### TECHNICAL PROGRAM: SYMPOSIUM

SoftCOM 2004, October 10-13, 2004 Split, Dubrovnik (Croatia) Venice (Italy)

#### SYMPOSIUM ON FUTURE WIRELESS SYSTEMS

#### VENICE, Wednesday, October 13

Wednesday, October 13, 09:00-10:30, (KORCULA)

#### SYM1 - FUTURE WIRELESS SYSTEMS I

Symposium organizer: Mario De Blasi, University of Lecce, Italy Chair: Jim Mollenauer, Technical Strategy Associates, USA

#### **Mobile Privacy and Identity Management**

Chun-Lung Huang, Chi-Chun Lo, National Chiao Tung University, Taiwan; Ching-Long Tseng, Institute for Information Industry, Taiwan

#### A Methodology for Testing IPSec-based Systems

Uljana Boiko, Antonietta Lo Duca, University of Lugano, Switzerland; Alberto Ferrante, Vincenzo Piuri, University of Milan, Italy

#### Seamless Soft Handover In DVB-H Networks

Xiaodong Yang, Y.H. Song, T.J. Owens, J. Cosmas, T. Itagaki, Brunel University, United Kingdom

### Efficient Space Utilization for Text Display on Small Screen Web Browsers

Huda Md. Nurul, Eiej Kamioka, Shigeki Yamada, National Institute of Informatics, Japan; Gazi Mushfiqur Rahman, University of Dhaka, Bangladesh

#### **Extensions of Mobile IP for Real-Time Applications**

Franco Tommasi, Simone Molendini, Andrea Tricco, Marco De Luca, University of Lecce, Italy

Wednesday, October 13, 11:00-12:30, (KORCULA)

#### SYM2 – FUTURE WIRELESS SYSTEMS II

Chair: Mario De Blasi, University of Lecce, Italy

#### Convergence in Bluetooth and 802.11 Networks

Satyajit Chakrabarti, Son Vuong, University of British Columbia, Canada; Anirban Sinha, Institute of Engineering and Management, India; Rajashree Paul, Simon Fraser University, Canada

### Inter-vehicle Communication System Using Hybrid Spread Spectrum Techniques

Su Yang, Hazem Refai, University of Oklahoma, USA

#### Browsing Personal Digital Photograph Collections with Spatial and Temporal Based Ontology and MPEG-7 Dozen Dimensional Digital Content Architecture

Pei-Jeng Kuo, Terumasa Aoki, Hiroshi Yasuda, The University of Tokyo, Japan

#### Connectivity State Change Notification in Ad hoc Networks

Djamal-Eddine Meddour, Yvon Gourhant, France Telecom R&D, France

#### All-IP Architecture for HAP Networks: Mobility Issues

Roman Novak, Jozef Stefan Institute, Slovenia

Wednesday, October 13, 15:15-16:45, (KORCULA)

#### SYM3 – FUTURE WIRELESS SYSTEMS III

Chair: Mario De Blasi, University of Lecce, Italy

### Dynamic Channel Mapping Strategies in Adaptive MIMO systems

*Tomaz Javornik, Gorazd Kandus, Sreco Plevel*, Jozef Stefan Institute, Slovenia

#### A Mobile Agent-Based Architecture for Mobile Systems Supporting Distributed Software Project Management

Gilda Pour, Fan Chieh Yao, San Jose State University, USA; Cheuk Chun Yu, Siemens Corporate Technologies, USA

## Power Constrained Active Suppression of Electromagnetic Fields Using MIMO Antenna System

Tommy Hult, Abbas Mohammed, Blekinge Institute of Technology, Sweden

### An agent based approach for modelling GSM location update function

Abdessadek Aaroud, S.E. Labhalla, B. Bounabat, University, Cadi Ayyad, Morocco

### TECHNICAL PROGRAM: SPECIAL SESSIONS

SoftCOM 2004, October 10-13, 2004 Split, Dubrovnik (Croatia) Venice (Italy)

#### **DUBROVNIK-SPLIT, Monday, October 11**

Monday, October 11, 09:00-10:30, (KORCULA)

## SS1 – MOBILE AND PERSONAL COMMUNICATIONS SAFETY

Session organizer: Dragan Poljak, University of Split, Croatia Chair: Poljak Dragan, University of Split, Croatia

