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LANGUES

Arabic 

English 

French 

FORMATION

EDUCATION/QUALIFICATIONS

Diplômes

- Baccalaureate, natural science, Batna, Algeria. June 2002
Electronics Engineer Diploma, option : Communication, Department of Electronics, University of Batna. June 2008
- Advanced Studies Diploma (DEA), option : Microwave, Department of Electronics, University of Batna. December 2009
- Magister in Microwave, Department of Electronics, University of Batna. " Using the integral equation of the electric field method and artificial neural networks to study a two-layer printed antenna operating in TM₁₁ mode ". December 2011
- PhD in Microwave, Department of Electronics, University of Batna. " Analytical and numerical evaluation of electromagnetic characteristics of microstrip structures " May 2015
- HDR in Electronics specialty, Department of Electronics, University of Batna 2. "Étude des caractéristiques de résonance d'une antenne microbande supraconductrice avec radôme". May 2017
- Professor December 2021
- Member at the Advanced Electronics Laboratory (LEA), Team: Microwaves, Department of Electronics, Faculty of Technology, University of Batna 2. May 2018 To this day



INTERNATIONAL PUBLICATIONS

1- S. Bedra, R. Bedra, S. Benkouda, and T. Fortaki, "Efficient CAD Model to Analysis of High Tc Superconducting Circular Microstrip Antenna on Anisotropic Substrates," *Advanced Electromagnetics*, vol. 6, pp. 40-45, **2017**.

<https://aemjournal.org/index.php/AEM/article/view/446>

2- S. Bedra, R. Bedra, S. Benkouda, and T. Fortaki, "Superstrate loading effects on the resonant characteristics of high Tc superconducting circular patch printed on anisotropic materials," *Physica C: Superconductivity and its Applications*, vol. 543, pp. 1-7, **2017**.

<https://www.sciencedirect.com/science/article/abs/pii/S0921453417304082>

3- S. Bedra, S. Benkouda, and T. Fortaki, "An efficient study of circular microstrip antenna on suspended and composite substrates," *Journal of Computational Electronics*, vol. 16, no. 3, pp. 922-929, **2017**.

<https://link.springer.com/article/10.1007/s10825-017-1012-9>

4- S. Bedra, R. Bedra, S. Benkouda, and T. Fortaki, "Analysis of HTS circular patch antennas including radome effects," *International Journal of Microwave and Wireless Technologies*, vol. 10, pp. pp. 843-850, **2018**.

<https://www.cambridge.org/core/journals/international-journal-of-microwave-and-wireless-technologies/article/abs/analysis-of-hts-circular-patch-antennas-including-radome-effects/BA2F048969B099808D2FDBAC4487CC8A>

5- A. Gadda, **S. Bedra**, C. Agaba, S. Benkouda, R. Bedra, and T. Fortaki, "Computer-Aided Design of Superconducting Equilateral Triangular Patch on Anisotropic Substrates," *Progress In Electromagnetics Research M*, Vol. 86, pp. 203-211, **2019**.

<https://www.jpier.org/pierm/pier.php?paper=19090803>

6- A. Mahamdi, S. Benkouda, M. Amir, **S. Bedra**, and T. Fortaki, "Study of two-layered circular patch using moment method and genetic algorithms," *International Journal of Electrical & Computer Engineering*, vol. 9, pp. 5368-5375, **2019**.

<http://ijece.iaescore.com/index.php/IJECE/article/view/17376>

6- S. Bedra, R. Bedra, S. Benkouda, and T. Fortaki, "Study of an Inverted Rectangular Patch Printed on Anisotropic Substrates," *IETE Journal of Research*, pp. 1-8, **2019**. (In press)

<https://www.tandfonline.com/doi/abs/10.1080/03772063.2019.1634497?journalCode=tijr20>

7- S. Bedra, S. Benkouda, R. Bedra, and T. Fortaki, "Inverted HTS rectangular patch antennas: Theoretical investigation," *Physica C: Superconductivity and its Applications*, vol. 580, pp. 1353802, **2021**.

<https://www.sciencedirect.com/science/article/abs/pii/S0921453420304007>

8- S. Bedra, S. Benkouda, R. Bedra, and T. Fortaki, "Characteristics of HTS inverted circular patches on anisotropic substrates," *Journal of Computational Electronics*, vol. 20, no. 2, pp. 892-899, **2021**.

