

2013 Future Network and Mobile Summit

(FutureNetworkSummit 2013)

**Lisbon, Portugal
3-5 July 2013**



IEEE Catalog Number: CFP1334J-POD
ISBN: 978-1-4673-5639-8

TABLE OF CONTENTS

An IP Cross-Layer Scheduler for QoS Provisioning in NGNs	1
<i>G. Panza, S. Grilli</i>	
Conditioned Pilots For ISI Channels	15
<i>N. Mazzali, G. Colavolpe</i>	
SmartenIT Cloud Traffic Management Approach and Architectural Considerations	25
<i>I. Papafili, J. Rückert, P. Poullie, S. Soursos, T. Bocek, K. Wajda, D. Hausheer, G. Stamoulis, B. Stiller</i>	
An Energy-Efficient Routing Protocol For Ad-Hoc Cognitive Radio Networks	36
<i>G. Mastorakis, A. Bourdena, C. Mavromoustakis, E. Pallis, G. Kormentzas</i>	
Optical Fiber Solution For Mobile Fronthaul to Achieve Cloud Radio Access Network	46
<i>P. Chanclou, A. Pizzinat, F. Le Clech, T. Reedeker, Y. Lagadec, F. Saliou, B. Le Guyader, L. Guillo, Q. Deniel, S. Gosselin, S. Le, T. Diallo, R. Brenot, F. Lelarge, L. Marazzi, P. Parolari, M. Martinelli, S. O'Dull, S. Gebrewold, D. Hillerkuss, J. Leuthold, G. Gavioli, P. Galli</i>	
Record-High and Robust Capacity Versus Reach Performance of Adaptive Real-Time Dual-Band Optical OFDM Signals For Upgrading Legacy MMF Systems	57
<i>E. Hugues-Salas, Q. Zhang, R. Giddings, M. Wang, J. Tang</i>	
Integrated Self-Management For Future Radio Access Networks: Vision and Key Challenges	67
<i>A. Eisenblätter, B. Rodriguez, F. Gunnarsson, T. Kürner, R. Litjens, B. Sas, B. Sayrac, L. Schmelz, C. Willcock</i>	
An Overlay Network Approach to Find Objects in the Future Internet	77
<i>P. Martinez-Julia, A. Skarmeta</i>	
On the TDD Subframe Structure For Beyond 4G Radio Access Network	87
<i>E. Lähetkangas, K. Pajukoski, E. Tirola, G. Berardinelli, I. Harjula, J. Vihriälä</i>	
Economic Evaluation of a Cognitive Radio Based Solution for Increasing Capacity of LTE Networks	97
<i>O. Grøndalen, M. Lähteenoja, P. Lehne, R. Mackenzie</i>	
STEM-Net: An Evolutionary Architecture for Highly-Reconfigurable Wireless Networks	107
<i>G. Aloï, M. Di Felice, V. Loscri, E. Natalizio, P. Pace, F. Panzneri, G. Ruggieri</i>	
A Common Open Interface to Programmatically Control and Supervise Open Networks in the Future Internet	117