### An M-Commerce Platform on J2ME with New Features of MIDP2.0

Kubilay Akgul, Haluk Bingol, Bogazici University, Turkey

### Energy in Transient Electromagnetic Field of Wire Array Antennas

Choy Tham, Tunku Abdul Rahman University, Malaysia; Dragan Poljak, University of Split, Croatia; Andy McCowen, Malcom S. Towers, University of Wales, United Kingdom

### Installation Uncertainty of a Base Station Antenna Radiation Pattern

Antonio Sarolic, Borivoj Modlic, University of Zagreb, Croatia, Dragan Poljak, University of Split, Croatia

### **Multiconductor Transmission Lines Modeling Using the Finite Element Technique**

Rino Lucic, Mate Kurtovic, Slavko Vujevic, University of Split, Croatia

### Time Domain Analysis of Radiation from a Cellular Phone Antenna

Dragan Poljak, University of Split, Croatia

# Trust and Context: Two Complementary Concepts for Creating Spontaneous Collaborative Networks and Intelligent Applications

Ivan Martinovic, Manuel Goertz, Ralf Ackermann, Andreas Mauthe, Ralf Steinmetz, TU Darmstadt, Germany

### Comparison of Time-Domain Thin-Wire Array Current Distribution Calculation Using GB-BIEM and NEC

Sinisa Antonijevic, Josko Radic, Vicko Doric, Dragan Poljak, Vesna Roje, University of Split

### Indoor propagation prediction software and WLAN measurements at $2.4\ \mathrm{GHz}$

Damir Zrno, Dina Simunic, Maja Roboz, University of Zagreb, Croatia

#### VENICE, Wednesday, October 13

Wednesday, October 13, 11:00-12:30, (BRAC)

#### SS2 - GENOMIC SIGNAL PROCESSING

Session organizer: Roberto Garello, Politecnico di Torino, Italy Chair: Roberto Garello, Politecnico di Torino, Italy

### An Overview of the Most Recent cDNA Microarray Image Processing Issues

Franco Chiaraluce, Ennio Gambi, Susanna Spinsante, Universita Politecnica dell Marche, Italy

#### Frequency and Time-Frequency Analysis of DNA Sequences Lorenzo Galleani, Roberto Garello, Monica Visintin, Politecnico di Torino, Italy; Francesco Mininni, Scuola di Applicazione ed Istituto di Studi Militari dell'Esercito, Italy

Sequence Analysis of DNA Based on Amino Acid Labeling Michele Crociani, Marco Chiani, University of Bologna, Italy

Scientific Progress for Molecular Biology and Genetic Engineering: Issues for Possible Interscience Cooperation
Stefania Zovato, G. Cartei, S. Binato, D. Pastorelli, F. Zustovich,
F. Salmaso, R. Cappellari, Istituto Oncologico Veneto, Italy.

### **TECHNICAL PROGRAM: GENERAL CONFERENCE**

### SoftCOM 2004 October 10-13, 2004 Split, Dubrovnik (Croatia) Venice (Italy)

#### **DUBROVNIK-SPLIT, Monday, October 11**

Monday, October 11, 09:00-10:30, (BRAC)

#### S1 – COMMUNICATIONS SOFTWARE I

Chair: Serge Midonnet, University of Marne la Vallee, France

### A New Adaptive-Rate Architecture for VoIP: Definition and Performance Evaluation

Francesco Beritelli, Salvatore Casale, Giovanni Schembra, Salvatore Serrano, University of Catania, Italy; Giuseppe Ruggeri, Università Mediterranea di Reggio Calabria, Italy

### Analysis of protocol design issues for open standards based programmable routers and switches

Hormuzd Khosravi, Intel Corporation, USA, Shashidhar Lakkavalli, Portland State University, USA

### **Aperiodic Invocations Admission in Real-Time CORBA** *Serge Midonnet*, University of Marne la Vallee, France

Serge Midonner, Oniversity of Marine la Vallee, Plance

### **Multi-channel MAC Protocol: Performance Mathematical Analysis and Comparison**

Peristera Baziana, Ioannis Pountourakis, National Technical University of Athens, Greece

Monday, October 11, 11:00-12:30, (BRAC)

#### S2 – COMMUNICATIONS SOFTWARE II

Chair: Jari Porras, Lappeenranta University of Technology, Finland

Privacy conscious architecture for personal information transfer from personal trusted device to HTTP based service Pekka Jäppinen, Mika Yrjölä, Jari Porras, Lappeenranta University of Technology, Finland

