

## MMS2009 Program

### Program at a glance

	Morning	Afternoon
<b>Saturday, November 14</b>		15H30 – 18H30 Registration
<b>Sunday, November 15</b>	Opening Ceremony Keynote Talks Session 1 Technical Sessions Workshop Sessions	Keynote Talks Session 2 Technical Sessions Workshop Sessions
<b>Monday, November 16</b>	Keynote Talks Session 3 Technical Sessions	Keynote Talks Session 4 Technical Sessions
<b>Tuesday, November 17</b>	<b>Social Event : Guided visit to Tetuan and Tangier (by registration)</b>	

08H30-09H30 Keynote Talks  
09H30-10H00 Coffee Break (& Poster Session)  
10H00-12H30 Sessions  
12H30-14H00 Lunch Break  
14H00-15H00 Keynote Talks  
15H00-15H30 Coffee Break (& Poster Session)  
15H30-18H00 Sessions

### Sunday, November 15, 2009

08H30-09H00 Opening Ceremony

09H00-09H30 **Keynote Talk session 1**

- **New Antennas For Wireless and other Applications**, Yahia Antar, Royal Military College of Canada, Canada.

09H30-10H00 Coffee Break

10H00 – 12H30 Technical Sessions

#### Session 1: Propagation, Scattering and diffraction

**Chairman:** John N. Sahalos, Aristotle University of Thessaloniki, Greece.

1. **The Scattering the TEM Mode at the Junction of Perfectly Conducting and Dielectric Loaded Grooved Coaxial Waveguides**, Feray Hacivelioglu, Alinur Buyukaksoy, Gokhan Uzgoren and A. Hamit Serbest.
2. **Novel Model for Complex Permittivity of Glass for Propagation Modeling in Millimeter-Wave Band**, Foad Arvani and Amir Ahmad Shishegar.
3. **Vectorial Gaussian Beam Tracing Method for Millimeter Wave Propagation Modelling in a Large Scale Media**, Seyed Mohammad AlaviRad, Ali Naqavi, Mostafa Shabani and Amir Ahmad Shishegar
4. **Modified Simplex Method Applied to Narrow Bandwidth Ridged Waveguide Filter Optimization**, Yahia Mohamd, Tao Jun Wu, Benzina Hafedh and Abdelkrim Mohamed Naceur
5. **FDTD Study of Surface Plasmons and Perfect Tunneling of Power in Parallel-Plate Waveguides**, Oscar Gonzalez, Ana Grande, Jose A. Pereda and Angel Vegas.
6. **Efficient Application of the Discrete Complex Images Method in the Analysis of Planar Guiding Structures**, M. Bassem Ben Salah, Nabil Ghannay, Abdelaziz Samet and Faouzi Romdhani.



## Session 2 : Microwave and Millimeter-Wave Circuits

*Chairman: S. Iezekiel, University of Cyprus, Cyprus.*

1. **Design and Optimization of a Two-Way Gysel Power Divider With Arbitrary Power Division and Impedance Matching**, Homayoon Oraizi and Alireza Sharifi.
2. **Novel Microwave Planar Bandpass Filter Structures With Strongly Asymmetric Characteristics**, George Lojewski, Nicolae Militaru and Marian Gabriel Banciu.
3. **A Novel CMOS All-pass Tunable Phase Shifter for Phased Array Systems**, Ali Mohammadi, Ahmad Ayatollahi and Adib Abrishamifar.
4. **Design and Implementation of A Compact Sharp Microstrip X-band Bandpass Filter**, Ossama Harfoush and Khaled Yazbek.
5. **Diplexer Design for Switched Frequency Diversity Applications in Wireless Communications Systems**, Ossama Harfoush and Khaled Yazbek.
6. **Dry Release of MEMS Structures Using Reactive Ion Etching Technique**, Khawaja Hamood Ur Rahman and Rodica Ramer.

## Session 3: Microwaves and millimeterwave devices CAD

*Chairmen: H. Aboulnour, Damascus University, Syria.*

1. **System level designing of FSO link through VCSEL and NRZ modulation scheme by using different filters**, Naveed Ahmed.
2. **System level designing of FSO link through VCSEL and RZ modulation scheme by using different filters**, Ibrar-ul-Haque.
3. **Design and performance analysis of OCDMA systems using different filters**, Muhammad Irfan.
4. **An Optimal Bandpass Filter for Bluetooth**, Shokrollah Karimian.