<i>A. Palo, L. Zuccaro, A. Simeoni, V. Suraci, L. Musto, P. Garino</i>	
Selfish and Malicious Behavior in Delay-Tolerant Networks	126
<i>N. Magaia, P. Pereira, M. Correia</i>	
Wireless Backhaul Architecture for Small Cells Deployment Exploiting Q-Band Frequencies	136
<i>R. Vilar, O. Bosshard, F. Magne, A. Lefevre, J. Marti</i>	
Cognitive Beamhopping for Spectral Coexistence of Multibeam Satellites	147
<i>S. Sharma, S. Chatzinotas, B. Ottersten</i>	
An Ad-Hoc Emergency Network for Crisis Events	157
<i>M. Casoni, D. Saladino, A. Karagiannis, D. Komnacos, S. Sagkriotis, J. Wagner, N. Joram, F. Ellinger</i>	
IDEALIST Control and Service Management Solutions for Dynamic and Adaptive Flexi-Grid DWDM Networks	169
<i>R. Muñoz, V. López, R. Casellas, Ó. González De Dios, F. Cugini, N. Sambo, A. D'Errico, O. Gerstel, D. King, S. López-Buedo, P. Layec, A. Cimmino, R. Martínez, R. Morro</i>	
Customized Services Over Virtual Wireless Networks: The Path Towards Networks Without Borders	179
<i>L. Dasilva, J. Kibilda, P. DiFrancesco, T. Forde, L. Doyle</i>	
Target Cost For Sliceable Bandwidth Variable Transponders in a Real Core Network	189
<i>V. López, Ó. González De Dios, O. Gerstel, N. Amaya, G. Zervas, D. Simeonidou, J. Fernandez-Palacios</i>	
The BATS Project	198
<i>G. Peters, J. Perez-Trufero, S. Watts, N. Wall</i>	
Converged Fixed and Mobile Broadband Networks Based on Next Generation Point of Presence	206
<i>S. Gosselin, T. Mamouni, P. Bertin, J. Torrijos, D. Breuer, E. Weis, J. Point</i>	
Designing a QoE Aware Intelligent Home Gateway for Future Smart Homes	215
<i>V. De Silva, X. Shi, B. Evans, J. Trufero, G. Peters</i>	
Elastic Optical Networks: The Vision of the ICT Project IDEALIST	223
<i>M. Bohn, A. Napoli, A. D'Errico, G. Ferraris, M. Gunkel, F. Jimenez, J. Fernandez-Palacios, P. Layec, G. Zervas, N. Amaya, D. Simeonidou, J. Fischer, M. Nölle, C. Schubert, N. Sambo, F. Cugini, P. Castoldi, M. Moreolo, J. Fabrega, C. Okonkwo, H. Waardt</i>	
Joint Allocation of Radio and Computational Resources in Wireless Application Offloading	232
<i>O. Muñoz, A. Pascual-Iserte, J. Vidal</i>	