#### Session Initiation Protocol Application Layer Gateway

Jurica Mikulic, Ivan Andrijic, Viktor Matic, University of Zagreb, Croatia

#### SMS School Notification Service as booster for e-school

Nikola Rendulic, Ozren Labor, NetworkStar Kate, Croatia; Zeljka Car, University of Zagreb, Croatia

#### The Two-Step Overlay Network Simulation Approach

Hannes Birck, Oliver Heckmann, Andreas Mauthe, Technical University of Darmstadt, Germany

### On-line Recording of the Microwave Signal Data - A Short Study

Radha Krishna Rao Geelapaturu SV, Multimedia University, Malysia, Purnachandra Rao Mallela, Andhra University, India

## Multicriteria Decision-Making in Selecting the Mobile Telephony Operator

Zvonko Kavran, Dragan Perakovic, University of Zagreb, Croatia: Pero Cosic, T - Croatian Telecom, Croatia

Monday, October 11, 15:15-16:45, (BRAC)

#### S3 - SIGNAL PROCESSING AND CODING

Chair: Julije Ozegovic, University of Split, Croatia

### Comparative study of high order statistics estimators

Arnaud Martin, Ali Mansour, ENSIETA, France

### Efficient Algorithms for Medical Sequences Decorrelation by 3D-Wavelet Transform

Encarnacion Moyano, Francisco J. Quiles, Luis Orozco-Barbosa, Universidad de Castilla-La Mancha, Spain

### Performance of the Hamming ANN for the Recognition of Gait Phases

Vladan Papic, Vlasta Zanchi, University of Split, Croatia

### The Modulation Approach in Perceptual Evaluation of Speech Quality

Ivo Mateljan, University of Split, Croatia

Monday, October 11, 17:00-18:30, (BRAC)

## S4 – INFORMATION INFRASTRUCTURE AND SECURITY

Chair: Francesco Palmieri, University "Federico II" - Napoli, Italy

#### **Descriptive Data Mining Modeling in Telecom Systems**

Ivo Pejakovic, Zoran Skocir, University of Zagreb, Croatia; Damir Medved, T - Croatian Telecom, Croatia

### Analyzing the Impact of Internet Worms on Global Routing Stability

Francesco Palmieri, University "Federico II" - Napoli, Italy

#### **Combined Public Key Cryptosystem**

Wen Tang, Nan Xiang-hao, Chen Zhong, Peking University, China

#### On Some Security Issues of Mobile Agent Systems

Katalin Sója, Ambrus Wagner, Gabor Nemeth, Budapest University of Technology and Economics, Hungary

#### Trap E-mail Address for Combatting E-mail Viruses

Boldizsar Bencsath, Istvan Vajda, Budapest University of Technology and Economics, Hungary

## S5 – TELECOMMUNICATIONS SERVICES AND QOS I

Chair: Gottfried Luderer, Arizona State University, USA

## A Study About the Applicability of the MPLS/CBR Model in QoS providing in IP Network

Nelcileno Araujo, Federal University of Mato Grosso, Brazil; Paulo Guardieiro, University of Uberlândia, Brazil

### Resourcee allocation and opportunistic scheduling for UMTS-TDD

Illia Racunica, Aawatif Menouni, Christian Bonnet, Institut Eurecom, France

#### Handling Link Failure Dependencies in Micro Mobility Network Reliability Modeling

Gyozo Godor, Mate Szalay, Sandor Imre, Budapest Universuty of Technology and Economics, Hungary

#### A Map Matching Algorithm with Positioning Area Input

Ivica Cubic, Ericsson NT, Croatia, Romeo Svalina, T - Croatian Telecom, Croatia.

Monday, October 11, 11:00-12:30, (HVAR)

## S6 – TELECOMMUNICATIONS SERVICES AND QOS II

Chair: Zoran Skocir, University of Zagreb, Croatia

### IAEMS: A System for Measuring E2E Network Performances with Intelligent Agent

Ming Chen, Qianglin Chang, Yi Gao, Rui Zhang, Lihua Song, Xiaofeng Qiu, Institute of Communications Engineering, China

#### Linear e-suboptimal network flow allocations

Primoz Skraba, Almir Mutapcic, Stanford University, USA

#### On Using Controllers for Active Queue Management

Deepak Agrawal, Fabrizio Granelli, University of Trento, Italy

### Receiver Based Bandwidth Sharing Strategy for Wireless Mobile Networks

Jaegyu Jung, Samsung Electronics, Korea University, South Korea, Banghun Chun, Youngjoo Kim, Samsung Electronics, South Korea, Chuck Yoo, Korea University, South Korea.