12H30-14H00 Lunch Break

14H00-15H00 **Keynote Talk session 2**

- **UWB Antennas and Channel Characteristics**, Werner Wiesbeck, Universität Karlsruhe, Germany.
- **The RF in RFID and the Improvement of Backscatter Radio Tag Efficiency**, John N. Sahalos, Radio-Communications Laboratory, Aristotle University of Thessaloniki, Greece.

15H00-15H30 Coffee Break

15H30 – 18H00 Technical Sessions

## Invited Session 1 : Wireless Communications

*Co-chairmen: M. Boulmalf and H. Harroud, Al-Akhawayn University, Morocco.*

1. **Detection and Dissipation of Road Traffic Congestion Using Vehicular Communication** Abderrahmane Lakas and Moumena Cheqfah, UAE University, College of Information Technology, Al Ain, United Arab Emirates.
2. **On the Ranging Performance in an Underground Mine Using Ultra-Wideband Fast Acquisition System** Yassine SALIH ALJ (Al-Akhawayn University, School of Science & Engineering, Morocco), Charles DESPINS (PROMPT Quebec, Canada), Sofiene AFFES (INRS Telecom, Montreal, Canada)
3. **Turbo Packet Combining for Broadband MIMO Relay Communication** Tarik Ait-Idir and, Houda Chafnaji (Telecom Bretagne/Institute of Telecom, Brest, France and INPT Rabat, Morocco), Halim Yanikomeroglu (Systems and Computer Engineering Department, Carleton University, Canada.), and Samir Saoudi(Telecom Bretagne/Institute Telecom, Brest, France).
4. **Services Provisioning in Mobile Wireless Environments** Hamid Harroud (AUI, School of Science & Engineering, Ifrane, Morocco), Aziz Berrado (EMI, Industrial Engineering Department, Rabat Morocco), Mohammed Boulmalf (AUI, School of Science & Engineering), Ahmed Karmouch (Ottawa University, SITE, Ottawa, Canada)
5. **The scalability of the hybrid protocol in wireless mesh network 802.11S** B. Nassereddine (FST, Settat, Morocco), A. Maach and S. Bennani (EMI, Computer Science Department, Rabat, Morocco).
6. **Can MAC waiting time improve TCP performance over Ad hoc network?** Angoma Blaise and Berqia Amine.
7. **Simulation of performance of indoor adjacent ZigBee meshed networks**, Victor Torres, Fermin Esparza, Antonio Lopez and Francisco Falcone.
8. **Improving Quality of Service (QoS) in Multi-Protocol Label Switching Module**, Abdellah Jamali, Najib Naja, Driss El Quadghiri and Redouane Benaini.

## Invited session 2 : Advances in Microwave Photonics

**Co-Chairmen:** *T. Berceli, Budapest University of Technology and Economics, Hungary*  
*P. R Herczfeld, Drexel University, USA*

1. **All -optical microwave receiver**, Yifei Li and Peter Herczfeld.
2. **Design and Characterization of Microwave Fiber-Optic Links**, Stavros Iezekiel.
3. **Performance Improvements for Optical Links Applying Semiconductor Optical Amplifiers**, Eszter Udvary and Tibor Berceli.
4. **Slow light for microwave photonics applications**, Andrea Blanco, Enrique Areizaga and Joseba Zubia.
5. **Optical Single Side Band Modulator based on dual arm and applications**, Manuel Violas and Ruben Sousa.
6. **Surface Plasmon Polariton Propagation in Metallic Channels Analyzed by Spatio-Temporal FEM Model (ST-FEM)**, Leonardo Lorenzo Bravo-Roger and Marcos Sergio Gonçalves.
7. **Laser diodes for microwave and millimeter wave photonics**, Frédéric van Dijk, Alain Enard, Guang-Hua Duan, Alain Accard, Francois Lelarge, Alexandre Shen and Olivier Parillaud.
8. **Radio over fiber systems: towards low-cost multi-standard and high data rate wireless applications**, Jean-Pierre Vilcot, Christophe Lethien, Christophe Loyez and Cathy Sion