On the Design of Discovery Patterns for Half-Duplex TDD Nodes Operating in Frame-Based Systems	242
<i>E. Tirola, B. Raaf, E. Lähetkangas, I. Harjula, K. Pajukoski</i>	
Defragmentation of Fixed/Flexible Grid Optical Networks	251
<i>A. Eira, J. Pedro, D. Fonseca, F. Arribas, J. Fernandez-Palacios, I. Polo, D. Schmuhl, S. Spaelter, D. Marzo, M. Bohn</i>	
Virtualizing Converged Optical Network and IT Infrastructures: The Benefits of Dynamic Virtual Infrastructure Re-Planning	261
<i>G. Landi, A. Tzanakaki, G. Bernini, D. Parniewicz, M. Anastasopoulos, B. Belter, J. Riera, E. Escalona, J. García-Espín</i>	
Test Derivation for Semantically Described IoT Services	270
<i>D. Kuemper, E. Reetz, R. Tönjes</i>	
Dynamic and Reconfigurable M2M Wireless Network With QoE-Based Control	280
<i>K. Yano, M. Uno, T. Miyasaka, K. Oshima, Y. Tanaka, K. Murakami, T. Yamamoto, H. Yamamoto, Y. Okada, K. Kobayashi, M. Ariyoshi</i>	
The Risks of WiFi Flexibility: Enabling and Detecting Cheating	289
<i>S. Szott, J. Gozdecki, K. Kosek-Szott, K. Loziak, M. Natkaniec, I. Tinnirello</i>	
Cognitive Heterogeneous Reconfigurable Optical Network: A Techno-Economic Evaluation	298
<i>E. Palkopoulou, I. Stiakogiannakis, D. Klonidis, T. Jiménez, N. Fernández, J. Aguado, J. López, Y. Ye, I. Tomkos</i>	
Designing the Governance Framework for Network and Service Management in Future Networks	308
<i>A. Galani, N. Koutsouris, G. Poullos, K. Tsagkaris, P. Demestichas</i>	
Migration Steps Towards Flexi-Grid Networks	316
<i>A. Mayoral, O. Dios, V. Lopez, J. Fernandez-Palacios</i>	
OpenFlow-Based Content-Centric Networking Architecture and Router Implementation	325
<i>A. Ooka, S. Ata, T. Koide, H. Shimonishi, M. Murata</i>	
Supporting Smart-City Mobility With Cognitive Internet of Things	335
<i>A. Somov, C. Dupont, R. Giaffreda</i>	
A New Meta-Model for Future Internet Architectures	345
<i>H. Einsiedler, R. Aguiar, A. Gavras, H. Schotten</i>	
Using the ZDelta Compression Algorithm for Data Reduction in Cellular Networks	356
<i>D. Bezaleli, J. Gutman, R. Nossenson</i>	
The Playground of Wireless Dense Networks of the Future	363
<i>C. Cicconetti, A. Morelli, M. Dräxler, H. Karl, V. Mancuso, V. Sciancalepore, R. Gupta, A. Oliva, I. Sánchez, P. Serrano, L. Rouillet</i>	
Round-Trip Time Mitigation Through Speculative Display Updating For Applications Rendered in the Cloud	367
<i>B. Vankeirsbilck, K. De Wolf, P. Simoens, F. De Turck, B. Dhoedt</i>	
IoT Multiplatform Networking to Monitor and Control Wineries and Vineyards	371
<i>A. Medela, B. Cendón, L. González, R. Crespo, I. Nevares</i>	
Cloud-Based Computation Offloading for Mobile Devices: State of the Art, Challenges and Opportunities	381
<i>L. Jiao, R. Friedman, X. Fu, S. Secci, Z. Smoreda, H. Tschofenig</i>	
Context-Aware Macro-Femto Handover for Energy Efficiency of Outdoor Users	392
<i>T. Moreira, W. Lage, A. Gomes, A. Radwan, J. Rodriguez</i>	
LTE Energy Saving SON Using Fingerprinting for Identification of Cells to be Activated	402
<i>E. Roth-Mandutz, A. Mitschele-Thiel</i>	
Enhanced OFDM Techniques for Fragmented Spectrum Use	410
<i>A. Loulou, S. Gorgani, M. Renfors</i>	
Fast-Convolution Filter Bank Approach for Non-Contiguous Spectrum Use	420
<i>J. Yli-Kaakinen, M. Renfors</i>	
Network and Service Governance for the Management of Future Networks	430
<i>B. Fuentes, E. Patouni, T. Rautio, E. Kosmatos, R. Arapoglou, G. Katsikas</i>	
RAN as a Service: Challenges of Designing a Flexible RAN Architecture in a Cloud-Based Heterogeneous Mobile Network	440
<i>D. Sabella, P. Rost, Y. Sheng, E. Pateromicelakis, U. Salim, P. Guitton-Ouhamou, M. Di Girolamo, G. Giuliani</i>	
Energy-Efficient Coordinated Resource Allocation for the Downlink of Cellular Systems	448
<i>F. Hélot, M. Imran, R. Tafazolli</i>	
Cognitive Radio Scenarios for Satellite Communications: The CoRaSat Approach	458
<i>K. Liolis, G. Schlueter, J. Krause, F. Zimmer, L. Combelles, J. Grotz, S. Chatzinotas, B. Evans, A. Guidotti, D. Tarchi, A. Vanelli-Coralli</i>	
Towards Massive-MIMO Transmitters: On The Effects of Deploying Increasing Antennas in Fixed Physical Space	468
<i>C. Masouros, J. Chen, K. Tong, M. Sellathurai, T. Ratnarajah</i>	

