Curriculum Vitae

Dr. Otman El Mrabet
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Né le 24 Octobre 1972 à Tétouan
Nationalité Marocaine
Marié

FORMATION UNIVERSITAIRE

2013-2014 **Habilitation à Diriger des Recherches,** « Métamatériaux et Antennes pour les Systèmes de Télécommunications », Faculté des Sciences de Tétouan, Université Abdelmalek Essaadi

2000-2004 **Doctorat en Sciences**
Option : Télécommunication
Université Abdelmalek Essaadi, Faculté des Sciences de Tétouan.
Titre : Modélisation Globales des circuits RF et Micro-ondes par la méthode des différences finies dans le domaine temporel (FDTD).
Mots Clés : FDTD, Modélisation globales (Mixtes), Diodes, MESFET, CAO, Amplificateurs, hyperfréquences (Micro-ondes).

1998-2000 **Diplôme d'Etudes Supérieures Approfondies** (DESA)
Option : Electronique et Physique du Solide
Université Abdelmalek Essaadi, Faculté des Sciences de Tétouan.

1995-1996 **Licence ès Sciences Physiques**
Option : Electronique
Université Abdelmalek Essaadi, Faculté des Sciences de Tétouan.

1991-1992 **Baccalauréat ès Sciences**
Option : Science expérimental
Lycée Hassan II, Tétouan

DEROULEMENT DE CARRIERE

2009 – 2014 Professeur assistant à la Faculté des Sciences de Tétouan, Université Abdelmalek Essaadi

2014- 2020 Professeur habilité à la Faculté des Sciences de Tétouan, Université Abdelmalek Essaadi

2019-2020 Professeur d'enseignement supérieur à la Faculté des Sciences de Tétouan, Université Abdelmalek Essaadi

EXPERIENCE PROFESSIONNELLE

2018-2019	**Fulbright** *Scholarship research Assistant* **(Wisconsin University, USA)**
2007-2009	**Post-doc** à l'école supérieure techniques en ingénierie des industrielles et des télécommunications, Pamplona, Espagne. **Sujet** : **Caractérisation** des Métamatériaux.
Décembre-octobre 2005	**Post-doc** à l'institut d'Electronique et de Télécommunications de Rennes (IETR), France. **Sujet** : conception et réalisation des antennes actives.
2000-2004	**Thèse** effectuée au Laboratoire d'électronique et micro-ondes **Sujet :** ''Modélisation Globales des Circuits RF & Micro-ondes par la Méthode des Différences Finies dans le Domaine Temporel (FDTD)''.
Mars- Avril 2004	**Stage** effectué à l'institut d'Electronique et de Télécommunications de Rennes (IETR), FRANCE. Stage permettant de se familiariser avec le simulateur Advanced Design System (Agilent - ADS) pour valider les résultats obtenus par notre approche pour le cas d'un amplificateur.
1999-2000	**Stage** effectué au sein de laboratoire d'électronique et Micro-onde. **Sujet** : ''Modélisation des oscillateurs Micro-ondes par la Méthode FDTD''.

RESPONSABILTES

- Coordonateur du Master "Telecommunication Systems Engineering (TSE)" pour l'accréditation 2017-2022.
- Membre du Conseil d'établissement pour le mandat 2012-2014.
- Membre de la commission "recherche Scientifique et Coopération" de l'établissement pour le mandat 2012-2014.
- Membre de la commission "Activités Culturelles, Sportives et Sociales" de l'établissement pour le mandat 2012-2014.
- Membre de la commission "Activités Culturelles, Sportives et Sociales" de l'établissement pour le mandat 2012-2014.
- Membre de la commission "Affaires Juridiques et Disciplinaires" de l'établissement pour le mandat 2012-2014.
- Membre de la commission "Affaires Pédagogiques" de l'établissement pour le mandat 2012-2014.

