

2010 2nd International Conference on Evolving Internet (INTERNET 2010)

**Valencia, Spain
20 – 25 September 2010**



**IEEE Catalog Number: CFP1042H-PRT
ISBN: 978-1-4244-8150-7**

The Second International Conference on Evolving Internet **INTERNET 2010**

The First International Conference on Access Networks, Services and Technologies **ACCESS 2010**

Table of Contents

INTERNET 2010 Preface	ix
ACCESS 2010 Preface	x
INTERNET 2010 Program Committee.....	xii
ACCESS 2010 Program Committee.....	xv
INTERNET 2010 Reviewers	xviii
ACCESS 2010 Reviewers	xx

INTERNET 1: Graph Theory/Topology/Routing Internet Support I

Improving the Traffic Prediction Capability of Neural Networks Using Sliding Window and Multi-task Learning Mechanisms.....	1
<i>João Rodrigues, António Nogueira, and Paulo Salvador</i>	
Multi-domain End-to-End (E2E) Routing with Multiple QoS Parameters – Considering Real World User Requirements and Service Provider Constraints	9
<i>Mark Yampolskiy, Wolfgang Hommel, Bernhard Lichtinger, Wolfgang Fritz, and Matthias K. Hamm</i>	
On the Use of Reservoir Computing in Popularity Prediction	19
<i>Tingyao Wu, Michael Timmers, Danny De Vleeschauwer, and Werner Van Leekwijck</i>	
Delay-Aware Design of Overlay Networks for Application-Layer Multicasting	25
<i>Krzysztof Walkowiak and Andrzej Kasprzak</i>	

INTERNET 2: Internet and Wireless, Internet Performance

Internet Satellite Challenges	31
<i>William W. Wu</i>	

On the Processor Sharing Properties of File Transfers in a WLAN Testbed.....	36
<i>Gerard Hoekstra and Rob van der Mei</i>	

Capacity and Congestion Probing: TCP Congestion Avoidance via Path Capacity and Storage Estimation.....	42
<i>Dirceu Cavendish, Kazumi Kumazoe, Masato Tsuru, Yuji Oie, and Mario Gerla</i>	

INTERNET 3: Graph Theory/Topology/Routing Internet Support II & AQM/QoS, Internet Challenges II

Adaptive Virtual Network Topology Control in WDM-Based Optical Networks	49
<i>Yuki Minami, Shin'ichi Arakawa, Yuki Koizumi, Takashi Miyamura, Kohei Shiimoto, and Masayuki Murata</i>	

3D IPTV Study and Performance.....	55
<i>Alejandro Canovas, Miguel Garcia, Jaime Lloret, and Jesús Tomás</i>	

Improving Virtual Machine Migration in Federated Cloud Environments.....	61
<i>Antonio Celesti, Francesco Tusa, Massimo Villari, and Antonio Puliafito</i>	

An Approach towards Resource Efficient Virtual Network Embedding	68
<i>Adil Razzaq and Muhammad Siraj Rathore</i>	

A Comparative Overview IEEE 802.16e QoS Scheduling Algorithms.....	74
<i>Daniel Ndiki, Hermann J. Helgert, and Sayed Hussein</i>	

INTERNET 4: Internet Challenges I

Providing an User Centric Always Best Connection	80
<i>Jens Schumacher, Martin Dobler, Eileen Dillon, Gemma Power, Markus Fiedler, David Erman, Karel De Vogeleer, Manuel Oritz Ramos, and José Rodríguez Argente</i>	

A Resource Management Framework Based on the Many Sources Asymptotic for Video-on-Demand Servers	86
<i>Thiago Stahlschmidt, Walter Godoy Junior, and Augusto Foronda</i>	

A Collaborative Approach for Spam Detection	92
<i>Pedro Sousa, Artur Machado, Miguel Rocha, Paulo Cortez, and Miguel Rio</i>	

A Distributed Content Storage Model for Web Applications	98
<i>Mark Wallis, Frans Henskens, and Michael Hannaford</i>	

INTERNET 5: Internet Trust, Security, and Dependability Levels I

Influence of Software-Based NIDS on FEC-Protected Uncompressed Video Transmissions	107
<i>Susanne Naegele-Jackson, Jochen Kaiser, and Peter Holleczeck</i>	

