Ahmed Sayed Hassan

Physics Dept. Faculty of science,
Minia university. El-Minia, Egypt
Mobile: 002-0100 659 2341
Email: ahmedhassan117@mu.edu.eg

Personal Info.

Family Name: Hassan

Date of Birth: September 4, 1960

Place of Birth: El-Minia, Egypt

Nationality: Egyptian

Employment history

2010–present: Professor in theoretical physics, Minia University, El-Minia, Egypt.

2005–2010: Associate professor in theoretical physics, , Minia University, El-Minia, Egypt.

2003–2005: Lecturer in theoretical physics, Minia University, El-Minia, Egypt.

1999–2003: Lecturer in theoretical physics, Faculty of Education for girls, Abha Saudi Arabia

1996–1999: Lecturer in theoretical physics, Minia University, El-Minia, Egypt.

Education

1991–1996: Ph.D. in Theoretical Physics, Department of Physics, Kyushu University, Fukuoka, Japan.

1985–1988: M.Sc. in Theoretical Physics, Department of Physics, Minia University, El-Minia, Egypt

1979–1983: B.Sc. in Physics, Department of Physics, Faculty of Science, Minia University, El-Minia, Egypt.

Theses supervised (M.Sc and Ph.D.)

M. Sc. : Hend Ahmed Sayed Abdel-Gany, Thermodynamic properties of a rotating Bose-Einstein condensation in a 2D optical lattice, Cairo University

M. Sc. : Yehya S. Elsharkawy, Rotation effects on the confined Bose-Einstein condensation in one dimensional optical potential, Minia University

M. Sc. : Allya A. Mahmoud, Superfluidity properties of ^{4}He using rotating interacting condensate boson as a quantum simulator, Minia University

Ph. D. : Hassab Eldyeam Hadi, Simultaneously Finite Size and Interaction Effects on a Harmonically Trapped ^{87}Rb Gas, Minia University

Invited talks at international conferences

1. The 3rd International Conference of Advanced Applied Sciences (ICCAS-III), 17-20th November 2015 Hurghada-Egypt

2.: 6th Environmental Physics Conference 20-24 September 2014 Hurghada, Egypt.

3.: Fourth Saudi Science Conference (March 21-24th)(2010).

4.: Third Saudi Science Conference (March 10-13th)(2007).

5.: International conference on mathematics, nuclear physics and application in 21st century, Cairo 8-13 , March (2003).

6.: 4th conference on Nuclear and particle physics 11-15 Oct. , Fayoum Egypt (2003).

7.: 4th radiation physics conference, Alx. University, Egypt 15-19 Nov. (1998).

8.: 3rd radiation physics conference, El-Minia University, Egypt 13-17 Nov. (1996).

Peer-reviewed journal papers

1.: Ahmed S. Hassan, M. Imachi, and H. Yoneyama, Real space Renormalization group analysis of U(1) gauge theory with -term in 2-dimensions, Prog. Theor. Phys. 93, 161 (1995).

2.: Ahmed S. Hassan, M. Imachi, N. Tsuzuki and H. Yoneyama, Character expansion, zeroes of partition function and -term in U(1) gauge theory, Prog. Theor. Phys. 94, 861 (1995).

3.: Ahmed S. Hassan, M. Imachi, N. Tsuzuki and H. Yoneyama, Topological charge distribution and CP1 model with -term, Prog. Theor. Phys. 95, 175 (1996).

4.: Ahmed S. Hassan, A. El-Hussein and A. A. Ahmed, Effect of Peclet number on transmission of free and attached radon daughters through a circular tube with concurrent formation and attachment, J. aerosol Sci. 29, 1087 (1998).

5.: Adel El-Shemi and Ahmed S. Hassan, Ejection probabilities of electrons as results of reorganization effects of inner-shell ionized atoms, Jpn. J. Appl. Phys. 36, 3726 (1997).

6.: Ahmed S. Hassan, and Adel El-Shemi, Phase structure of Zn gauge theory with -term in 2-dimensions, Egypt J. Phys. 30, 171(1999).

7.: Azza M. El-Badry, Ahmed S. Hassan, and E. E. Abdel-Hady, Proceeding of the international conference on mathematics, nuclear physics and applications in 21st century, Cairo 8-13 March, 1(2003).

8.: Azza M. El-Badry, Ahmed S. Hassan, Sensitivity of developed self –powered neutron detector, Proceeding of the 4th conference on nuclear and particle, Fayoum, Egypt 11-15 October (2003).