<https://rd.springer.com/article/10.1007%2Fs10825-020-01596-1>

- 1- **S. Bedra**, S. Benkouda, M. Amir and T. Fortaki, "Resonant frequency of tunable microstrip ring antenna printed on isotropic or uniaxially anisotropic substrate," *Advanced Electromagnetics*, vol. 2, no. 2, pp. 6-9, **2013**.
<http://aemjournal.org/index.php/AEM/article/view/194>
- 2- A. Messai, S. Benkouda, M. Amir, **S. Bedra** and T. Fortaki, "Analysis of high Tc superconducting rectangular microstrip patches over ground planes with rectangular apertures in substrates containing anisotropic materials," *International Journal of Antennas and Propagation*, vol. 2013, Article ID 169893, pp. 1-7, **2013**.
<https://www.hindawi.com/journals/ijap/2013/169893/>
- 3- **S. Bedra**, S. Benkouda, and T. Fortaki, "Analysis of a Circular Microstrip Antenna on Isotropic or Uniaxially Anisotropic Substrate Using Neurospectral Approach," *COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, vol. 33, no. 1/2, pp.567 - 580, **2014**.
<https://www.emerald.com/insight/content/doi/10.1108/COMPEL-10-2012-0225/full/html>
- 4- **S. Bedra**, R. Bedra, S. Benkouda, and T. Fortaki, "Full-Wave Analysis of Anisotropic Circular Microstrip Antenna with Air Gap Layer," *Progress In Electromagnetics Research M*, vol. 34, pp. 143-151, **2014**.
<https://www.jpier.org/pierm/pier.php?paper=13122205>
- 5- M. Amir, **S. Bedra**, S. Benkouda, and T. Fortaki, "Bacterial foraging optimisation and method of moments for modelling and optimisation of microstrip antennas," *IET Microwaves, Antennas & Propagation*, vol. 8, no. 4, pp. 295 – 300, **2013**.
<https://ietresearch.onlinelibrary.wiley.com/doi/pdf/10.1049/iet-map.2013.0086>
- 6- **S. Bedra**, R. Bedra, S. Benkouda, and T. Fortaki, "Efficient full-wave analysis of inverted circular microstrip antenna," *Microwave and Optical Technology Letters*, vol. 56, pp. 2422-2425, **2014**.
<https://onlinelibrary.wiley.com/doi/abs/10.1002/mop.28618>
- 7- **S. Bedra** and T. Fortaki, "Rigorous Full-Wave Analysis of Rectangular Microstrip Patch Antenna on Suspended and Composite Substrates," *Wireless personal communications*, vol. 78, pp. 1455-1463, **2014**.
<https://link.springer.com/article/10.1007/s11277-014-1827-7>
- 8- M. Hassad, **S. Bedra**, R. Bedra, S. Benkouda, A. S. Boughrara, and T. Fortaki, "Resonant characteristics of rectangular Microstrip antenna printed on electric–magnetic uniaxial anisotropic substrates," *International Journal of Microwave and Wireless Technologies*, vol. 7, pp. 783-790, **2015**.
<https://www.cambridge.org/core/journals/international-journal-of-microwave-and-wireless-technologies/article/abs/resonant-characteristics-of-rectangular-microstrip-antenna-printed-on-electricmagnetic-uniaxial-anisotropic-substrates/11D767A9F7586BD53F2F4A039CC3291B>
- 9- L. Djouane, **S. Bedra**, R. Bedra, and T. Fortaki, "Neurospectral modeling of rectangular patch with rectangular aperture in the ground plane," *International Journal of Microwave and Wireless Technologies*, vol. 7, pp. 759-768, **2015**.
<https://www.cambridge.org/core/journals/international-journal-of-microwave-and-wireless-technologies/article/abs/neurospectral-modeling-of-rectangular-patch-with-rectangular-aperture-in-the-ground-plane/EE3B625B819F1A5E6DCFF4EE1EE130E8>
- 10- R. Bedra, **S. Bedra**, S. Benkouda, and T. Fortaki, "Efficient Full-Wave Analysis of Resonant Modes of Circular Microstrip Antenna Printed on Isotropic or Uniaxially Anisotropic Substrate," *Wireless personal communications*, vol. 81, pp. 239-251, **2015**.
<https://www.springerprofessional.de/en/efficient-full-wave-analysis-of-resonant-modes-of-circular-micro/10766450>
- 11- **S. Bedra** and T. Fortaki, "Hankel transform domain analysis of covered circular microstrip patch printed on an anisotropic dielectric layer," *Journal of Computational Electronics*, vol. 14, pp. 747-753, **2015**
<https://rd.springer.com/article/10.1007%2Fs10825-015-0708-y>