#### VoIP QoS on low speed links

Ivana Pezelj, Croatian Academic and Research Network – CARNet, Croatia, Julije Ozegovic, Ljubomir Hrboka, University of Split

#### Monday, October 11, 15:15-16:45, (HVAR)

## S7 – TELECOMMUNICATIONS SERVICES AND QOS III

Chair: Pascal Lorenz, Univ. de Haute Alsace, France

#### Receiver – based Management Scheme of Access Link Resources for QoS- Controllable TCP Connections

Go Hasegawa, Kazuhiro Azuma, Masayuki Murata, Osaka University, Japan

#### **Security Aspects of Network Management Systems**

Periklis Chatzimisios, Bournemouth University, United Kingdom

### The Meta-QoS-Class Concept: a Step Towards Global QoS inter-Domain Services

Pierre Levis, Mohamed Boucadair, Pierrick Morand, France Telecom R&D, France; Panos Trimintzios, C.C.S.R. University of Surrey, United Kingdom

Monday, October 11, 17:00-18:30, (HVAR)

## S8 – NEXT GENERATION NETWORKS AND SERVICES

Chair: Algirdas Pakstas, London Metropolitan University, UK

### A Domain Forming Algorithm for Next Generation, IP Based Mobile Networks

Vilmos Simon, Sandor Imre, Budapest Universuty of Technology and Economics, Hungary

### Agents Architecture to support Environmental Data Knowledge Management

Vincenzo Di Lecce, Politecnico di Bari, Italy; Ciro Pasquale, Vincenzo Piuri, University of Milan, Italy

#### Design of Real-Time VBR Traffic Shaping Schemes by Considering the Impact of Both Buffer Overflows and Deadline Violations

Tamer Dag, Isik University, Turkey; Ioannis Stavrakakis, University of Athens, Greece

### New signaling mechanisms for multi-provider and cross-network services

Claude Rigault, Rony Chahine, ENST, France

### The next-generation network as an express way for the Internet

Takahiko Yamada, Ritsumeikan University, Japan

#### **Vocabulary Development for Event Notification Services**

Kresimir Pripuzic, University of Zagreb, Croatia; Darko Huljenic, Antun Caric, NetworkStar KATE, Croatia

### **Fundamental Attributes of High-Speed Networks**

Seshasayi Pillalamarri, City of Phoenix, USA, Sumit Ghosh, Stevens Institute of Technology, USA.

## S9 – NETWORK OPERATIONS AND MANAGEMENT I

Chair: Thomas Fischer, Technische Universität München, Germany

### A Practical Topology Discovering Scheme for Large Heterogeneous LANs

Dongli Zhang, University of Ottawa, Canada; Guangming Xing, Western Kentucky University, USA

### An OSNR-Optimal Photonic Network Model with Dispersive and Nonlinear Constraints

Thomas Fischer, Technische Universität München, Germany

#### Data Mining Techniques for Effective Analysis of Multi-Gigabit Network Traffic

Mario Baldi, Elena Baralis, Fulvio Risso, Politecnico di Torino, Italy

### Effect of Wireless LAN Management Based on the Mobile Agents Paradigm

Hrvoje Tkalcic, Croatia Airlines Ltd, Croatia; Marijan Kunstic, University of Zagreb, Croatia

### Call routing methods for Mobile Number Portability in Croatia

Ivan Viskovic, T - Croatian Telecom, Croatia.