ENCADREMENT DES THESE DE DOCOTRAT

Encadrement de thèses

Nom & Prénom du doctorant	Sujet de thèse	Date de soutenance
El Khamlichi Mohamed	Development of passive UHF RFID tag for blood monitoring : Application to the healthcare system	14 Juin, 2022
Bajtaoui Mustapha	Design and Fabrication of Rectennas for Energy Harvesting and Wireless Power Transfer	18 Juillet, 2022
EL Bakkali Mohamed	Embroidered textile and rigide UHF RFID tags design and characterization for wearbale application and health monitoring	11 Juin 2022

Co-Encadrement de thèses soutenues

Nom & Prénom du doctorant	Sujet de thèse	Date de soutenance
El Miloud AR-Reyouchi	Optimisation des performances des réseaux de communications sans fil pour la télégestion de stations de la diffusion TV/FM à QoS garantie	22 Novembre, 2014
Ikram Aznabet	Contribution au développement d'antennes de tags pour la technologie RFID-UHF	22 Décembre, 2018
Kanjaa Mohamed	Efficient Modelling of Biological Tissues by the TLM Method	25 Juillet 2020

Membre de Projets de recherche

- Projet de Coopération Maroco-Française PHC Toubkal (TBK/20/100 N° Campus 43761TJ), **responsable**
- Métamatériaux: Conception et fabrication des structures périodiques micro-ondes et millimétriques, TEC 2008-06871-C02-01, 2009-2011 (Montant 348.500 €).
- Conception et fabrication des antennes pour les systèmes de communication 3G et 4G, projet financé par IAM.
- Optimisation et Planification des Ressources Radio dans les réseaux Radio Mobiles, projet financé par IAM.
- Métamatériaux pour des circuits micro-ondes, Actions Intégrée Maroco-espagnol, A6851/06, 2006-2007.
- Simulation des effets biologiques des micro-ondes, Actions Intégrée Maroco-espagnol, 2004-2005.
- Réalisation d'un simulateur pour la modélisation des circuits micro-ondes planaires, Action Intégrée Maroco-tunisienne, 2003-2005.
- Advanced modelling of mixed signal circuits, USA Army Research office, No.N62558-02-M-5602, 2000-2002.

- Modélisation des circuits microstrip, Actions Intégrée Maroco-espagnol, 2000-2001.

PUBLICATIONS

Brevets

1- **Essaaidi Mohammed ; Mohammed Ali Ennasar ; Otman El Mrabet** "Antenne RFID TAG-UHF pour l'identification radio fréquence des objets métalliques", *N° de publication* ***MA 38734 A1,*** *2017.*

Chapitre de Livre

1- Mohammed Kanjaa, Otman El Mrabet, Mohsine Khalladi"A TLM Formulation Based on Fractional Derivatives for Dispersive Cole-Cole Media", *Intechopen(DOI: 10.5772/intechopen.96378), 20221.*

2- M. Essaaidi and **O. El Mrabet** "Dielectric Substrates Anisotropy Effects on the Characteristics of Microstrip Structures", *Advances in Electromagnetics of Complex media and metamaterials*, 449-460, Kluwer Academic Publisher, 2003.

A- Articles

1- Akazzim Y, Jofre M, El Mrabet O, Romeu J, Jofre-Roca L. "UWB-Modulated Microwave Imaging for Human Brain Functional Monitoring",. Sensors (Basel). 2023 Apr 28;23(9):4374. doi: 10.3390/s23094374. PMID: 37177578; PMCID: PMC10181633.

2- Akazzim, Youness, Otman El Mrabet, Jordi Romeu, and Luis Jofre-Roca. 2023. "Multi-Element UWB Probe Optimization for Medical Microwave Imaging" *Sensors* 23, no. 1: 271. https://doi.org/10.3390/s23010271.

3- Said Choukri Hakim Takhedmit Otman El Mrabet Laurent Cirio , "Analytical Modeling of Metamaterial Absorbers with Low Cross-Polarized Reflected Field Under Oblique Incidence Using Equivalent Medium Approximation," Progress In Electromagnetics Research M, Vol. 117, 83-93, 2023.

4- El Bakkali, M., Ennasar, M. A., El Mrabet, O., & García, R. F. "Design and experimental validation of a multifunction Single layer UHF-RFID Tag antenna", Advanced Electromagnetics, 11(1), 22–29,2022.

5- Khamlichi, M.E.; Alvarez-Melcon, A.; Mrabet, O.E.; Ennasar, M.A.; Hinojosa, J. "A Flexible and Low-Cost UHF RFID Tag Antenna for Blood Bag Traceability", *Electronics*, *11*, 439. https://doi.org/10.3390/electronics11030439,2022.