Cognitive Architecture and System Solutions to Offload LTE Networks in TVWS	478
<i>G. Mange, U. Celentano, P. Lehne, T. Tjelta, M. López-Benitez</i>	
Making IEEE 802.11 Wireless Access Programmable	486
<i>E. Khorov, A. Krasilov, A. Safonov, P. Serrano, I. Tinnirello</i>	
Challenges of Designing Jointly the Back-Haul and Radio Access Network in a Cloud-Based Mobile Network	496
<i>C. Bernardos, A. De Domenico, J. Ortin, P. Rost, D. Wübben</i>	
Real-Time Immersive Multimedia Experience for Collaborating Users Over Hybrid Broadcast Networks	506
<i>S. Dogan, E. Ekmekcioglu, A. Kondoz, A. Akman, F. Blanco, I. Politis, T. Dagiuklas, H. Marques</i>	
Ubiquitous Connectivity Platform for Public Transport Communication Services	516
<i>Z. Polgar, A. Rus, Z. Kiss, A. Consoli, J. Ayadi, M. Egido</i>	
SANP: An Algorithm for Selecting End-to-End Paths With QoS Guarantees	524
<i>R. Jacquet, G. Texier, A. Blanc</i>	
Flexible and Modular Support for Multicast Rate Adaptation in WLANs	534
<i>N. Facchi, P. Gallo, F. Gringoli, S. Paris, I. Tinnirello, A. Capone</i>	
Computation Offloading For Mobile Cloud Computing Based on Wide Cross-Layer Optimization	544
<i>S. Barbarossa, S. Sardellitti, P. Di Lorenzo</i>	
A Novel Future Internet Smart Grid Application for Energy Management in Offices	554
<i>R. Kusber, K. David, B. Klein</i>	
Software Defined Transceivers for High-Speed Flexible Optical Networks	564
<i>J. Hoxha, G. Cincotti, M. Nazarathy, P. Zakyntinos, I. Tomkos</i>	
Fiber To The Distribution Point (FTTdp) Architecture for Single User Based on Hybrid Fiber and Copper Scheme	572
<i>M. Leroux, N. Genay, H. Mariotte, F. Neddard, D. Kurz, P. Chanclou, B. Capelle, J. Guy, R. Liu</i>	
Convergence of Heterogeneous Network and IT Infrastructures in Support of Fixed and Mobile Cloud Services	581
<i>M. Anastasopoulos, A. Tzanakaki, G. Zervas, B. Roföee, R. Nejabati, D. Simeonidou, G. Landi, N. Ciulli, J. Riera, J. Garcia-Espin</i>	
Experimenting With Services Over An Information-Centric Integrated Satellite-Terrestrial Network	590
<i>C. Ververidis, P. Frangoudis, Y. Thomas, V. Siris, G. Polyzos, I. Andrikopoulos, F. Arnal, C. Baudoïn, M. Guta</i>	
An Opportunistic Approach for Coverage and Capacity Optimization in Self-Organizing Networks	600
<i>D. Karvounas, P. Vlacheas, A. Georgakopoulos, K. Tsagkaris, V. Stavroulaki, P. Demestichas</i>	
A Framework for Large-Scale Measurements	610
<i>M. Bagnulo, T. Burbidge, S. Crawford, P. Eardley, J. Schönwälder</i>	
Energy Efficient Relay-Aided Shared LTE Network Using CoMP and LB	620
<i>V. Monteiro, S. Mumtaz, J. Rodriguez, C. Verikoukis, A. Radwan, C. Politis</i>	
Techno-Economic Gains Analysis of Services Over an Information-Centric Integrated Satellite-Terrestrial Network	629
<i>V. Siris, C. Ververidis, G. Polyzos</i>	
Live Migration of Virtual Machines Among Edge Networks Via WAN Links	639
<i>D. Darsena, G. Gelli, A. Manzalini, F. Melito, F. Verde</i>	
Agent Transfer Learning For Cognitive Resource Management on Multi-Hop Backhaul Networks	649
<i>Q. Zhao, D. Grace</i>	
Towards Automated Interactions Between the Internet and the Carrier-Grade Management Ecosystems	659
<i>M. Drogon, M. Chamania, A. Jukan, M. Yannuzzi, X. Masip-Bruin, V. Lopez, O. González, M. Maciejewski, M. Roth, C. Brunn, J. Altmann</i>	
Spectrum Sharing in the EU and the Path Towards Standardization	669
<i>P. Marques, J. Rodriguez, S. Delaere, P. Delahaye, B. Lecroart, M. Gundlach, D. Triantafyllopoulou, K. Moessner, D. Noguét</i>	
Application Service Quality Indication to End-Users in IP Based Networks as Added Value Service	678
<i>A. Roos, O. Bonness, S. Dhakal, H. Lonsethagen, I. Korthals, S. Wieland, A. Schwarzbacher</i>	
Architecture for the Heterogeneous Federation of Future Internet Experimentation Facilities	688
<i>W. Vandenberghe, B. Vermeulen, P. Demeester, A. Willner, S. Papavassiliou, A. Gavras, M. Sioutis, A. Querrelhac, Y. Al-Hazmi, F. Lobillo, F. Schreiner, C. Velayos, A. Vico-Oton, G. Androulidakis, C. Papagianni, O. Ntofon, M. Boniface</i>	
Green Joint User Scheduling and Power Control in Downlink Multi-Cell OFDMA Networks	699
<i>L. Venturino, C. Risi, A. Zappone, S. Buzzi</i>	
Macro-Cell Overlaid Green Topology Management for Beyond Next Generation Mobile Broadband Systems	709
<i>S. Rehan, D. Grace</i>	
Author Index	