Building Trust in Virtualized Networks	113
<i>Mohammed Achemlal, Jean-Claude Pailles, and Chrystel Gaber</i>	

An Improved Watermarking Scheme for Internet Applications	119
<i>Christophe Guyeux and Jacques M. Bahi</i>	
Randomness Quality of CI Chaotic Generators: Applications to Internet Security	125
<i>Jacques M. Bahi, Xiaole Fang, Christophe Guyeux, and Qianxue Wang</i>	

INTERNET 6: Internet Trust, Security, and Dependability Levels II, Sensor-Oriented Networks/Algorithms, Data Streaming

Prototype Genomics-Based Keyed-Hash Message Authentication Code Protocol.....	131
<i>Harry Shaw, Sayed Hussein, and Hermann Helgert</i>	
A Probabilistic Marking Scheme for Fast Traceback	137
<i>Hongcheng Tian, Jun Bi, Xiaoke Jiang, and Wei Zhang</i>	
Performance Analysis of Gateway Discovery Techniques: IPv6-Based Wireless Sensor Networks	142
<i>Dhananjay Singh and Daeyeoul Kim</i>	
Investigating the Impact of Bursty Traffic on Hoeffding Tree Algorithm in Stream Mining over Internet	147
<i>Yang Hang and Simon Fong</i>	

ACCESS 1: NEUTRAL

Multicast TV Channels over Wireless Neutral Access Networks	153
<i>Andrea Seraghiti, Lorenz Klopfenstein, Stefano Bonino, Andrea Tarasconi, and Alessandro Bogliolo</i>	
Enhancing Broadband Penetration in a Competitive Market	159
<i>Erika Pigliapoco and Alessandro Bogliolo</i>	
Competition Promoting Unbundling of PON	164
<i>Kosuke Tomonaga, Masataka Ohta, and Takashi Tsutsui</i>	
Extending AAA Operational Model for Profile-Based Access Control in Ethernet-Based Neutral Access Networks	168
<i>Jon Matias, Eduardo Jacob, Yuri Demchenko, Cees de Laat, and Leon Gommans</i>	
On the Impact of Operative Systems Choice in End-User Bandwidth Evaluation: Testing and Analysis in a Metro-Access Network.....	174
<i>Anna Del Grosso, Luca Rea, Paolo Bolletta, Alessandro Valenti, and Angelo Maria Luisi</i>	

ACCESS 2: OPTICAL & HOWAN

Centralized Management of Data Collection over Hybrid Networks.....	180
<i>Elisa Benetti, Enrica Salbaroli, Chiara Taddia, and Gianluca Mazzini</i>	
Optical Burst Signal Receiver for ONU in Optical Switched Access Network	186
<i>Hiromi Ueda, Keita Hamasaki, Takashi Kuriyama, and Toshinori Tsuboi</i>	

CAPEX Model for PON Technology	192
<i>João Pedro Davim and Armando Nolasco Pinto</i>	
EPON CWDM Optical Light Expander with Adaptive Prediction Scheduler	197
<i>Andrea Tonini, Mohammad Al Hissi, and Alie El-Din Mady</i>	

ACCESS 3: NEXTACCESS & LEGAL

Reducing Power Consumption of Subscriber Stations in WiMAX Networks	201
<i>Umut Akyol</i>	
Impact of Packet Loss on the Perceived Video Quality	206
<i>Qin Dai and Ralf Lehnert</i>	
Controlled Access to the Internet, Prevention of Illicit Uses and Fundamental Rights – A Criminal Law Experience in Light of the Italian "Google Case"	210
<i>Gabriele Marra</i>	
Web Accessibility on Spanish Universities	215
<i>Juan Manuel Fernández, Jordi Roig, and Vicenç Soler</i>	

ACCESS 4: MOBILE WIRELESS, FEMTO, BROADBAND

Studying MANET through a Petri Net-Based Model	220
<i>Alessandro Bianchi and Sebastiano Pizzutilo</i>	
Green Femtocell: The VLR-DAS Approach	226
<i>Moshe Ran, Amir Lebovitch, Yuri Yurchenko, and Yossef Ben Ezra</i>	
Femtocell SINR Performance Evaluation	229
<i>Yoram Haddad and Dana Porrat</i>	
Improving VoIP Traffic Performance in WiMAX Networks	235
<i>Iwan Adhicandra</i>	
Author Index	240