6- Mohamed El Bakkali, Otman El Mrabet, Mohammed Kanjaa, Ignacio Gil, and Raúl Fernandez-Garcia,"An embroidered passive textile RFID tag based on a T-matched antenna", Progress in electromagnetics research letters", 21 , vol. 101, p. 137-145, 2021.

7- M. Kanjaa, K. Mounirh, S. El Adraoui, O. El Mrabet, and M. Khalladi, "An ADE -TLM Modeling of Biological Tissues with Cole-Cole Dispersion Model," Progress In Electromagnetics Research M, Vol. 89, 161-169, 2020.

8- El Khamlichi, M.; Alvarez Melcon, A.; El Mrabet, O.; Ennasar, M.A.; Hinojosa, J. "Flexible UHF RFID Tag for Blood Tubes Monitoring", *Sensors* 2019, *19*, 4903.

9- M.A. Ennasar, M. Kanjaa, O El Mrabet, M. Essaaidi "Design and Characterization of a broadband flexible polyimide antenna UHF RFID Tag Sensor for detection the

concentration of salt and sugar contents in water", Progress In Electromagnetics Research C", Vol. 94 , pp. 273-283, 2019.
10- Ennasar, M. A., Aznabet, I., EL Mrabet, O., & Essaaidi, M. (2019). "Design and Characterization of a Compact Single Layer Modified S-Shaped Tag Antenna for UHF-RFID Applications", Advanced Electromagnetics, Vol.8(1), pp. 59-65, 2019.
11- I. Aznabet, M. A. Ennasar, O. El Mrabet, G. Andia-Vera, M. Khalladi, and S. Tedjni, "A Broadband Modified T-Shaped Planar Dipole Antenna for UHF RFID Tag Applications," Progress In Electromagnetics Research C, Vol. 73, 137-144, 2017.
12- M. Aznabet**, O. El Mrabet**, J.M. Floc'h, F. Falcone, and M. Drissi, "A coplanar Waveguide-Fed Printed Antenna with Complementary Split Ring resonator for wireless Communications Systems," Waves in Random and Complex Media, pp.43-51, Sep, 2014.
13- **O. El Mrabet**, M. Aznabet, F. J. Falcone, H. Rmili, J.-M. Floc'h, M. Drissi, and M. Essaaidi, "A compact split ring resonator antenna for wireless communication systems," Progress In Electromagnetics Research Letters, Vol. 36, 201-207, 2013.
14- EL Milioud A. R. Reyouchi, Kamal Ghoumid, Koutaiba Amezian, Otman Mrabet, "The Improvement of end to end delays in network management system using networking coding", *International Journal of Computer Networks & Communications World,* Vol. *5, pp.65-84, 2013.*
15- M. Bassouh**, M. Aznabet**, M. Meloui, O. EL Mrabet, M. Khalladi, " Design of a new ultra wideband planar antenna for wireless communication systems", Microwave *and Optical Technology Letters*, Vol. 55, No. 6, pp. 1335-1338, 2013.
16- EL Milioud A. R. Reyouchi, Kamal Ghoumid, Koutaiba Amezian, Otman Mrabet, MIMO-OFDM Coded for Digital Terrestrial Television Broadcasting Systems", *World Academy of Science, Engineering and Technology,* Vol. *76, pp. 849-853, 2013.*
17- El Miloud Arreyouchi, Kamal Ghoumid, Koutaiba Amezian, Otman El Mrabet, Performance Analysis of Round Trip Time in Narrowband RF Networks For Remote Wireless Communications", International Journal of Computer Science & Information technology(IJCSIT), Vol. *5, No. 5, pp. 1-20, 2013.*
18- M. Aznabet, M. Navarro-Cía, M. Beruete, F. Falcone, M. Sorolla, O. El Mrabet, M. Essaaidi, "Transmission properties of stacked SRR metasurfaces in free space", *Progress In Electromagnetics Research M*, 20, pp. 1-11, 2011.
19- M. Navarro-Cía, M. Aznabet, M. Beruete, F. Falcone, **O. El Mrabet**, M. Sorolla, and M. Essaaidi, "Stacked complementary metasurfaces for ultraslow microwave metamaterials", *Applied Physics Lett.* 96, 164103, 2010.
20- M. Beruete, M. Aznabet, M. Navarro-Cía, **O. El Mrabet**, F. Falcone, N. Aknin, M. Essaaidi, and M. Sorolla, "Electroinductive waves role in left-handed stacked complementary split ring resonators", *Optics Express*, 16(22), pp. 18312-18319, 2009.
21- Mohssin Aoutoul, M. N. Nabil Srifi, **O.EL Mrabet**, M. Essaaidi, and Ahmed El Moussaoui "Dual Band Hemispherical Dielectric Resoantor Antenna for WLAN". *Accepted for publication in International journal on information and communication technologies (IJICT), Vol. 1, No. 3-4, pp. 125-127, 2008.*
22- Mohamed Nabil Srifi, **Otman El Mrabet**, F. Falcone, Mario Sorolla, and Mohamed Essaaidi "A Novel Compact Printed Circular Antenna for very ultrawideband" *Microwave and Optical Technology Letters, vol. 51, no. 4, p.1130-1133, 2008*.

