby*)



## MONDAY, SEPTEMBER 9, 2002

### 10:30-13:30 REGISTRATION

*IASTED Staff: Nadia Hamza (Canada)*

*Room: Alboran Foyer*

### 13:30-14:00 WELCOME ADDRESS

*Presenter: C.E. Palau Salvador (Spain)*

*Room: Alboran I*

### 14:00 – TUTORIAL – MULTIMEDIA COMMUNICATION SYSTEMS: TECHNIQUES, STANDARDS, AND NETWORKS

*Presenters: Z. Bojkovic and D. Milovanovic (Yugoslavia)*

*Room: Alboran IV*

The objective of this Tutorial is to provide a comprehensive description of the concepts and potential applications of multimedia communications. This Tutorial consists of six parts:

**Part 1** describes the concept of multimedia communication modeling. After that, user and network requirements are discussed, together with packet transfer concept.

**Part 2** reviews a recent trend in multimedia research to exploit the audio-visual interaction and to build the link between audio and video processing.

**Part 3** is devoted to multimedia processing in communication. Digital media and signal processing elements are presented and analyzed. Next, we describe a general framework for image copyright protection through digital watermarking. The key attributes of neural processing essential to intelligent multimedia processing are also reviewed. Finally, this section concludes with recent large-scale-integration programmable processors designed for multimedia processing, such as real-time compression and decompression of audio and video, as well as the generation of computer graphics.

**Part 4** deals with the issues concerning distributed multimedia systems. An overview is given of the main features, resource management, networking and multimedia operating systems. Next, applications such as interactive television, telecooperation, and hypermedia are discussed.

**Part 5** focuses on multimedia communication standards, with a focus on MPEG-1, MPEG-2, MPEG-3, MPEG-4 VTC and JPEG-2000, MPEG-7, MPEG-21, ITU-T, and Internet standards.

**Part 6** concentrates on multimedia communication over networks. After an introductory speech concerning packet audio-video in the network environment, the concept of video transport over generic networks is explored. This is followed by multimedia over IP networks, including video transmission, traffic specification for MPEG video transmission on the Internet, and bandwidth allocation mechanisms. The concepts of Internet access networks are presented and illustrated. Special issues relating to multimedia over

wireless such as wireless broadband communication for multimedia audiovisual solutions, mobile and broadcasting networks, as well as digital TV infrastructure for interactive multimedia services are discussed.

**Prof. Zoran S. Bojkovic** received the Dipl.Ing, M.Sc and Ph.D degree, all in electrical engineering, from the University of Belgrade in 1964, 1974, and 1978, respectively. Since 1969 he has been with the University of Belgrade, where he is currently a Professor of Electrical Engineering and Chief of the Postal and Communication Department (Faculty of Transport and Traffic Engineering). He is also with the Faculty of Electrical Engineering. He has been a Visiting Professor at several universities in North America, Europe, and Asia. Prof. Bojkovic is also an active reviewer and a member of scientific committees of numerous journals and conferences, and serves as a chairman for international conferences, symposiums, workshops and panel discussions. He is a member of IEEE, EURASIP, the IASTED Technical Committee on Image Processing, and the Research Center for Communication and Signal Processing. He has conducted and participated in many scientific and industrial communication projects. Prof. Bojkovic has published more than 260 invited, regular, and tutorial papers in international books, journals, and conference proceedings, in addition to five monographs and ten textbooks. He is the co-author of the books Packet Video Communications over ATM Networks (Prentice-Hall, 2000) and Multimedia Communication Systems (Prentice-Hall, 2002).

**Mr. Dragorad A. Milovanovi** received the Dipl. Electr. Eng. and Master of Science degrees from the University of Belgrade in 1987 and 1991, respectively. From 1987 to 1991 he was a Research Assistant in the Department of Electrical Engineering, where his research interests included analysis and design of digital communications systems. He has been working as R&D engineer for DSP software development in the digital television industry. He also serves as a consultant for developing standard-based and secure solutions for media coding, streaming, and distribution. He has participated in numerous scientific projects and published more than 150 papers in international journals and conference proceedings. Currently, he is about to complete work on his Ph.D. degree at The University of Belgrade, specializing in digital image/video processing for efficient transmission. He is the co-author of the book Multimedia Communication Systems (Prentice-Hall, 2002).

