

## CURRICULUM VITAE

### Personal Data:

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## Abdel-Baset, A. Mohamed

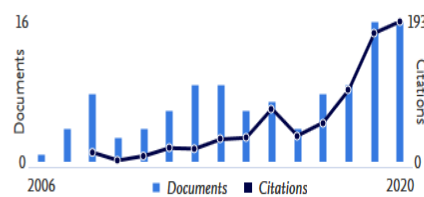
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### Academic Positions:

- Professor of Mathematics, Assiut University, Egypt, 9-2019-present.
- Professor of Mathematics, Prince Sattam Bin Abdulaziz Un., KSA, 10-2018-present.
- Associate Professor of Mathematics, Prince Sattam Bin Abdulaziz Un., KSA, 2014-2018.
- Associate Professor of Mathematics, Prince Sattam Bin Abdulaziz Un., KSA, 2011-2014.
- Assistant Professor of Mathematics, Assiut University, Egypt, 2009-2011.
- Assistant Lecturer of Mathematics, Maths. Dept., Faculty of Science, Assiut Univ, 2006-2009.
- Demonstrator in Maths. Dept., Faculty of Science, Assiut Univ., Egypt, 2002-2006.

### Educationa:

- Bachelor of Science (Physics) South Valley university, Egypt, 1992-1996.
- Bachelor of Science (Mathematics) Assiut University, Egypt, 1999-2002.
- Master of Science (Applied Mathematics), Assiut University, Egypt, 2003-2006.
- Doctor of Philosophy in Mathematics (Applied Mathematics-Quantum Information) Assiut University, Egypt, 2006 -2009.

### Membership Of Scientific Societies:

- 1- Assistant Coordinator in QAAU of Faculty of Science, Assiut University
- 2- Egyptian Mathematical Society.
- 3- Mathematical and Physical Society of Egypt.
- 4-

**Prizes:**

- 1- Prize of the Egyptian Mathematical Society for the best Master thesis (2008)
- 2- Prize of the Egyptian Mathematical Society for the best Ph.D. thesis (2010)
- 3- Assiut University Prize for best PhD thesis in Basic Science (2010).
- 4- 2-Prize of Prof. Mohammed Amean Lotfy, Academy of Scientific Research and Technology (2011).
- 5- Prize of the National Committee of Mathematics, Egyptian Academy of Sciences and Technologies, Egypt (2012).
- 6- The State Incentive Award in Mathematal Sciences, Egypt, 2015
- 7- Prize of Prof. Mohammed Amean Lotfy, Academy of Scientific Research and Technology (2017).

**Conferences:**

- 1- The Second International Conference in Mathematics ICMTD07, Egyptian Mathematical Society, Cairo, 27-30, December, 2007.
- 1- The First Annual Conference for Young Scientists "Basic Science and Technology " Faculty of Science, Assiut University, May 5-6, 2007.
- 2- The Second Annual Conference for Young Scientists "Basic Science and Technology " Faculty of Science, Assiut University, October,18-19, 2008.
- 3- International Conference on Mathematics and Information Security(ICMIS) at Sohag university (13-15 November 2009)
- 4- The Third Annual Conference for Young Scientists "Basic Science and Technology " Faculty of Science, Assiut University, October,18-19, 2010.
- 5- 8th International Conference Mathematics and Information Sciences 8-10 Feb. 2019, Egypt

**Computer Skills:**

Programming with Fortran and Matlab -Writing with Word and WinEdit.

**Contribution to teaching the following courses:**

- Quantum Mechanics, Quantum Optics, Analysis Mechanics, Applied Maths.
- Algebra (Introductory), Linear Algebra
- Calculus, Advanced Calculus, Differential Equations
- Analytical Geometry (Planar and Solid ), Special Functions
- Computer Science as Microsoft Office (Word, Excel, Power Point) and Programming Languages (Basic, Fortran, Matlab Programs).

**Related Professional Experience**

- A)- Attained and satisfactorily completed the following training programs organized by the FLDC (Faculty and leadership development center)([http://us.geocities.com/fldp\\_assiut](http://us.geocities.com/fldp_assiut)):
- 1- Effective Teaching, from 16 to 20 July 2005
  - 2- Teaching with Technology, from 27 to 30 August 2005
  - 3- Ethics and curtsies of the vocation, from19 to 21 June 2006
  - 4- Skills of the thinking from 2 to 4 September 2006
  - 5- Effective offer skills from 16 to 18 September 2006
  - 6- Effective communication skills from 7 to 9 October 2006 .
  - 7- Accredited Hours System from 1 to 3 Marsh 2008.
  - 8- E-Learning, from 21 to 23 February 2009.
  - 9- International Publishing of Research from 21 to 23 February 2009.
  - 10- Research Team Management from 4 to 6 April 2009.
  - 11- How to Complete for a Research Fund from 11 to 13 April 2009.
  - 12- Legal Financial Aspects in University Environment from 1 to 3 June 2009.
  - 13- Conference Organization from 5 to 7 June 2010 .
  - 14- Strategy Planning, from 24 to 26 July 2010.
  - 15- Quality Standards in Teaching from18 to 20 December 2010.
- B)- Training workshop organized by College of Science & Humanitarian Studies, Salman Bin Abdulaziz University.
- 16- Programs and Courses Specifications and Reports, 18-17 October 2011.

- 17- Program Self Study 29 October 2011.
- 18- Good Examination Specifications 27 December 2011.
- 19- Description of Field Experience 16 April 2012.
- 20- SPSS- Statistical analysis, 30/11/2014.
- 21- Skills of the academic advisor 20/3/2016

### Field of Interest

- Interaction between atomic system with some states of light.
- Influence of noise on quantum coherence and entanglement generation in quantum information
- Study of the dynamics of these real physical models with presence of quantum dissipation is an open point.
- The effect of the dissipation on the systems which have multi-level qubit.
- The effect of the dissipation on the systems which have multi two-level qubits.
- Quantum information and computation.