23- M. Aznabet, M. Navarro-Cía, S.A. Kuznetsov, A.V. Gelfand, N.I. Fedorinina, Yu.G. Goncharov, M. Beruete, O**. El Mrabet**, M. Sorolla, "Polypropylene-substrate-based SRR- and CSRR-metasurfaces for submillimeter waves", Optics *Express*, 16(22), pp. 18312-18319, 2008.

24- M. Aznabet, M. Beruete, M. Navarro-Cía, O. El Mrabet, F. Falcone, N. Aknin, M. Essaaidi, and M. Sorolla, '' Multiresonances in Waveguide and Metasurfaces'' *Microwave and Optical Technology Letters, vol. 50, no. 11, p. 2825-2827, November, 2008*.

25- Mohamed Nabil Srifi, **Otman El Mrabet**, and Mohamed Essaaidi "A New Compact Half-Disc Monopole Anetnna (HDMA) for UWB Communications Systems", *EuMa Proceedings*, Vol. 4, No. 1, pp. 71-75, 2008.

26- Hatem Rmili, **Otman Mrabet,** Jean-Marie Floc'h and Jean-Louis Miane, ''Study of an Electrochemically-Deposited 3D Random Fractal Tree-Dipole Antenna" *IEEE Transactions on Antennas & Propagation journal*, vol. 55, no. 4, p. 1045 – 1050, April 2007.

27- **O. El Mrabet**, M. Essaaidi and M'hamed Drissi, "Global modeling of microwave three terminal active devices using the FDTD method", IEICE Electron. Express, Vol. 2, No. 2, pp.43-48, 2005.

28- **O. El Mrabet** and M. Essaaidi "A new Algorithm for Modeling Packaged Schottky Diodes Using a Reduced Nonlinear Lumped Network (RNL²N) – FDTD Approach". *IEEE Microwave & wireless Components Letters*, Vol.14, N°2, p.86-88, Fev, 2004.

29- **O. El Mrabet** and M. Essaaidi "Comments on Rigorous Modeling of Packaged Schottky Diodes by the Nonlinear Lumped Network (NL²N)–FDTD Approach". *IEEE Transactions on Microwaves Theory and Techniques journal*, Vol 50, N° 10, p. 2411, Oct 2002.

B- Communications internationals & nationals

1- M. E. Bakkali, M. Martinez-Estrada, R. Fernandez-Garcia, I. Gil and O. E. Mrabet, "Effect of Bending on a Textile UHF-RFID Tag Antenna," *2020 14th European Conference on Antennas and Propagation (EuCAP)*, Copenhagen, Denmark, 2020, pp. 1-5, doi: 10.23919/EuCAP48036.2020.9135331.

2- M. E. Khamlichi, O. E. Mrabet and A. Á. Melcón, "A Ground Slotted UHF Tag Antenna For Blood Bags Monitoring," *2019 IEEE 19th Mediterranean Microwave Symposium (MMS)*, Hammamet, Tunisia, 2019, pp. 1-5, doi: 10.1109/MMS48040.2019.9157267.