<p>12- S. Bedra and T. Fortaki, "High-Tc superconducting rectangular microstrip patch covered with a dielectric layer," <i>Physica C: Superconductivity and its Applications</i>, vol. 524, pp. 31-36, 2016.</p> <p>https://www.sciencedirect.com/science/article/abs/pii/S0921453416300028?via%3Dihub</p>
<p>13- S. Bedra and T. Fortaki, "Resonant and Radiation Characteristics of Rectangular Microstrip Patch Antenna on Suspended-Composite Substrates," <i>Applied Computational Electromagnetics Society Journal</i>, vol. 31, pp. 138-143, 2016.</p> <p>https://aces-society.org/includes/downloadpaper.php?of=ACES_Journal_February_2016_Paper_6&nf=16-2-6</p>
<p>14- S. Bedra and T. Fortaki, "Effects of Superstrate Layer on the Resonant Characteristics of Superconducting Rectangular Microstrip Patch Antenna," <i>Progress In Electromagnetics Research C</i>, vol. 62, pp. 157-165, 2016.</p> <p>https://www.jpier.org/pierc/pier.php?paper=15122902</p>
<p>15- R. Bedra, S. Bedra, and T. Fortaki, "Analysis of elliptical-disk microstrip patch printed on isotropic or anisotropic substrate materials," <i>International Journal of Microwave and Wireless Technologies</i>, vol. 8, no. 2, pp. 251-255, 2016.</p> <p>https://www.cambridge.org/core/journals/international-journal-of-microwave-and-wireless-technologies/article/abs/analysis-of-elliptical-disk-microstrip-patch-printed-on-isotropic-or-anisotropic-substrate-materials/63B277B000979B1133CAE0C6FB58D24F</p>
<p>16- L. Barkat, S. Bedra, T. Fortaki, and R. Bedra, "Neurospectral computation for the resonant characteristics of microstrip patch antenna printed on uniaxially anisotropic substrates," <i>International Journal of Microwave and Wireless Technologies</i>, vol. 9, pp. 613-620, 2017.</p> <p>https://www.cambridge.org/core/journals/international-journal-of-microwave-and-wireless-technologies/article/abs/neurospectral-computation-for-the-resonant-characteristics-of-microstrip-patch-antenna-printed-on-uniaxially-anisotropic-substrates/859FA2B6042DA2EA14F0A4FEF3E2BF9B</p>
<p>INTERNATIONALES COMMUNICATIONS</p>
<p>1- A. Mahamdi, S. Bedra, R. Bedra, and S. Benkouda, "CAD cavity model analysis of high Tc superconducting rectangular patch printed on anisotropic substrates," <i>5th International Conference on Electrical Engineering- in Boumerdes (ICEE-B)</i>, 2017, pp. 1-4, Algeria.</p>
<p>2- A. Gadda, A. Mahamdi, S. Benkouda, and S. Bedra "Resonant characteristics of a superconducting thin film resonator using the two-fluid method and artificial neural networks," <i>2nd International Conference on Automatic Control, Telecommunication & Signals - in Annaba (ICATS'17)</i>, 2017, pp. 1-4, Algeria.</p>
<p>3- A. Mahamdi, S. Bedra, L. Barkat, and S. Benkouda "Neurocomputational model of annular-ring microstrip antenna with air gap layer," <i>2nd International Conference on Automatic Control, Telecommunication & Signals - in Annaba (ICATS'17)</i>, 2017, pp. 1-4, Algeria.</p>
<p>4- A. Mahamdi, S. Benkouda, and S. Bedra, "Artificial Neural Network Model Analysis of Tunable Circular Microstrip Patch Antenna," in <i>2019 International Conference on Advanced Systems and Emergent Technologies (IC_ASET)</i>, 2019, pp. 229-233, Tunis, Tunisia.</p>
<p>5- A. Mahamdi, S. Benkouda, and S. Bedra, "Fast and Accurate Model to Determine the Resonant Characteristics of Elliptical Microstrip Patch Antenna," in <i>2019 International Conference on Advanced Systems and Emergent Technologies (IC_ASET)</i>, 2019, pp. 234-237, Tunis, Tunisia.</p>
<p>1- S. Bedra, and T. Fortaki, "Resonant frequency of tunable circular microstrip patch antennas using artificial neural networks," <i>International Congress on Telecommunication and Application (ICTA12)</i> 11-12 APRIL 2012, Bejaia, Algeria.</p>