## Session 4: Antenna theory and measurement

**Chairman:** *Y. Antar, Royal Military College of Canada, Canada.*

1. **Design Of Broadband ESPAR Antenna**, Bashir Alshami, Hassan Aboulmour and Mouhamad Dib.
2. **Design of A Novel Circularly Polarized Microstrip Patch Antenna Using EBG Structure**, Ahmadreza Eskandari, Mohammad Naser Moghaddasi and Mohammad amin Honarvar.
3. **Analysis and Synthesis of a K-Band Microstrip Patch Antenna Array**, Mouloud Challal, Arab Azrar, Mokrane Dehmas and Abdelmadjid Recioui.
4. **Micromachined Millimeter-wave Butler Matrix with a Patch Antenna Array**, Noor Murad, Micheal Lancaster, Yi Wang and Mao Ke
5. **Resonant frequency of a Microstrip Antenna on a Uniaxial Electric Superstrate**, zebiri chemseddine.
6. **A Compact T-Shaped Antenna For Dual-Band WLAN Communications**, M. Harmouzi, M. Essaaidi, M. Ben Ahmed and M. Bouhorma
7. **A Compact Disc Monopole Antenna for UWB Communication Systems**, Mohamed Nabil Srifi, S.K.Podilchak, Mohamed Essaaidi, and Yahia M. M. Antar
8. **Compact Internal antenna for Multiband Operation in the Mobile Phone**, Mohamed Ben Ahmed, Mohammed Bouhorma, Fatiha Elouaai and Ahmed Mamouni.

## Monday, November 16, 2009

### 09H00-09H30 Keynote Talk session 3

- **Microwave Antennas for Medical Applications**, Koichi Ito, Research Center for Frontier Medical Engineering, Chiba University, Japan.

### 09H30-10H00 Coffee Break

#### Poster Session

**Chairman:** *M. Khalladi and A. Medouri, Abdelmalek Essaadi University, Morocco.*

1. **Carrier Leakage Calibration in DCT**, Rachida Touhami.
2. **High frequency Characterization of multilayered anisotropic planar circuits with several metallized**, Chafik Boularak, Abdelhamid Khodja, and Rachida Touhami
3. **Effects of Metal Plate to RFID Tag Antenna Parameters**, GHANNAY Nabil, BEN SALAH M. Bassem, SAMET Abdelaziz and Romdhani Faouzi.
4. **A Compact UWB Rectangular Dielectric Resonator Antenna**, Mohssin Aoutoul, Otman El-Mrabet, Mohamed Essaaidi, and Ahmed El Moussaoui
5. **STRUCTURE-NLO PROPERTY RELATIONSHIPS IN OCTUPOLAR MATERIALS: TDHF AND TDDFT STUDIES**, Yazid BITAR and Dalila HAMMOUTENE.
6. **A Printed Reconfigurable Antenna for Communication System**, Faouzi Romdhani and Mohsen Denden.
7. **Dual-Band Rectangular Dielectric Resonator Antenna for ISM and 4 GHz Bands Applications**, Achraf Jaoujal, Noura Aknin and M. Ahmed El Moussaou.
8. **Simulation of electromagnetic waves propagation in systems of four energy levels by the SCN-TLM method**, H.El Faylali, M.Iben Yaich and M. Khalladi
9. **New approach: WCIP and FDTLM hybridization**, A Zugari<sup>1</sup>, N Raveu, H Baudrand, M. Khalladi
10. **A Novel Compact Multiband Planar Antenna for Mobile Handsets**, Najib Gouddane and Mohamed Essaaidi
11. **A Flat Gain Low Noise Amplifier For 1.8 to 4 GHz Wide Band Wireless Receivers**, M. Meloui, I. Akhchaf, H. Setti, M. Charif, and M. Essaaidi