9.: Ahmed S. Hassan, and Azza M. El-Badry, Properties of topological charge distribution and zeroes of partition function for lattice models with -term in two dimensions, Egypt J. Phys. 36, 205 (2005).

10.: Ahmed S. Hassan, Accurate density of states for condensed ^{87}Rb in anisotropic harmonic oscillator confining potential trap, Journal of pure and applied physics (IJPAP) 1, 1 (2005).

11.: Ahmed S. Hassan, Characteristic function analysis of the lattice CPN-1 models with -term in 2-dimensions, Egypt J. Phys., 36, 139 (2005).

12.: Ahmed S. Hassan, A. El-Hussein and Azza M. El-Badry, Diffusion of aerosol particles from Poiseuille flow in a cylindrical tube, Egypt J. Phys., 35, 65 (2004).

13.: Ahmed S. Hassan, Azza M. El-Badry, A study on the magnetic and electric transition probabilities in nuclei with $140 < A < 150$, Egypt J. Phys., Vol. 38, 177 (2007).

14.: Ahmed S. Hassan, Azza M. El-Badry, Critical Points of a Three-Dimensional Harmonically Trapped Bose Gas, Physica B 404 , 1947 (2009).

15.: Ahmed S. Hassan, Shemi S. M. Soliman, and Emad H. Soliman , Interaction Dependence of Thermodynamical parameters for Harmonically Trapped Bose gases, Egypt J. Phys., Vol. 41, (2010).

16.: Ahmed S. Hassan, Azza M. El-Badry, Critical Atom Number of a Harmonically Trapped 87Rb Bose Gas at Different Temperature , Rom. J. Phys. Vol. 54, Nos. 9-10, 911 (2009).

17.: Ahmed S. Hassan, Azza M. El-Badry, Effective Width and Expansion Energy of the Interacting Condensed 87Rb Bose Gas with Finite Size Effects, Turk. J. Phys. 33, 21 (2009).

18.: Ahmed S. Hassan, Critical points of a quasi two-dimensional harmonically trapped Bose gas, Physica B 405 , 1040 (2009).

19.: Ahmed S. Hassan, Effective area and expansion energy of trapped Bose gas in a combined magnetic-optical potential, Physics Letters A 374, 2106 (2010).

20.: Ahmed S. Hassan, Azza M. El-Badry, Thermodynamic properties of quasi-equilibrium magnons in crystalline bulk materials and thin films, Turk. J. Phys. 33 ,129 (2009).

21.: Ahmed S. Hassan, Azza M. El-Badry, Shemi S. M. Soliman, Evaporation of Drops into

a Gas Flow Through a Cylindrical Tube, Rom. Reports in Phys. Vol. 60, Nos. 1, 13 (2008).

22.: Ahmed S. Hassan, Azza M. El-Badry, A study on the magnetic and electric transition probabilities in nuclei with 140 $<$ A $<$150, Egypt J. Phys., Vol. 38, 177 (2007).

23.: Ahmed S. Hassan and H. Eldyeam Hadi, Simultaneously Finite Size and Interaction Effects on a Harmonically Trapped 87Rb Gas , Turk J Phys. 32 , 31 (2008) .

24.: Ahmed S. Hassan and H. Eldyeam Hadi, RELEASE ENERGY AND SPECIFIC HEAT CAPACITY OF A TRAPPED 87Rb GAS WITH CONCURRENT FINITE SIZE AND INTERATOMIC INTERACTION EFFECTS, Rom. Journ. Phys. 53, Nos. 7–8, 817(2008).

25.: Ahmed S. Hassan, Accurate Density of States for Trapped Weakly Interacting Bose Gas with Finite Size Effects, J. King Saud Univ., Vol. 21, Science (Special Issue), pp. 203-207, Riyadh (2009).

26.: Ahmed S. Hassan, Shemi S. M. Soliman, and Emad H. Soliman, Thermodynamical parameters of an Interacting Bose gas harmonically Trapped in Highly Anisotropic Potential, Fourth Saudi Science Conference (March 21-24th)(2010).

27.: Ahmed S. Hassan and Azza M. El-Badry, Entropy as a measure for losing the superfluidity of condensed Bose gas in optical potential, Fourth Saudi Science Conference (March 21-24th)(2010).