### References

#### **1-Prof. Abdel-Shafy F. Obada**

- Faculty of Science, Al-Azhar University (Cairo)
- Manchester Univ. UK 1994 D. Sc. - UMIST, Manchester, UK 1964-7 Ph. D.(Maths)
- Email: [obada@mailers.scu.eun.eg](mailto:obada@mailers.scu.eun.eg) or [obada75@hotmail.com](mailto:obada75@hotmail.com)

#### **2- Ass. Prof. Hosney A. Hessein**

- Faculty of Science, Assiut University, Assiut, Egypt Ph. D .(Maths)
- Email:[ammammar\\_67@yahoo.com](mailto:ammammar_67@yahoo.com)

#### **3-Prof. Mahmoud M. Abdel-Aty**

- Faculty of Science, Sohag University, 82524 Sohag, Egypt - D. Sc. And Ph. D.(Maths)
- Email: [abdelatyquantum@gmail.com](mailto:abdelatyquantum@gmail.com) or [abdelatyquant@yahoo.co.uk](mailto:abdelatyquant@yahoo.co.uk)

### Publications:

#### **(a) Book**

1-Abdel-Baset A. Mohamed, Abdel-Shafy F. Obada, Hosney A. Hessein Quantum, "Decoherence and Entanglement in Quantum Information", LAP LAMBERT Academic Publishing (October 17, 2011)

#### **(b) International Refereed Journals**

##### 2006

[1] A.-S. F. Obada, H. A. Hessian and **A.-B. A. Mohamed**, Sub-entropies and phase properties undergoing the effects of atomic motion for the Jaynes–Cummings model with initial mixed state input, *International Journal of Quantum Information*, 4 (2006) 871

##### 2007

[2] A.-S. F. Obada, F. A. Mohammed, H. A. Hessian and **A.-B. A. Mohamed**, Entropies and entanglement for initial mixed state in the multi-quanta JC model with the Stark shift and kerr-like medium, *International Journal of Theoretical Physics*, 46 (2007) 1027.

[3] A.-S. F. Obada, H. A. Hessian and **A-B A Mohamed**, Entropies and entanglement for decoherence without energy relaxation in a two-level atom, *J. Phys. B: At. Mol. Opt. Phys.* 40 (2007) 2241.

[4] A.-S. F. Obada, H. A. Hessian and **A-B A. Mohamed**, Entropy and entanglement in the mixed state for a dispersive JC model in a phase-damped cavity, *Opt. Commun.* 280 (2007) 230.

[5] A.-S. F. Obada, H.A. Hessian and **A.-B. A. Mohamed**, Effects of atomic motion on the entropies and entanglement for a JC model with a mixed state input, *Chinese Journal of Physics* 45 (2007) 447.

[6] Hosny A. Hessian and **A.-B. A. Mohamed**, Entropy and degradation of entanglement due to damping of the atomic decay in the Jaynes-Cummings model, *International Conference on Mathematics Trends and Developments*, (2007).

### 2008

- [7] A.-S. F. Obada, H. A. Hessian and **A-B A. Mohamed**, Combined effect of dissipation and thermal mixed state on entanglement in the dispersive limit, *Chin. Phys. Lett.* 25 (2008) 949.
- [8] A.-S. F. Obada, H. A. Hessian and **A.-B. A. Mohamed**, The effects of thermal photons on entanglement dynamics for a dispersive Jaynes-Cummings model, *Phys. Lett. A* 372 (2008)3699.
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- [15] Hosny A. Hessian and **A-B A. Mohamed**, Quasiprobability distribution functions for a single trapped ion interacting with mixed laser field, *Laser Physics*, 18 (2008)1217.

### 2009

- [16] A. Hessian, F. A. Mohammed, and **A-B A. Mohamed**, Entropy and entanglement in the master equation of effective Hamiltonian for J-C model, *Commun. Theor. Phys.* 51 (2009) 723.
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### 2010

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### 2011

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### 2012

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### 2014

- [49] A.-S. F. Obada, H. A. Hessian, **A.-B. A. Mohamed**, Ali H. Homid, Efficient protocol of N-bit discrete quantum Fourier transform via transmon qubits coupled to a resonator, *Quantum Inf. Process*, 13 (2014) 1947.
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[53] **A-B A Mohamed**, A Joshi and S S Hassan, Bipartite non-local correlations in a double quantum-dot excitonic system, *J. Phys. A: Math. Theor* **47** (2014) 335301.

#### 2015

- [54] A.-S. F. Obada, H.A. Hessian, **A.-B.A. Mohamed** and M. Hashem, Stationary discord and non-local correlations via qubit damping, *Journal of Modern Optics*, **62**, (2015) 918.
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#### 2016

- [61] **A.-B. A. Mohamed**, A. Joshi, S. S. Hassan, Enhancing nonlocal correlations in the bipartite partitions of two qubit-system with non-mutual Interaction, *Annals of Physics*, **366** (2016) 32.
- [62] **A.-B.A. Mohamed**, Hichem Eleuch, Wehrl Information and Mixedness of a Cooper-pair Box Coupled to a Cavity in a Thermal Reservoir, *J. of the Korean Physical Society*, **68** (2016) 513.
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#### 2017

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#### 2018

- [73] **A.-B. A. Mohamed**, H.Eleuch, Generation and robustness of bipartite nonclassical correlations in two nonlinear microcavities coupled by an optical fiber, *Opt. Soc. Am. B*, **35** (2018) 47.
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- 2019**
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