## 14:00 – SESSION 1 – CODING, EQUALIZATION, AND MODULATION IN TELECOMMUNICATION SYSTEMS

Chair: A.J. Al-Dweik (Israel)

Room: Alboran I

371-033

Sum Capacity of Signature Sequence Multisets Consisting of Two Orthogonal Sets with Unequal Power Constraints

F. Vanhaverbeke and M. Moeneclaey (Belgium)

371-018

Reducing the Peak Power and the Sensitivity to Carrier Offsets Frequency in Noncoherent OFDM-ASK Systems

A.J. Al-Dweik (Israel) and F. Xiong (USA)

371-335

Non-Data-Aided Carrier Synchronization in Burst Mode QPSK Transmission

E. Arias de Reyna Domínguez and J.I. Acha Catalina (Spain)

371-046

Uplink and Downlink MC-DS-CDMA Sensitivity to Static Clock Frequency Offsets

H. Steendam and M. Moeneclaey (Belgium)

371-061

Low-Complexity Chase-like Decoding

G. Aricò (Italy) and J.H. Weber (The Netherlands)

371-067

Design Rules for Adaptive Turbo Equalization in Fast-fading Channels

M.J.M. Peacock, I.B. Collings (Australia), and I. Land (Germany)

## 14:00 – SESSION 2 – DATA NETWORKS I

Chairs: TBA

Room: Mediterraneo III

371-108

Performance Comparisons between MPLS Multicast and IP Multicast using Fair Share Policy and Priority Buffers

A. Al Wehaibi, A. Agarwal, M. Kadoch, and A. El Hakeem (Canada)

371-011

Simulation of a Reliable Client-Server System for Semi-Elastic Flows

M. Postigo-Boix, J. Garcia-Haro, and M. Aguilar-Igartua (Spain)

371-316

Interworking between MMS and Streaming

M-E. Mostafa (Finland)

371-050

A Survey of Multicast Routing Algorithms and Protocols

Q. Wang, G. King, and J. Vincent (UK)

371-053

Multicasting Connector Architecture for Component-Based Distributed Communication Applications

S.I. Ahamed (USA)

371-332

Integration of CIF with ATM

D. Meziat, A. García, and G. López (Spain)

371-030

Improving Strict QoS Provision on the Internet with MPLS Traffic Engineering Differentiated Service Features

F. Palmieri (Italy)

371-319

Enhanced Applications of an ISDN-based Tele-Working Platform

P. Sotiriades, G.P.-K. Economou, and D. Lymberopoulos (Greece)

371-323

Two-Level Renegotiated Constant Bit Rate Algorithm (R-CBR) for Stored Video Services over QOS Networks

J.J. Alins, J.R. Pegueroles, J. Mata, and L.J. de la Cruz (Spain)

## 15:30-16:00 COFFEE BREAK

Room: Alboran Foyer

## 16:00 – TUTORIAL AND SESSIONS 1 AND 2 CONTINUED

## 17:45 – OPTIONAL TOUR – MIJAS VILLAGE

Cost: USD \$55 (tickets must be purchased in advance)

Meeting Place: Hotel Torrequebrada Main Lobby

The village of Mijas is perched high above the Fuengirola and Mijas coast, and is surrounded by heavily wooded mountains. Its cobbled streets, stunning views, and warm Spanish hospitality make this typical Andalusian village a charming place to visit. The history of Mijas dates back to the 9th Century when the Romans made the village an important fortress.

Among the little whitewashed houses and narrow, winding streets of Mijas lie a host of bars, restaurants, and shops, as well as two pretty churches and the most stunning views along the coast. The entire length of the main street is lined with artisan and gift shops. From the natural balcony behind the church, participants will have an unforgettable view of the Mediterranean Sea, and possibly across the Rock of Gibraltar to Africa. After a guided tour of the village, delegates will have time to explore Mijas on their own before returning to the hotel.