3- Y. Akazzim, M. Kanjaa, O. E. Mrabet, L. Jofre and M. Essaaidi, "An UWB Tapered Slot Vivaldi Antenna (TSA) with Improved Characterestics," *2019 IEEE 19th Mediterranean Microwave Symposium (MMS)*, Hammamet, Tunisia, 2019, pp. 1-4, doi: 10.1109/MMS48040.2019.9157265.

4- A. Abraray *et al*., "A Metamaterial-Inspired Small Rectenna for RF Energy Harvesting Based on a 3-Way Power Combiner," *2019 IEEE Global Communications Conference (GLOBECOM)*, Waikoloa, HI, USA, 2019, pp. 1-6, doi: 10.1109/GLOBECOM38437.2019.9013495.

5- A. El Yousfi, A. Es-Salhi, A. Lamkaddem, O. El Mrabet, M. Aznabet and M. Ali Ennasar, "A dual band inverted L monopole antenna based on Complemenatry Split ring Resonator for RFID applications," *2019 International Conference on Wireless Technologies, Embedded and Intelligent Systems (WITS)*, Fez, Morocco, 2019, pp. 1-3, doi: 10.1109/WITS.2019.8723843.

6- K. El Ouahabi, K. Roky, O. El Mrabet, M. Aznabet and M. A. Ennasar, "Bandwidth Enhancement of Complementary Split Ring Based Antenna," *2018 International Symposium on Advanced Electrical and Communication Technologies (ISAECT)*, Rabat, Morocco, 2018, pp. 1-3, doi: 10.1109/ISAECT.2018.8618820.

7- M. Aznabet, O. E. Mrabet, M. Beruete, M. Navarro-Cía and M. Essaidi, "Chiral SRR Metasurfaces for Circular Polarisation Conversion," *2018 18th Mediterranean Microwave Symposium (MMS)*, Istanbul, 2018, pp. 404-406, doi: 10.1109/MMS.2018.8611834.

8- F. Z. Khoutar, M. Aznabet and O. E. Mrabet, "Gain and Directivity Enhancement of a Rectangular Microstrip Patch Antenna using a Single Layer Metamaterial Superstrate," *2018 6th International Conference on Multimedia Computing and Systems (ICMCS)*, Rabat, 2018, pp. 1-4, doi: 10.1109/ICMCS.2018.8525893.

9- M. E. Khamlichi, O. EL Mrabet, M. E. Bakkali, M. Khalladi and M. A. Ennasar, "T-shaped Tag antenna for UHF RFID Applications," *2018 6th International Conference on Multimedia Computing and Systems (ICMCS)*, Rabat, 2018, pp. 1-4, doi: 10.1109/ICMCS.2018.8525951.

10- A. Abattouy, M. Y. Douieb, M. A. Ennasar, O. EL Mrabet and K. Ameziane, "Desing of a low cost meander line RFID tag antenna using 3D printing Technology," *2018 6th International Conference on Multimedia Computing and Systems (ICMCS)*, Rabat, 2018, pp. 1-3, doi: 10.1109/ICMCS.2018.8525957.

11- M. E. Bakkali, O. E. Mrabet, M. E. Khamlichi, M. Khalladi and M. A. Ennasar, "Single-Layer UHF RFID Tag Antenna with Multifunctional Characteristics," *2018 6th International Conference on Multimedia Computing and Systems (ICMCS)*, Rabat, 2018, pp. 1-3, doi: 10.1109/ICMCS.2018.8525927.

12- M. L. Moutis, M. A. Ennasar, I. Aznabet, O. El Mrabet and A. Elfarkhsi, "A Low Cost Automated RFID Tag Antenna Measurement Set-up Based on UHF-RFID Reader," *2018 6th International Conference on Multimedia Computing and Systems (ICMCS)*, Rabat, 2018, pp. 1-5, doi: 10.1109/ICMCS.2018.8525938.

13- K. E. Ouahabi, K. Roky and O. E. Mrabet, "New Design of Compact CSRR Antenna Loaded with Rectangular Slots," *2018 6th International Conference on Multimedia Computing and Systems (ICMCS)*, Rabat, 2018, pp. 1-3, doi: 10.1109/ICMCS.2018.8525922.

14- M. Bajtaoui, A. Abraray, O. EL Mrabet, M. Aznabet and M. Essaaidi, "A novel compact CPW OCSRR strucutre for 2.45 GHz rectenna application," *2016 International Renewable and Sustainable Energy Conference (IRSEC)*, Marrakech, 2016, pp. 979-982, doi: 10.1109/IRSEC.2016.7984042.