#### Monday, October 11, 15:15-16:45, (KORCULA)

## S10 – NETWORK OPERATIONS AND MANAGEMENT II

Chair: Fulvio Risso, Politecnico di Torino, Italy

### Introducing Advanced Database Concepts for the Improvement of Telecommunications network analysis

Nenad Dragun, Robertina Jarak, Mihaela Sokic, T - Croatian Telecom, Croatia

### Partial Burst Dropping Strategy for Optical Burst Switching Networks

Abdelouahab Abid, Multimedia University, Malaysia

### Policy-based Management Using Web Services Based Active Network Architecture

Maroun Chamoun, Rima Kilany, Saint-Joseph University, Lebanon; Ahmed Serhrouchni, ENST – Paris, France

### Self-Organization for IP Networking on Mobile Wireless Networks

Yihjia Tsai, Cheng-Chin Lin, Ching-Chang Lin, Tamkang University, Taiwan

#### Monday, October 11, 17:00-18:30, (KORCULA)

#### S11 – INTERNET AND IP BASED ENVIRONMENTS AND SERVICES

Chair: Darko Huljenic, KATE d.o.o., Croatia

### A New Scalable Reliable Multicast Transport Protocol for Satellite Networks (RMT)

Prawit Chumchu, Univesity of New South Wales, Australia, R. Boreli, A. Seneviratne, National ICT Australia Ltd\*, Australia

### Analysis of the Current State in the m-commerce Applications Darko Huljenic, Antun Caric, Ozren Labor, NetworkStar KATE,

Croatia; *Zeljka Car*, University of Zagreb, Croatia

### Interleaving Harmonic Broadcasting Scheme with Limited Client Bandwidth

Hung-Chang Yang, Hsiang-Fu Yu, Li-Ming Tseng, Yi-Ming Chen, National Central University, Taiwan

#### Semantic Matchmaking of Advanced Personalized Mobile Services using Intelligent Agents

Krunoslav Trzec, Sasa Desic, Ericsson Nikola Tesla, Croatia; Alisa Devlic, Gordan Jezic, Mario Kusek, University of Zagreb, Croatia

### Using the Enterprise Application Integration tools to support the emergency warning system

Tatjana Listes, T - Croatian Telecom, Croatia; Damir Kalpic, University of Zagreb, Croatia

### Relevant Parameters Analysis of the VoIP Traffic end-to-end Delay

Damir Dlaka, T - Croatian Telecom, Croatia; Milutin Kapov, University of Split, Croatia

#### SPLIT, Tuesday, October 12

**Tuesday, October 12, 09:00-10:30,** (BRAC)

#### S12 – MOBILE AND WIRELESS COMMUNICATIONS I

Chair: Ferenc Balazs, Budapest Universuty of Technology and Economics, Hungary

### UTD Assessment of Coherence Bandwidth at 900MHz for Single-Floor Indoor Environment

Ivan Marinovic, Igor Zanchi, Zoran Blazevic, University of Split, Croatia

### A Comparison of Mean Power Prediction with Wide-Band Measurements in the Indoor Environment

Zoran Blazevic, Igor Zanchi, Ivan Marinovic, University of Split, Croatia

### A Robust QR-based Detector for V-BLAST and its Efficient Hardware Implementation

Fariborz Sobhanmanesh, Saeid Nooshabadi, University of New South Wales, Australia

## Adaptive Channel and Power Allocation Algorithm for Multiuser OFDM Systems

Zeljko Ilic, University of Zagreb, Croatia, Josip Dulj, Ericsson Nikola Tesla, Croatia, Alen Bazanat, University of Zagreb, Croatia.

#### An Enhanced Mobile IP Protocol for Mobile Wireless Networks

Jeng-Yueng Chen, Wen-Shiung Chen, National Chi Nan University, Taiwan, Yi-Hong Huang, Hsiuping Institute of Technology, Taiwan, Chun-Chuan Yang, National Chi Nan University, Taiwan, Heng-Te Chu, Hsiuping Institute of Technology, Taiwan.

### Estimation of the Effective Throughput in 802.11b WLAN Networks

Josip Lörincz, Dinko Begusic, University of Split, Croatia

**Tuesday, October 12, 15:15-16:45, (BRAC)** 

#### S13 – MOBILE AND WIRELESS COMMUNICATIONS II

Chair: Franco Tommasi, University of Lecce, Italy

#### Dynamic CAC for 3G/4G WCDMA Systems

Sándor Imre, Budapest University of Technology, Hungary

**M-Manager: Using a Mobile Portal to Support Coordination** *Carlos Costa*, Adetti/ISCTE, Portugal; *Manuela Aparício*,
Lusocredito, Portugal