## TUESDAY, SEPTEMBER 10, 2002

### 09:00 – SESSION 3 – MOBILE IP

Chair: *K.-H. Lee (Korea)*

Room: *Alboran I*

371-040

A Mobile Explicit Multicast in DiffServ Environment  
*J.-H. Bae, U.-S. Jeon, K.-H. Lee, and H.K. Kim (Korea)*

371-027

A Study on Characteristics of Ad Hoc Network Applications  
*M. Hayashi and C. Bonnet (France)*

371-320

Mobility and Network Management in Ad Hoc Networks  
*J. Costa-Requena, R. Kantola, and N. Beijar (Finland)*

371-013

An Evaluation on Fault-Tolerant Multicasting Schemes in Multistage Interconnection Networks  
*H. Masuyama, Y. Sakono, and T. Kawamura (Japan)*

371-094

A Hybrid Protocol for Broadcast Storm Problem in Mobile Ad Hoc Network  
*D. Kim (USA) and J.-C. Cano (Spain)*

371-001

A High-speed Multi-layer Lookup for Policy Based Packet Classification using TCAM  
*B.-C. Choi, D.-Y. Kwak, and J.-T. Lee (Korea)*

371-097

Study of the Throughput of Wireless Home Automation Network Using the Encapsulation of Two Medium Access Methods  
*N. Hakem and M. Misson (France)*

371-066

Traffic Analysis of IP Telephony in Wireless Cellular Networks  
*T. Janevski and B. Spasenovski (Macedonia)*

371-114

Performance Comparison of the AODV and DSDV Routing Protocols in Mobile Ad Hoc Networks  
*R. Khalaf, A. El-Haj-Mahmoud, and A. Kayssi (Lebanon)*

### 09:00 – SESSION 4 – CDMA SYSTEMS

Chair: *M. Nakamura (Japan) and I. Barbancho-Perez (Spain)*

Room: *Mediterraneo III*

371-112

Adaptive Array Antenna based on Radial Basis Function Network as a Multiuser Detection for WCDMA System  
*C.-J. Ahn and I. Sasase (Japan)*

371-314

Intersymbol Multiuser Detection for Asynchronous CDMA in Multipath  
*G. Zhang and G. Bi (Singapore)*

371-064

Influence of Imperfect Power Control on the Optimal Performance of OCDMA/OCDMA  
*F. Vanhaverbeke and M. Moeneclaey (Belgium)*

371-086

Inter-cell Interference Caused by Asynchronous Cells in Approximately Synchronized CDMA Systems  
*M. Nakamura, H. Torii, S. Wakoh, and N. Suehiro (Japan)*

371-087

Spreading Method to Improve Interference Tolerance for Power Efficient APSK Signal  
*N. Izuka and Y. Daido (Japan)*

371-092

Estimation of the Maximum Number of Users in UMTS-FDD Uplink  
*A.M. Barbancho, I. Barbancho, L.J. Tardón, and J.T. Emtrambasaguas (Spain)*

371-100

An Information Transmission Method using Kronecker Product  
*N. Suehiro, C. Han, T. Imoto, and N. Kuroyanagi (Japan)*

371-057

Optimal Two-Stage Partial PIC Receivers for Aperiodic Spreading Codes  
*Y.-T. Hsieh and W.-R. Wu (Taiwan)*

371-101

Very Efficient Wireless Frequency Usage System with Multipath Estimation in Correlation Domain  
*C. Han, N. Suehiro, T. Imoto, and N. Kuroyanagi (Japan)*

371-049

Implementation Overview of a WCDMA Transceiver on an FPGA based Software Radio Platform  
*S.P. Korah and S.A. McDonald (South Africa)*