<p>2- S. Bedra, M. Amir, S. Benkouda, and T. Fortaki, "Study of dual-resonant frequency of elliptical microstrip antenna using artificial neural networks," <i>Première Conférence Nationale sur les Télécommunications (CNT 2012)</i>, 11& 12 Novembre, 2012, Guelma, Algérie.</p>
<p>3- M. Amir, S. Bedra, S. Benkouda, and T. Fortaki, "New formula for the calculation of the resonant frequency of double-layer circular patch based on cavity model and genetic algorithm (GA)," <i>Première Conférence Nationale sur les Télécommunications (CNT 2012)</i>, 11& 12 Novembre, 2012, Guelma, Algérie.</p>
<p>4- S. Bedra, F. Chebara, and T. Fortaki, "Analysis of resonant characteristics and radiation patterns of a circular microstrip antenna on isotropic or uniaxially anisotropic substrate using artificial neural network," <i>International Conference on Electronics & Oil: From Theory to Applications (ICEO'2013)</i>, March 05-06, 2013, Ouargla, Algeria.</p>
<p>5- S. Bedra, S. Benkouda, L. Djouane, and T. Fortaki, "The air gap effect on the resonant frequency of circular microstrip antenna using artificial neural network," <i>International Conference on Systems and Information Processing (ICSIP 2013)</i>, May 12-14, 2013, Guelma, Algeria.</p>
<p>6- S. Bedra, L. Djouane, S. Benkouda, and T. Fortaki, "Analysis of tunable annular ring microstrip antenna printed on isotropic or uniaxial anisotropic substrate," <i>International Conference on Systems and Information Processing (ICSIP 2013)</i>, May 12-14, 2013, Guelma, Algeria.</p>
<p>7- S. Benkouda, S. Bedra, I. Benacer, and T. Fortaki, "Radiation pattern of circular disc antenna printed on isotropic or uniaxially anisotropic substrate," <i>International Conference on Nanoelectronics, Communications and Renewable Energy 2013 (ICNCRE 2013)</i>, pp. 237–242, ISBN: 978-81-925233-8-5, September 22-23, 2013, Jijel, Algeria.</p>
<p>8- S. Bedra, S. Benkouda, I. Benacer, and T. Fortaki, "Resonant characteristics of circular microstrip antenna using genetic algorithm optimization," <i>International Conference on Nanoelectronics, Communications and Renewable Energy 2013 (ICNCRE 2013)</i>, pp. 255–259, ISBN: 978-81-925233-8-5, September 22-23, 2013, Jijel, Algeria.</p>
<p>9- S. Benkouda, S. Bedra, M. Benacer, and T. Fortaki, "Modeling and design of rectangular microstrip patch antenna with iso/anisopropic substrate using neuro-spectral computation approach," <i>International Conference on Nanoelectronics, Communications and Renewable Energy 2013 (ICNCRE 2013)</i>, pp. 264–269, ISBN: 978-81-925233-8-5, September 22-23, 2013, Jijel, Algeria.</p>
<p>10- A. Messai, S. Bedra, M. Amir, and T. Fortaki, "Resonant frequency of tunable microstrip ring antenna printed on isotropic or uniaxial anisotropic substrate," <i>The 2nd Advanced Electromagnetics Symposium (Proceedings of AES 2013)</i>, pp. 67–68, ISBN: 978-2-9545460-1-8, March 19 – 22, 2013, Sharjah, United Arab Emirates.</p>
<p>11- R. Bedra, S. Bedra, S. Benkouda, and T. Fortaki, "Comportement Bifréquences des Antennes Microbandes Empilées Gravées sur des Matériaux à Anisotropie Electrique et Magnétique," <i>International Congress on Telecommunication and Application (ICTA14)</i> 23-24 APRIL 2014, Bejaia, Algeria.</p>
<p>12- S. Bedra, R. Bedra, S. Benkouda, and T. Fortaki, "Spectral-domain Analysis of Rectangular Microstrip Patch Over Ground Plane with Rectangular Aperture and Variable Air Gap ," <i>International Congress on Telecommunication and Application (ICTA14)</i> 23-24 APRIL 2014, Bejaia, Algeria.</p>

13- S. Bedra, T. Fortaki, R. Bedra, and A. Messai, "Extended Cavity Model to Analysis Tunable Circular Disk Microstrip Antenna Using Genetic Algorithm," *The 7th International Conference on Information Technology (ICIT 2015)*, pp. 679-684, ISBN 978-9957-8583-3-9, May 12-15, 2015, Al Zaytoonah University of Jordan, Amman, **Jordan**.

14- S. Bedra, T. Fortaki, R. Bedra, and A. Messai, "Modeling and Design of Anisotropic Circular Microstrip Patch Antenna Using Neurospectral Computation Approach," *The 7th International Conference on Information Technology (ICIT 2015)*, pp. 127-133, ISBN 978-9957-8583-3-9, May 12-15, 2015, Al Zaytoonah University of Jordan, Amman, **Jordan**.

15- S. Bedra, R. Bedra, L. Barkat, and T. Fortaki "Extended Cavity Model to Analysis Circular Disk Microstrip Antenna on Isotropic or Uniaxial Anisotropic Substrate with Air Gap Layer," *3rd International Conference on Signal, Image, Vision and their Applications (SIVA'15)*, University of Guelma - November 23-25, 2015 - www.pimis.net/siva15, **Algeria**.

16- S. Bedra, L. Barkat, R. Bedra, and T. Fortaki "Estimation of Resonant Frequency of a Circular Ring Microstrip Antenna Using Artificial Neural Network," *3rd International Conference on Signal, Image, Vision and their Applications (SIVA'15)*, University of Guelma - November 23-25, 2015 - www.pimis.net/siva15, **Algeria**.