28.: Ahmed S. Hassan, General behavior for the condensation of an interacting Bose gas in a 1D optical lattice, Physica B 405, 3766 (2010).

29.: Ahmed S. Hassan, Shemi S. M. Soliman, and Emad H. Soliman , Interaction Dependence of Thermodynamical parameters for Harmonically Trapped Bose gases, Egypt J. Phys., Vol. 41, (In Press) (2010).

30.: Ahmed S. Hassan , Azza M. El-Badry and Shemi S. M. Soliman, Critical temperature of a Bose-Einstein condensate in a 3D non-cubic optical lattice, Physica B 405, 4768 (2010).

31.: Ahmed S. Hassan , Azza M. El-Badry and Shemi S. M. Soliman, Thermodynamic properties of a rotating Bose gas in harmonic trap, Eur. Phys. J. D 64, 465 (2011).

32.: Ahmed S. Hassan, Azza M. El-Badry, Adel M. Mohammedein and M.R. Ebeid, Effective widths of boson gas confined in a harmonic rotating trap, Phys. Lett. A 376, 1781 (2012).

33.: Tharwat M. El-Sherbini1, Doaa Hassan, Abdelhamid A. Galal1, and Ahmed S. Hassan, Thermodynamic properties of a rotating Bose-Einstein condensation in a harmonic plus quartic trap, Eur. Phys. J. D. 67, 185 (2013).

34.: Ahmed S. Hassan , Azza M. El-Badry and Shemi S. M. Soliman, Thermodynamic properties of a condensed ^{39}K Bose gas in a harmonic trap, Physica B 410, 63 (2013).

35.: Hend A. ABDEL-GANY1, Ali Y. ELLITHI, Abdelhamid A. GALAL, Ahmed S. HASSAN, Thermodynamic properties of a rotating Bose Einstein condensation in a deep optical lattice, Turk J Phys 38, 39 (2014).

36.: Ahmed S. Hassan , Azza M. El-Badry and Hend A. Abdel-Gany, Thermodynamic properties of a rotating Bose–Einstein condensation in a 2D optical lattice, Physica B 444, 54 (2014).

37.: Ahmed S. Hassan and Azza M. El-Badry, Temperature dependence of the entropy and the in situ size of a rotating condensate cloud in an optical lattice, Eur. Phys. J. D. 68, 76 (2014).

38.: Ahmed S. Hassan, and Shemi S. M. Soliman, Rotating condensed-boson gases in a 1D lattice at finite temperature, Physica B 459, 110 (2015).

39.: Ahmed S. Hassan and Shemi S. M. Soliman, Temperature dependence of the in situ widths of a rotating condensate in one dimensional optical potential, Phys. Lett. A 380, 22 (2016).

40.: Azza M. El-Badry, Shemi S.M. Soliman and Ahmed S. Hassan, Critical point of a rotating Bose-Einstein condensates in optical lattice, Physica B 491, 65 (2016).

41.: Ahmed S. Hassana, Azza M. El-Badry, and Shemi S.M. Soliman, Semiclassical Hartree-Fock theory of a rotating Bose-Einstein condensation, Eur. Phys. J. D. 71, 4 (2017).

42.: Ahmed S. Hassan, Abbas H. Abbas, Tharwat M. El-Sherbini, Walaa M. Seif, Magnetic properties of the synthetically charged neutral bosons, Physica B 540, 9 (2018).

43.: Ahmed S.Hassan, Azza M.El-Badry, Alyaa A.Mahmoud, Hend A.Abdel-Gany, Adel M.Mohammedein, A.M.Abdallah, Effect of the weak interaction on the in situradii of condensate boson atoms in one or two-dimensionaldeep optical lattices, Phys. Lett. A 383, 3063 (2019).

44.: Ahmed S.Hassan, Azza M.El-Badry, M.R.M.Elsharkawy, Adel M.Mohammedein, A.M.Abdallah, Phys. Lett. A 384, 126476 (2020).

45.: Ahmed S. Hassan, Azza M. Elbadry, Alyaa A. Mahmoud, A. M. Mohammedein and A. M. Abdallah, Critical Rotation Rate for Vortex Nucleation in Ultracold Rotating Boson Atoms Trapped in 2D Deep Optical Lattice at Finite Temperature, J Low Temp. Phys. 200. 102 (2020).

Languages

Arabic: Mother tongue

English: It is my language of instruction for undergraduate and postgraduate studies.

Japanese: Fair

Updated

January 10, 2021