### 11:00-11:30 COFFEE BREAK

Room: *Alboran Foyer*

### 11:30 – SESSIONS 3 AND 4 CONTINUED

**14:00 – SESSION 5 – SIGNAL PROCESSING FOR TELECOMMUNICATIONS**

*Chair: M. Abdel-Hafez (UAE)*

*Room: Alboran I*

371-333

Study And Modeling Of Noise On The Medium Voltage Part

Of The Electrical Power Distribution Network

*F.J. Simois and J.I. Acha (Spain)*

371-048

Performance of a Sequence Division Multiple Access Scheme based on Chaotic Waveforms

*F. Chiaraluce, E. Gambi, and P. Pierleoni (Italy)*

371-062

Automated Troubleshooting of Mobile Networks using Bayesian Networks

*R. Barco, R. Guerrero, G. Hylander (Spain), L. Nielsen (Denmark), M. Partanen (Spain), and S. Patel (UK)*

371-103

Sorting in the V-Blast Algorithm and Loading

*T. Vencel, C. Windpassinger, and R.F.H. Fischer (Germany)*

371-329

Multiple Fault Identification using Neural Models for Telecommunication Networks

*A. Yilmaz and İ. Kılınç (Turkey)*

371-337

Performance of Trellis Coded Hybrid ARQ Schemes over ISI Channels

*A.M. Al-Sanie (Saudi Arabia)*

371-119

SDL Pattern-based Design of SIP-T Protocol in a Softswitch System

*C.-S. Keum, Y.I. Choi, H.-J. Park, and B.-S. Lee (Korea)*

371-084

Co-Channel Interference Probability of Cellular Mobile Radio in Generalized Fading and Correlated Shadowing Environment

*M. Abdel-Hafez (UAE)*

**14:00 – SESSION 6 – OPTICAL COMMUNICATIONS**

*Chairs: H. Sotobayashi (USA) and P. Pavon-Mariño (Spain)*

*Room: Mediterraneo III*

371-118

A Framework for Randomized Optimization Algorithms and its Application to the Wavelength Assignment Problem

*D.A. Schupke and C. Kühnel (Germany)*

371-105

Hierarchical Hybrid OTDM/WDM Network based on Ultrafast Photonic Processing

*H. Sotobayashi (USA/Japan), W. Chujo and T. Ozeki (Japan)*

371-331

Scaling Strategies Survey for Envisaged Backbone Optical Packet Switches

*P. Pavon-Mariño, J. Garcia-Haro, and J. Malgosa-Sanahuja (Spain)*

371-304

Assessment of Traffic Performance in Wide-Area WDM Optical Networks with Small Diameter

*R.M.F. Coelho, J.J.P.C. Rodrigues, and M.M. Freire (Portugal)*

371-310

Direct Frequency Modulation of an Injection Locked Semiconductor Laser

*M.K. Haldar and F.V.C. Mendis (Singapore)*

371-325

Traffic Analysis of Data Transmission on Hybrid Fiber Coax Network

*M. García, X.G. Pañeda, D.F. García, V.G. García, and R. Bonis (Spain)*

371-099

Comparison of Methods for Modeling the Next Generation Multimode Fiber

*A. Risteski, B. Spasemovski (Macedonia), and P. Pepeljugoski (USA)*

**16:00-16:30 COFFEE BREAK**

*Room: Alboran Foyer*

**16:30 – SESSIONS 5 AND 6 CONTINUED**

**19:45 DINNER BANQUET**

*Room: Garden Area*

**WEDNESDAY, SEPTEMBER 11, 2002**

**09:00 – SESSION 7 – DATA NETWORKS II**

*Chair: C.-M. Huang (Taiwan)*

*Room: Alboran I*

371-093

Traffic Engineering Communication Protocols for Best Effort Traffic

*B.G. Koehler, D.A. Barlow, and H.L. Owen (USA)*

371-315

A Proposal of Traffic Shaping to Improve Policing Functions in Communication Networks  
*F.D. Trujillo Aguilera, E. Casilari Pérez, A. Díaz Estrella, and F. Sandoval (Spain)*