## 10H00 – 12H30 Technical Sessions

### Invited Session 3 : Inverse Scattering And Microwave Imaging

*Chair: Salvatore Caorsi, University of Pavia, Italy*

1. **Electromagnetic imaging using closed-form radiating and non-radiating currents**, G. L. Gragnani.
2. **Microwave imaging of magnetic nanoparticles for biomedical diagnostics**, I.Catapano, L. DiDonato, F. Soldovieri and L. Crocco.
3. **Integrated full-waveform analysis of ground penetrating radar and electromagnetic induction data for non-invasive reconstruction of multilayered media**, F. André, D. Moghadas, C. Patriarca, E.C. Slob, H. Vereecken, and S. Lambot
4. **A machine learning algorithm for GPR sub-surface prospection**, S.Caorsi, M.Stasolla.
5. **Permittivity estimation from the scattering responses of TEM waveguides**, Ivan Maio, Patrizia Savi and F. Marino.

### Session 5: Microwave and Millimeter-Wave Circuits

*Chairman: F. Ghannouchi, University of Calgary, Canada.*

1. **Improvement in the Stopband of a Microwave Lowpass Filter Utilizing Resonance Structure**, Mojtaba Shobeyri, Malihe Jalilvand and Mohammad Hashem Vadjed Samiei.
2. **An 18GHz LNA Ga FET High Gain Amplifier for WLAN**, Alireza Habibzade, Mahdi Jalali and Mohamad Naser Moghaddasi.
3. **Design Methodology for Designing Second Order Microstrip Dual-Mode Filters**, Abdulla. A. Rabeea, Fred Barlow, and Aicha Elshabini.
4. **Recent Development of Ultra-Wideband (UWB) Bandpass Filters Using Distributed Stub Transmission Line Structures**, Hussein Shaman and Jia-sheng Hong.
5. **5-GHz Low Phase Noise CMOS LC-VCO with PGS Inductor Suitable for Ultra-Low Power Applications**, Ahmed El Oualkadi.
6. **mm-Wave CMOS Mixer Design in 65 nm Technology for 60 GHz Wireless Communications**, Ahmed El Oualkadi, Khalid Faitah and Abdellah Ait Ouahman.
7. **System level designing of FSO link through LED and NRZ modulation scheme by using different filters**, Naveed Ahmed.
8. **Investigation of Residual Stress Effects and Modelling of Spring Constant for RF MEMS Switches**, Khawaja hamood Ur Rahman, King Yuk (Eric) Chan and Rodica Ramer.

12H30-14H00 Lunch Break

14H00-15H00 **Keynote Talk session 4**

- **Radio Frequency Integrated Circuits for Adaptive Beamforming**, Frank Ellinger, Dresden University of Technology, Germany.
- **SDR Based Power amplifiers /Transmitters for Advanced Wireless and Satellite Communications**, Fadhel Ghannouchi, University of Calgary, Canada

15H00-15H30 Coffee Break

## 15H30 – 18H00 Technical Sessions

### Invited Session 4 : Metamaterials and Plasmonics

*Chair: F. Falcone, Public University of Navarre, Spain*

1. **Some considerations on lattice network-based lossless balanced Composite Right/Left-Handed transmission lines**, Jaime Esteban, Carlos Camacho-Peñalosa, J. Enrique Page and Teresa M. Martín-Guerrero.
2. **A Novel Metamaterial SRR for Waveguide Antenna**, Mahdi Jalali, Tohid Sedghi and Majid Shokri.
3. **Extraordinary Transmission Surfaces as Superstrates**, Miguel Beruete, Miguel Navarro, Francisco Falcone, Mario Sorolla, Igor Campillo, JE Rodriguez, E Perea and IJ Nuñez-Manrique.
4. **Implementation of Effective Negative  $\epsilon$  Transmission Line in Stripline Technology**, Jesus Illescas, Eduardo Jarauta, Aritz Estevez, Antonio Marcotegui and Francisco Falcone.
5. **Design and Measurement of DNG Metamaterial for Tunable Microwave Devices**, Hafid Griguer, Hicham Lalj, Eric Marzolf and M'hamed Drissi.
6. **Complementary Split Ring Resonators Configurations for Dual Band Patch Antenna design**, N. Ortiz, F. Falcone, M. Sorolla.
7. **Equivalent-circuit model for a periodic array of slits sandwiched between dielectric slab**, Raul Rodriguez-Berral and Francisco Mesa, and Francisco Medina
8. **Perturbation Method Based on Resonant Type Metamaterial Transmission Lines for Dual-Band Matching Networks**, Ferran Paredes, Gerard Zamora, Jordi Bonache and Ferran Martín.
9. **Wave Propagation Properties in Stacked SRR/CSRR Metasurfaces at Microwave Frequencies**, M. Aznabet, O. El Mrabet, M. Navarro, M. Beruete, F. Falcone, M. Essaïdi, and M. Sorolla.
10. **Planar Horn Antenna: Application of Periodic Stacked Subwavelength Hole Array with Metamaterials Properties**, Michel Audrey Abaga Abessolo, Akin Noura, M. Ahmed El Moussaoui and Mario Sorolla