15- M. A. Ennasar, M. Essaaidi, I. Aznabet and O. EL Mrabet, "A UHF RFID tag antenna with improved bandwidth," *2016 5th International Conference on Multimedia Computing and Systems (ICMCS)*, Marrakech, 2016, pp. 465-467, doi: 10.1109/ICMCS.2016.7905571.

16- A. Abraray *et al*., "Design of a 5.8 GHZ rectenna by using metamaterial inspired small antenna," *2016 5th International Conference on Multimedia Computing and Systems (ICMCS)*, Marrakech, 2016, pp. 416-418, doi: 10.1109/ICMCS.2016.7905670.

17- **O. El Mrabet**, M. EL Salhi, M. Aznabet, F. Falcone, J. M Floch, M. Drissi, M. Essaaidi, M. Sorolla, "Asymmetric double SRR to design multi-stop band filter", Mediterranean Microwaves Symposium, MMS'12, Istanbul, Turkey, 2-5 September, (2012).

18- I. A. I. Naib, O. El Mrabet, "Different Scenarios of Uni-layer CPW Bandstop filters", Progress In Electromagnetics Research Symposium 2011, PIERS 2011 in Marrakesh, Marrakesh, Morocco, 2011.

19- M. Aznabet, M. Navarro-Cía, M. Beruete, F. Falcone, O. El Mrabet, M. Essaaidi, M. Sorolla, "Slow Light Phenomena in Stacked Metasurfaces", Progress In Electromagnetics Research Symposium 2011, PIERS 2011 in Marrakesh, Marrakesh, Morocco, 2011.

20- O. El Mrabet, M. Aznabet, F. Falcone, M. Essaaidi, M. Sorolla, "A Compact Antenna Based on Split Ring Resonator", 4th European Conference on Antennas and Propagation, EuCAP'2010, Barcelona, Spain, 2010.

21- O. El Mrabet, M. Goulouh, M. Aznabet, F. Falcone, M. Khalladi, M. Essaaidi and M. Sorolla, ``Novel printed planar antenna using split ring resonator'', *META'10 & NATO Advanced Research Workshop Metamaterials*, Cairo, , Egypte, 2010.

22- M. Aznabet, O. El Mrabet, M. Navarro-Cía, M. Beruete, F. Falcone, M. Essaaidi, M. Sorolla, "Wave Propagation Properties in Stacked SRR/CSRR Metasurfaces at Microwave Frequencies", Mediterranean Microwaves Symposium, MMS'09, Tangier, Morocco, 2009.

23- M.M.A. Abaga Abessolo, M. Aznabet, A. Alilouche, O. El Mrabet, M. Essaaidi, M. Beruete, M. Navarro-Cía, F. Falcone, N. Aknin, M. El Moussaoui, M. Sorolla, "Planar horn antenna: Application of periodic stacked subwavelength hole arrays with metamaterials properties", Mediterranean Microwaves Symposium, MMS'09, Tangier, Morocco, 2009.

24- M. Aznabet, O. El Mrabet, M. Navarro-Cía, M. Beruete, F. Falcone, M. Sorolla, "Transmission Resonance in CSRR metasurfaces", 3rd Young Scientist Meeting on Metamaterials 2009, Leganes, Spain, 2009.

25- M. Aznabet, O. El Mrabet, M. Navarro-Cía, M. Beruete, F. Falcone, N. Aknin, M. Essaaidi, M. Sorolla, "Complementary SRRs Higher-Order Resonances in metasurfaces", IEEE AP-S International Symposium on Antennas and Propagation and 2009 USNC/URSI National Radio Science Meeting, Charleston, USA, 2009.

26- M. Nabil Srifi, **O.EL Mrabet**, and M. Essaaidi "A Novel Printed Circular Antenna for ultrawideband Applications". *Mediterranean Microwave Symposium (MMS2008)*, October 14 – 16, Damascus, Syria.

27- Bilal EL Jaafari, **O.EL Mrabet**, and M. Essaaidi "FDTD Simulation of A Linear Amplifier". *Mediterranean Microwave Symposium (MMS2008)*, October 14 – 16, Damascus, Syria.