371-089

A Differentiated Multicast Controlling Mechanism for Layered Video Delivering on the Best-Effort-Based Networks  
*C.-M. Huang, Y.-T. Yu, and W.-C. Tseng (Taiwan)*

371-091

Proteo: A New Approach to Network-On-Chip  
*D. Sigüenza-Tortosa and J. Nurmi (Finland)*

371-339

On the Effect of Packet Losses in HTTP Traffic Self-Similarity  
*J.M. Cano-García, E. González-Parada, J.A. Aguilar-González, A. Reyes-Lecuona, and A. Díaz-Estrella (Spain)*

#### **09:00 – SESSION 8 – PUBLIC WIRELESS NETWORKS**

*Chair: E. Garcia-Palacios (Ireland)*  
*Room: Mediterraneo III*

371-008

Adaptive SDMA with Repeater in UMTS Urban Environment  
*M.N. Patwary, P. Rapajic, and I. Oppermann (Australia)*

371-321

Applicability of Traffic Engineered Routing in Mobile Data Networks  
*S. Recker, W. Geisselhardt, and I. Wolff (Germany)*

371-110

VNC-based Access to Remote Computers from Cellular Phones  
*B. Shizuki, M. Nakasu, and J. Tanaka (Japan)*

371-082

Downlink Packet Data Scheduling for Wireless WCDMA Systems  
*F. Beaulieu and S. Aïssa (Canada)*

371-051

Interference Control Technics in Mixed Networks: Downlink Power Control for GPRS  
*R. Rodríguez, J. Martínez, and J. Romero (Spain)*

371-041

Assessing Impact of Static Selective Partitioning Bandwidth Reservation Policy in Wireless Multimedia Networks  
*E. Garcia Palacios and A. Marshall (UK)*

#### **10:00-10:30 COFFEE BREAK**

*Room: Alboran Foyer*

#### **10:30 – SESSIONS 7 AND 8 CONTINUED**

#### **14:00 – SESSION 9 – SPECIAL SESSION ON SECURITY AND MANAGEMENT IN DATA NETWORKS AND MOBILE COMMUNICATIONS**

*Chair: A. Kayssi (Lebanon)*  
*Room: Alboran I*

371-350

Complementary Mechanisms for Secure Mobile Electronic Commerce  
*D. Ponce, M. Soriano, S. Montardit, and F. Barceló (Spain)*

371-351

Certificate Revocation Policies for Wireless Communications  
*J.L. Muñoz and J. Forné (Spain)*

371-060

TINA Services: A Look at the Primary Application Areas  
*C.L. Choo, R. Logeswaran, L.S. Wei, and I. Chai (Malaysia)*

371-353

Cryptanalysis Of Lin-Jan Anonymous Channel Protocol For Wireless Communications  
*A.M. Barbancho and A. Peinado (Spain)*

371-113

Securing Mobile Banking Transactions using WAP Application-Layer Security  
*S. Itani and A. Kayssi (Lebanon)*

371-352

An Improved Cryptanalysis of the A5/2 Algorithm for Mobile Communications<sup>a</sup>  
*S. Petrović and A. Fúster-Sabater (Spain)*

#### **14:00 – SESSION 10 – WIRELESS NETWORKS I**

*Chair: F.H. Kashani (Iran)*  
*Room: Mediterraneo III*

371-117

Assessment of a New Event Based Reporting Method and Comparison with Other Measurement Reporting Methods Proposed by the Standard 3GPPTS 25.423  
*J.G. Wangüemert Pérez, A. Tölli, and P. Hakalin (Spain)*

371-009

Quantitative Characterization of Content-based FEC Techniques on Interactive-Audio over Wireless Networks  
*J.M. González (USA)*

371-322

An Approach to Design Circularly-Polarized Radiating Elements for Mobile Terminal at K-Band  
*S. Dragaš and L. González (Spain)*

371-109

The Influence of Propagation Model and Sectorization over WCDMA Capacity  
*N. Cardonna (Spain) and A. Navarro (Colombia)*

