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Ibrahim Abdelbasit Ismail Mohamed Elmashad

Date of birth: 17/03/1987 | **Nationality:** Egyptian | **Gender:** Male | **Phone number:** (+20) 01114830438 (Mobile) | **Email address:** ibrahim.elmashad@fsc.bu.edu.eg |

Address: Faculty of Science, Benha University, Benha city, Qaliubiya governorate, Egypt., 13518, Benha, Egypt (Work)

WORK EXPERIENCE

26/04/2017 – CURRENT Benha, Egypt

LECTURER OF THEORETICAL PHYSICS DEPARTMENT OF PHYSICS, FACULTY OF SCIENCE, BENHA UNIVERSITY

Research statement

My research area is Theoretical Physics. More specifically, I am interested in Quark-Gluon Plasma QGP state of matter and its thermodynamic properties. I studied the Quantum Gravity effect on many topics like quark-gluon plasma and the Dirac equation which are used in the description of a new material of practical interest like Graphene. Also, my research is focusing on studying the possible restrictions on the generalized uncertainty principle GUP different models and their results on some low energy phenomena.

Teaching statement

I have a good experience in teaching both practical and theoretical courses for undergraduate students like:
1. Teaching the Physics Laboratories (Ph 180, Ph 181, ...etc).
2. Teaching assistant in Quantum Mechanics (Ph 311, Ph 411).
3. Teaching Quantum Mechanics (Ph 311 and Ph 411) for third year students and Applied Physics for first year students.
4. Teaching Principles of Modern Physics Ph 225 for second and third year students.
5. I am a general supervisor to the second year labs. for optics and sharing in its development by applying a new and modern experiments.
6. Teaching for first year students for Faculty of Science- Benha University, Faculty of Veterinary Medicine- Benha University, Faculty of Computers and Informatics- Benha University, Faculty of Education- Benha University, Faculty of Physical Therapy- Benha University (from first to fourth year students) and Faculty of Pharmacy- Zagazig University.

26/04/2017 – CURRENT Benha, Egypt

LECTURER OF THEORETICAL PHYSICS DEPARTMENT OF PHYSICS, FACULTY OF SCIENCE, BENHA UNIVERSITY

EDUCATION AND TRAINING

21/03/2017 – CURRENT Benha, Egypt

PHD. DEGREE IN THEORETICAL PHYSICS Faculty of Science, Benha University, Egypt.

Address Benha city, Qaliubiya governorate, Egypt., Benha, Egypt | **Website** https://www.fsci.bu.edu.eg/en/

30/06/2013 – 20/03/2017 Benha, Egypt

M. SC DEGREE IN THEORETICAL PHYSICS Faculty of Science, Benha University, Egypt.

Address Benha city, Qaliubiya governorate, Egypt., Benha, Egypt | **Website** https://www.fsci.bu.edu.eg/en/

14/09/2004 – 29/07/2008 Benha, Egypt

B. SC DEGREE OF PHYSICS WITH GENERAL GRAD EXCELLENT WITH HONOR Faculty of Science, Benha University, Egypt.

Address Benha city, Qaliubiya governorate, Egypt., Benha, Egypt | **Website** https://www.fsci.bu.edu.eg/en/

LANGUAGE SKILLS

Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office | Skype | LinkedIn | Internet user

ADDITIONAL INFORMATION

PUBLICATIONS

" Testing the Core-Cluster Model Calculations for Some Heavy Deformed Nuclei " L. I. Abou-Salem,K. E. Abdelmageed, I. A. Elmashad,and R. Al Allam, International Journal of Modern Physics E 28 (2019).

– 2019

"Generalized Dirac structure beyond the linear regime in graphene" A.Iorio,P.Pais, I.A.Elmashad, A.F.Ali, Mir Faizal,and L.I.Abou-Salem [arXiv:1706.01332] [physics.gen-ph], International Journal of Modern Physics D Vol. 27, No. 8 (2018) 1850080.

– 2018

" The Quark-Gluon Plasma Equation of State and the Generalized Uncertainty Principle" L. I. Abou-Salem, N. M. El Naggar, and I. A. Elmashad, Advances in High Energy Physics, 103576 (2015).

– 2015

" Quantum Gravity effect on the Quark-Gluon Plasma" I. Elmashad, A. F. Ali, L.I. Salem, JUnNabi , A. Tawfik, SOP Trans.Theor.Phys. 1 (2014) 1-6. e-print: arXiv:1208.4028 [hep-ph].