28- M. Sorolla, M. Beruete, M. Navarro-Cía, I. Campillo, M. Aznabet, **O. El Mrabet**, F. Falcone, S.A. Kutznetsov, A. V. Gelfand, N. I. Fedorinina, ''Negative Refraction route by stacked subwavelength hole arrays

at millimeter wave and THz frequencies'', *Metamaterials' 2008*, Pamplona, Spain, 2008.

29- M. Sorolla, S.A. Kutznetsov, A.V. Gelfand, N.I. Fedorinina, M. Aznabet, M. Navarro-Cía, **O. El Mrabet**, M. Beruete, F. Falcone, ''SRR and CSRR Millimeter Wave Metasurfaces'', *Metamaterials' 2008*, Pamplona, Spain, 2008

30- M. Navarro-Cía, M. Beruete, **O. El Mrabet**, I. Campillo, M. Sorolla, "Oblique Incidence in Extraordinary Transmission Metamaterial", *IEEE AP-S International Symposium on Antennas and Propagation 2008 and USNC/URSI National Radio Science Meeting 2008, San Diego, USA, June, 2008*.

31- M. Aznabet, M. Beruete, F. Falcone, M. Navarro-Cía, **O. EL Mrabet**, N. Aknin, M. Essaaidi, M. Sorolla, " SRR's High-Order Resonances in Waveguide and Free Space", *META'08 & NATO Advanced Research Workshop Metamaterials*, Marrakech, Morocco, May, 2008.

32- M. Aznabet, **O. El Mrabet**, M. Beruete, F. Falcone, M. Navarro-Cía, N. Aknin, M. Essaaidi, M. Sorolla, "A Novel Frequency Selective Surface Design based on Metamaterials", *META'08 & NATO Advanced Research Workshop Metamaterials*, Marrakech, Morocco, May, 2008.

33- M. Navarro-Cía, M. Beruete, M. Sorolla, **O. El Mrabet**, I. Campillo, "Negative Refraction in Stacked Subwavelength Hole Array Metamaterial", *2nd Young Scientist Meeting on Metamaterials 2008*, Barcelona, Spain, February, 2008.

34- M. Navarro-Cía, M. Beruete, **O. El Mrabet**, I. Campillo, M. Sorolla, "Angle-of-Incidence and Polarization dependence of the Extraordinary Transmission Metamaterial", *1st Conferencia Española de Nanofotónica*, Tarragona , Spain, April, 2008.

35- M. Nabil Srifi, M. Aznabet, **O. El Mrabet**, N. Aknin, and M. Essaaidi**, "**UWB Compact Monopole Antennas for Breast Cancer Detection**"**, *Colloque International Optique Hertzienne & Diélectriques (OHD), Valence, France, 2007.*

36- **O.EL Mrabet**, Mohssin Aoutoul, M. N. Nabil Srifi, M. Essaaidi, and Ahmed El Moussaoui "Dual Band Hemispherical Dielectric Resoantor Antenna for WLAN". *Ictis'07*, April 3-5, Fez - Morocco,2007.

37- Mohssin Aoutoul, **O.EL Mrabet**, M. N. Nabil Srifi, M. Essaaidi, and Ahmed El Moussaoui "A Minuature UWB Rectangular Dielectric Resoantor Antenna ". *Ictis'07*, April 3-5, Fez - Morocco, 2007.

38- M. Nabil Srifi, **O.EL Mrabet**, and M. Essaaidi " Band notched Printed compact rectangular-slot disc monopole antenna for UWB applications''**.** *Ictis'07*, April 3-5, Fez - Morocco, 2007.

39- El Mrabet O., Aznabet M., Srifi M. N., Aknin N., and Essaaidi Mohamed, '' A Novel Compact UWB Planar Monopole Antenna for UWB Communication Systems'', *International conference on science & technology, JICT'07*, March 21 – 23, Malaga-Tangier , 2007.

40- M. Nabil Srifi, **O.EL Mrabet**, and M. Essaaidi "UWB Half disc monopole Antenna (HDMA) for Medical Applications". *SEI&TI-07*, Faculté des Sciences et Techniques Mohammédia, February 25 – 26, Mohammédia, Morocco,2007.

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