371-031

Slot Coupled Ridged Circular Disk Microstrip Antenna Element  
*F.H. Kashani, M. Omidj, and A.R. Mallahzadeh (Iran)*

**15:00-15:30 COFFEE BREAK**

*Room: Alboran Foyer*

**15:30 – SESSIONS 9 AND 10 CONTINUED**

**THURSDAY, SEPTEMBER 12, 2002**

**09:00 – SESSION 11 – CODING, EQUALIZATION, AND MODULATION IN TELECOMMUNICATION SYSTEMS II**

*Chairs: C. Benavente (Spain) and M. El-Tarhuni (UAE)*  
*Room: Alboran I*

371-106

Bit-Loading Algorithm for DMT Broadband Indoor Power Line Communications  
*J.L. Cortés, L. Díez, F.J. Cañete, and J.T. Entrambasaguas (Spain)*

371-039

MMSE PN Code Tracking in Frequency Selective Fading Channels  
*M. El-Tarhuni (UAE) and A. Ghayeb (Canada)*

371-044

Bit Synchronisation and Detection in CPM Digital Receivers using Neural Networks  
*C. Benavente and R. García (Spain)*

371-056

Blind Equalization using a Stop-and-Go Decision-directed Least-squares Algorithm  
*Y.-H. Lin, and J.-T. Yuan (Taiwan)*

371-002

Two New Approaches for QAM Constellation Classification in Multipath  
*H. Roufarshbaf and H. Amindavar (Iran)*

**09:00 – SESSION 12 – WIRELESS NETWORKS II**

*Chair: E. Garcia Palacios (Ireland)*  
*Room: Mediterraneo III*

371-095

Frequency Offset Estimation via the Sample Autocorrelation Function in Flat Fading Channels  
*M. Rezeki, L. Sabel, and I. Kale (UK)*

371-116

Deadline-based Round-Robin Scheduling Discipline for Guaranteed Performance Service in ATM Networks  
*J. Martyna (Poland)*

371-047

A new Approach for Delivering Non-Standardized Assistance Data in E-OTD/A-GPS Hybrid Location Systems  
*I. Martin-Escalona, F. Barcelo, and J. Paradells (Spain)*

371-029

Stochastic Estimator Learning Automation based Approach in Reducing Congestion Level in ATM Network  
*F.J. Ogwu (Botswana) and G.A. Aderounmu (Nigeria)*

**10:00-10:30 COFFEE BREAK**

*Room: Alboran Foyer*

**10:30 – SESSIONS 11 AND 12 CONTINUED**

**FRIDAY, SEPTEMBER 13, 2002**

**08:00-19:45 OPTIONAL TOUR – CITY OF GRANADA AND THE ALHAMBRA PALACE**

*Cost: USD \$80 (tickets must be purchased in advance)*  
*Meeting Place: Hotel Torrequebrada Main Lobby*

A visit to Southern Spain would not be complete without a trip to the world-famous city of Granada, which is set against the mountain backdrop of the Sierra Nevada. Granada was the crown jewel of the Arab empire in Spain and the last to be conquered by the Catholic Kings, Isabella and Ferdinand. The drive to Granada is resplendent with a multi-coloured and fascinating countryside from mountains to plains to vast properties of olive groves.

Once in Granada, delegates have some free time to visit the markets. A visit to the Royal Chapel in which Fernando III and Isabel, the Christian conquerors of Granada, are buried, is included.

Finally, participants will visit the Alhambra Palace, one of the world's most important and well-recognized



accomplishments of Islamic art and architecture. This palace, with its elaborate patios and gardens, is among the most important attractions of Spain. The Alcazaba is the Alhambra's Muslim fortress dating from the 11th century, with great views of the city from the tops of its towers. The Palacio Nazaries is the centerpiece of the Alhambra, and is noted for the intricacy of its stonework. Finally, there is the Generalife - the summer palace of the sultans, set in the soul-soothing Alhambra gardens.