– 2014

"A study on quark-gluon Plasma equation of state using generalized uncertainty principle" N. M. El Naggar, L.I. AbouSalem, I. Elmashad, Ahmed Farag Ali. Journal of Modern Physics, 2013, 4 , 13-20 [doi: 10.4236/jmp.2013.44A003].

– 2013

"Effect of the generalized uncertainty principle on QGP phase transition" I. A. Elmashad, Asmaa G. Shalaby, International Journal of Modern Physics D Vol. 30, No. 15, 2150118 (2021).

– 2021

"Universality of minimal length" Ahmed Farag Ali, Ibrahim Elmashad, Jonas Mureika, Physics Letters B 831 (2022) 137182.

– 2022

"Theoretical and Observational Implications of Planck's Constant as a Running Fine Structure Constant" Ahmed Farag Ali, Ibrahim Elmashad, Caroline Gorham, Jonas Mureika, and Elias C. Vagenas – 2023
Submitted for publishing

CONFERENCES AND SEMINARS

I am a participant at the ECTP international conference on" Primordial QCD Matter in LHC Era Implication of QCD results on the early universe" Dec 4- 8, 2011 Cairo- Egypt.

I am a participant at "Third International High Energy Physics School" in Cairo University (Opening and Lecture Sessions) and British University in Egypt (Training and Closing Sessions) April 26- May 3, 2012.

I am a participant at the ECTP international conference on" Primordial QCD Matter in LHC Era" Feb 10- 14, 2013 Cairo- Egypt.

I am a participant at" German-Egyptian School of Particle Physics" Feb 24-28, 2013 at Zewail City of Science and Technology.

I am a participant at" The 1st School in Plasma Physics" April 27-29, 2016 Port Said, Egypt.

RECOMMENDATIONS

Prof. Dr. Loutfy Ibrahim Abou Salem Supervisor

Prof. Dr. Loutfy Abou Salem is my supervisor in both M. Sc and PhD. Also, he is Dean of Faculty of Science, Benha University, Egypt.

Email loutfy.abousalem@fsc.bu.edu.eg | **Phone** (+20) 01126681977

Link https://bu.edu.eg/staff/lotffiabosalem7

Dr. Ahmed Farag Ali Supervisor

Dr. Ahmed Farag is Associate Professor at Faculty of Science, Benha University, Egypt. He is my supervisor in my PhD and we have a research work with each other.

Email ahmed.ali@fsc.bu.edu.eg | **Phone** (+20) 01003209208

Link https://bu.edu.eg/staff/ahmedali7

Dr. Asmaa Gaber Shalaby Colleague

Dr. Asmaa Shalaby is an Associate Professor in Theoretical Physics at Physics Department, Faculty of Science, Benha University. We have a research work with each other.

Email asmaa.shalaby@fsc.bu.edu.eg | **Phone** (+20) 01066260404

Link https://bu.edu.eg/staff/asmaashalaby7

PROJECTS

31/08/2020 – 30/08/2021
Quantum Gravity Effect on The Time History of The Universe Using Quark- Gluon Plasma. Project ID: 6720
Project Type: Science Up Faculty of Science
Supported by: Academy of Scientific Research & Technology, Egypt.

Link http://asrt.sci.eg/

HONOURS AND AWARDS

29/07/2008
First Class Honor B. Sc, The best Grade for B. Sc, Benha University, July, 2008. – Faculty of Science, Benha University

COMPUTER SKILLS

Programming knowledge of FORTRAN,, Mathematica, Maple, MS Office and LaTex.

Working knowledge of LINUX, Mac and Windows.

ACADEMIC POSITIONS

10/01/2009 – 20/07/2013
Demonstrator at Physics Department, Faculty of Science, Benha University, Egypt.

21/07/2013 – 25/04/2017
Assistant Lecturer at Physics Department, Faculty of Science, Benha University, Egypt.

26/04/2017 – CURRENT
Lecturer of Theoretical Physics at Physics Department, Faculty of Science, Benha University, Egypt.

ACADEMIC SUPERVISION

11/2017 – 03/2019
"Study of The Ground State Rotational Band for Some Heavy Nuclei" Rania Abdullah Ahmed Al-Allam

This was a master thesis in Nuclear Physics Which was awarded to Mrs. Rania Abdullah Ahmed Al-Allam at 2019 from Physics Department, Faculty of Science, Benha University, Egypt.

2016 – 2021
I am supervising more than five Graduation Projects at Physics department, Faculty of Science, Benha University.