### Performability Modeling of Cellular Mobile Systems with Prioritized Handoff Procedures

Vahideh Vakil, Karim Faez, Amirkabir University of Technology, Iran

### New Online Power-aware Routing Algorithms in Wireless Networks

Antti Autere, Helsinki University of Technologie, Finland

### Low Complexity Multiuser Ddetectors for TD-SCDMA Systems: Design and Implementation

Angela Bifano, Politecnico di Milano, Italy, Vittorio Rampa, I.E.I.I.T., Italy

Tuesday, October 12, 17:00-18:30, (BRAC)

## S14 – MOBILE AND WIRELESS COMMUNICATIONS III

Chair: Ivan Marinovic, University of Split, Croatia

### Modified Radial Basis Network Based Blind Channel Estimation

Ferenc Balazs, Sandor Imre, Budapest University of Technology and Economics, Hungary

#### **Multimedia Transmission over Mobile Networks**

Tamás Jursonovics, Zsolt Butyka, Sándor Imre, Budapest University of Technology and Economics, Hungary

### Performance Analysis of Small World Application Layer for Ad-hoc Networks

Ivana Sekula, Mladen Franic, T - Croatian Telecom, Croatia

### Adaptive Image Transmission in Multicarrier Modulation System

Zhongrui Qi, Zhenmig Gao, Shandong University, China

#### VENICE, Wednesday, October 13

Wednesday, October 13, 09:00-10:30, (BRAC)

## S15 – OPTICAL AND PHOTONIC COMMUNICATIONS

Chair: Vesna Roje, University of Split, Croatia

### Agent-based Electronic Market for Optical Bandwidth Trading

Krunoslav Trzec, Ericsson Nikola Tesla, Croatia; Branko Mikac, University of Zagreb, Croatia

### Delta Burst-Polling Based Dynamic Bandwidth Allocation Scheme for QoS over E-PONs

Yeon-Mo Yang, Gwangju Institute of Science and Technology, South Korea, Ji-Myong Nho, Catholic University of Daegu, Korea, South, Byung-Ha Ahn, Gwangju Institute of Science and Technology, South Korea.

#### Analysis of Optical Backbone Architectures for Core IP Networks

Vedran Bozic, T-Croatian Telecom, Croatia, Marija Vrdoljak, University of Split, Croatia

Wednesday, October 13, 09:00-10:30, (HVAR)

## S16 – MULTIMEDIA AND VIRTUAL REALITY SYSTEMS

Chair: Anna Gentile, Ilenia Paladini, University of Lecce, Italy

### A Virtual Museum for Education in Art through Graphic Animation and 3-D

Anna Gentile, Ilenia Paladini, University of Lecce, Italy

#### An AI-based Software Tool for Intelligent E-Movie Creation

Jinhong Shen, Terumasa Aoki, Hiroshi Yasuda, University of Tokyo, Japan; Seiya Miyazaki, Matushita Electric Industrial Co, Japan

#### Development of Multimedia Learning Software About MP3 Audio Coding With Special Regard to Usability Principles and Multimedia Learning Theories

Daniel Pape, ZAS Berlin, Germany, Gerrit Kalkbrenner, University of Dortmund, Germany

### Online Optimal Smoothing of VBR Stream Aggregations in Systems with Available Bandwidth Constraints

Pietro Camarda, Antonio De Gioia, Domenico Striccoli, Politecnico di Bari, Italy

#### **S17 – COMMUNICATION THEORY**

Chair: Igor Zanchi, University of Split, Croatia

#### A Communication Model with Sensitive Distance Approach

Yihjia Tsai, Cheng-Chin Lin, Ping-Nan Hsiao, Wen-Fa Huang, University of Tamkang, Taiwan

#### A Framework for Analysis of Connectivity and Performance Bounds in Slotted ALOHA-Based Ad Hoc Networks

Fabrizio Granelli, University of Trento, Italy

#### Carrier Synchronization Based on Renyi's Entropy

Maciej Pedzisz, Ali Mansour, ENSIETA, France

### Improved Antnet Routing Algorithm With Link Probability Evaporation Over the Given Time Window

Firat Tekiner, Zabih Ghassemlooy, Northumbria University, United Kingdom; S. Al-khayatt, School of Computing and Management Sciences, United Kingdom

## Further Analysis of the Number of Spanning Trees in Circulant Graphs

Talip Atajan, Tokyo Denki University, Japan, Xuerong Yong, Rutgers University, USA, Hiroshi Inaba, Tokyo Denki University, Japan