### **Session 6: Microwaves and millimeterwave devices CAD**

**Chairman: Carlos Camacho-Peñalosa, University of Malaga, Spain.**

1. **Comparing accuracy for ML, MUSIC, ROOT-MUSIC and spatially smoothed algorithms for 2 users**, Mahdi Jalali, Alireza Habibzade and Mohamad Naser Moghaddasi.
2. **Improving Ambiguity Function (AF) of Costas Signal**, Khaola Kasas, Hassan Aboulmour and Osama Kawas.
3. **Grid Computing to Improve Performance and Management of Distributed Electromagnetic Applications**, Igor J. F. Freitas, Carlos H. Silva-Santos, Marli G. F. Hernández and Hugo E. Hernández-Figueroa.
4. **Efficient Parallel Computational Environment to Perform Electromagnetic**, Carlos Silva-Santos, Marco Antonio Miguel Miranda and Hugo Enrique Hernández Figueroa.
5. **3D Time-domain Electromagnetic/Transport Macroscopic Numerical Physical Modelling. Application to Mm-wave GaAs photoswitch**, Ali El Moussati and Christophe Dalle.
6. **Development of a Time-Domain Physical Electromagnetic Simulator For Microwaves Circuits-Application to the millimeter wave Silicon DIMPATT diode**, Ali El Moussati and Christophe Dalle.
7. **PIC Receiver with decision thresholds over Rayleigh fading channel**, Mohamed Moussaoui, Mostafa Zaizouni and Jean-Michel Rouvaen.
8. **Improving Ambiguity Function of Costas Signal**, khaola kasas, Hassan Aboulmour and Osama Kawas.

### **Session 7: Medical applications and biological effects**

**Chairman: Koichi Ito, Chiba University, Japan.**

1. **Two-Dimensional Forward-Backward Time-Stepping Approach for Tumor Detection in Dispersive Breast Tissue**, KISMET HONG PING, TOSHIFUMI MORIYAMA, TAKASHI TAKENAKA and TOSHIYUKI TANAKA
2. **The Ability of the Ultra-wide Band Radar For Brain Hematoma Detection**, Mohamed Ali Eldosoky.
3. **The Coding System of the Finger Movements Detected by the Ultra-wide Band Radar**, Mohamed Ali Eldosoky.
4. **A Study of the Effect of the Water on the Interaction between Human head model and Dipole antenna (900MHz)**, M. Srifi and M. Essaaidi.
5. **Minimizing cellular radiation risk**, Abdulkarim Assalem.

### **Poster Session (Cont'd) \***

**Chairman: M. Khalladi and A. Medouri, Abdelmalek Essaadi University, Morocco.**

12. **Rachida Mousa, Mohamed Essaaidi and Mohammed Aghouthane**  
**A Tri-band Filter Usign Stepped Impedance Resonators and Coupled Metamaterial Resonator**
13. **Nahid Bentaibi and Mohamed Boussouis**  
**Leaky Wave Microstrip Antenna: Parametric Study**
14. **Circularly Polarized Microstrip Patch Antenna Gain Improvement Using A Novel LHM Structure**  
**Iman Ben Issa Rachid Rian, and Mohamed Essaaidi**

\* These papers will be presented in the same Poster Session indicated above.



IEEE Communication Society  
Morocco Chapter

Workshop on  
**Next Generation Mobile Networks**  
-WNGMN'09-  
**November 14-15, 2009**  
Tangiers, Morocco



**Celebrating 125 Years**  
of Engineering the Future

**Saturday, November 14, 2009 :**

16h00-20h00 Registration

**Sunday, November 15, 2009 :**

8h30-9h00 Welcome addresses

9h00-10h00 **Plenary Session 1**  
**Mobile Wimax Standard - 802.16<sup>e</sup>**  
**Loutfi Nuaymi, Telecom Bretagne, France**

10h00-10h30 **Coffee break**

**Session 1**  
*Chairman: Loutfi Nuaymi*

10h30-10h50 Victor Torres, Fermin Esparza, Antonio López, Francisco Falcone, « Simulation and Analysis of Performance of LTE in indoor environments »

10h50-11h10 Constantinos T. Angelis, Christos Koliopanos, Spyridon K. Chronopoulos, « UWB MB-OFDM outdoor signal propagation in the presence of mobile WiMax interferers »

11h10-12h00 **Plenary Session 2**  
**High Speed Packet Access (HSDPA/HSUPA)**  
**Francisco Falcone, Universidad Publica de Navarra, Spain**

12h00-13h00 **Plenary Session 3**  
**3GPP Long Term Evolution: LTE, SAE, All-IP and IMS**  
**Francisco Falcone, Universidad Publica de Navarra, Spain**

14h30-15h30 **Plenary Session 4**  
**Ultra Wide Band radiocommunications (UWB)**  
**Werner Wiesbeck, Universität Karlsruhe, Germany**

15h30-16h00 **Coffee break**

**Session 3**  
*Chairman: lyad Dayoub*

16h00-16h20 Mostapha Zbakh, « Tasks Allocation Problem as a Non - Cooperative Game »

16h20-16h40 Christos Koliopanos, Spyridon K. Chronopoulos, Constantinos T. Angelis, « Simulation and performance analysis of a new nonautonomous chaotic circuit for data communications »

16h45-17h45 **Plenary Session 5**  
**Mobile Ad hoc Networking (MANET)**  
**lyad Dayoub, University of Valenciennes, France**

9h00-12h00 **Session 2 « Poster »**  
*Chairman: Mohamed Moussaoui*

M. Jaifar, M. Moussaoui, « Study and proposal of a mapping between the classes of service 3G and the DiffServ model for transport in a network IP/MPLS »

R. Zoubairi, Z. Jarir, « Quality of Service in MAQAME Architecture »

F. Thami Alami , N. Aknin, A. El Moussaoui, « Cell Capacity Improvement by using a liberation resources mechanism in uplink direction »

M. Bouhorma, A. Benslimane & A. A. Boudhir, « Quality of service and communication technologies for Multimedia Wireless Sensor Networks »

S. Kabil, R. ElAssali, F. Boukour, S. Ait essaid, A. Ait ouahman, « Comparisons between Different Systems of The Communication Inter-Vehicles »

Abderrahim Tahiri, Esteban Egea-López, Javier Vales-Alonso, Joan García-Haro and Mohamed Essaïdi, « Optimal Wireless Sensor Network Deployment»

A. Ala, D. El Ouadghiri and M. Essaïdi, « Fast Convergence Mechanisms and Features Deployment within operator backbone Infrastructures »

14h30-17h30 **Session 4 « Poster »**  
*Chairman: Ahmed El Oualkadi*

S. Chabaa, A. Zeroual & J. Antari, « Internet traffic time series modeling using ANFIS method »

A. Latif, M. Moughit and M. Chabbi, « Study and Simulation of Subscriber Localization in a mobile network »

M. D. Laanaoui, S. Raghay, « IPv6 for the mobile agent »

A. Saika, R. El Kouch & M. M. Himmi, «Implementation and performances of the protocols of routing AODV and OLSR in the Ad hoc networks Ad Hoc »

M. Bouhorma, H. Bentaouit, A. Boudhir, « Mobility Effect And Reactifs Routing Protocols AODV, DSR On Ad-hoc networks »

K. Taghouti, A. Ahaitouf, A. Meresse, G. Duchamp, F. Errahimi, « Modelling of conducted and radiated electromagnetic emissions of an integrated circuit »

C. Sall, E. C. El Alaoui, S. Doubabi, E. M. El Warraki, «On enhancing TCP performances in wired-cum-wireless networks»