

السيرة الذاتية

الاستاذ الدكتور احمد عزيز احمد الربيعي

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الشهادات الدراسية:

- بكالوريوس في علوم الفيزياء/ كلية العلوم/ الجامعة المستنصرية 1996:
- ماجستير في علوم الفيزياء/ كلية العلوم/ الجامعة المستنصرية 1999
- دكتوراه في الفيزياء النظرية / كلية الفيزياء والرياضيات \ جامعة اركوتسك\ روسيا الاتحادية 2006
- مابعد الدكتوراه من معهد الهندسة الالكترونية للنانو في جامعة برلين الماليزية في العام 2014.

اللغات

- اللغة العربية
- اللغة الانكليزية
- اللغة الروسية

الخبرات

- محاضر في قسم الفيزياء\ كلية العلوم\ الجامعة المستنصرية 1999-2001
- مدير معمل في شركة بعقوبة للصناعات الغذائية 2000-2001
- محاضر في كلية العلوم الجامعة المستنصرية للدراسات الاولى (كهرومغناطيسية, علم الحاسوب, فيزياء البلازما, ميكانيك الكم, فيزياء حديثة, علم الفلك) وللدراسات العليا (تفاعل الحسيمات, فيزياء البلازما, نظرية الاستطارة, فيزياء الطاقات العالية) منذ العام 2006 ولغاية الان.
- محاضر في كلية التربية الجامعة المستنصرية في مادة برمجة الحاسوب في العام 2008
- عضو في هيئة تحرير مجلة العلوم\ الجامعة المستنصرية للعام 2012
- مسؤول مختبر الفيزياء النظرية قسم الفيزياء\ كلية العلوم\ الجامعة المستنصرية خلال العام الدراسي 2012-2013
- عضو في مجلس القسم في قسم الفيزياء\كلية العلوم\ الجامعة المستنصرية منذ العام 2012 ولغاية 2018
- تفرغ علمي في جامعة برلين الماليزيا للفترة 2013-2014
- حاصل على شهادة ما بعد الدكتوراه من جامعة برلين\ ماليزيا في العام 2014
- مسؤول مختبر الالكترونيات في قسم الفيزياء\ كلية العلوم\ الجامعة المستنصرية خلال العام الدراسي 2014-2015
- عضو في هيئة تحرير مجلة Expert Opinion on Astronomy and Astrophysics منذ العام 2018
- عضو في هيئة تحرير مجلة Journal of Autonomous Intelligence منذ العام 2018
- رئيس لجنة التعليم المستمر قسم الفيزياء\ كلية العلوم\ الجامعة المستنصرية للعام 2016
- رئيس لجنة رصانة المجلات العلمية قسم الفيزياء\ كلية العلوم\ الجامعة المستنصرية للعام 2017
- حاصل على لقب الاستاذية قسم الفيزياء\ كلية العلوم\ الجامعة المستنصرية في العام 2019
- عضو في اللجنة العلمية في قسم الفيزياء\كلية العلوم\ الجامعة المستنصرية منذ العام 2018 ولغاية 2021
- عضو في لجنة الدراسات العليا في قسم الفيزياء\كلية العلوم\ الجامعة المستنصرية منذ العام 2021
- عضو في مجلس القسم في قسم الفيزياء في العام 2022

Curriculum Vitae

1. Personal data

Name: Dr. Ahmed Al-Rubaiee

Place and date of birth: Iraq-Baghdad

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Email Address: dr.rubaiee@uomustansiriyah.edu.iq, dr.ahmedrubaiee@gmail.com

Languages: Arabic, English, Russian

Scientific degree: Professor

Current university: Mustansiriyah University

Current Faculty: College of Science

Current department: Department of Physics

2. Education (Diploma and certificates)

a. **B.Sc.** Physics, 1997, College of Science, Al-Mustansiriyah University, Baghdad.

b. **M.Sc.** {Increasing the Range of Stopping Power for Charged Particles at Energies ($1 < E(\text{MEV}/U) \leq 0.1$)}, Atomic physics, 2000, College of Science, Al-Mustansiriyah University, Baghdad.

c. **Ph.D.** {Modeling and Approximating of the Lateral Distribution Function of Cherenkov Light in Extensive Air Showers}, Theoretical physics, 2006, College of physics and mathematics, Russia, Irkutsk state university.

d. Proficiency certificate in computer programming and Microsoft, 2000.

e. Diploma in Russian language, 2003.

f. International certification in Internet and Computing Core Certification (IC³) in Computer fundamentals, Key applications and Living online, 2011.

g. **Post-Doctoral**, Studying the Characteristics of Cherenkov Light Lateral Distribution Function in Extensive Air Showers, University of Malaysia Perlis, Institute of Nano Electronic Engineering 2014.

3. Employments

a. Lecturer in the departments of physics, College of Science, Al-Mustansiriyah University, Baghdad (1999-2001).

b. Plant Manager in the company of Diyala for food industry (2000-2001).

c. Ph.D. student at the University of Irkutsk, Russia (2002-2006).

d. Lecturer for B.Sc. in Electromagnetic, computer science, Plasma Physics, Quantum Mechanics, Interaction of charged particles, Modern Physics, Plasma Physics and Astronomical Science; for MSc and PhD. in Interaction of particles, Plasma Physics, Scattering theory and High energy Physics from 2006 until now.

e. Lecturer in computer programming in College of Education, Al-Mustansiriyah University, 2008.

f. Reviewer of College of Science's Journal of Al-Mustansiriyah University, since 2006.

g. Member of the editorial Board of College of Science's Journal of Al-Mustansiriyah University, 2012.

h. Member of the department of Physics board of College of Science of Al-Mustansiriyah University since 2012 until 2018.

i. In charge of Theoretical Physics laboratory in College of Science of Al-Mustansiriyah University since 2012.

j. Successfully completed the training workshop of "Modern teaching methodology and excellence in university teaching", 2013.

k. Post-Doctoral scholar in University Malaysia Perlis, Malaysia, Feb. 2013-2014.

- l. In charge of Electronics Laboratory in the College of Science of Al-Mustansiriyah University in 2014-2015.
- m. Member of the editorial Board of Expert Opinion on Astronomy and Astrophysics, 2018.
- n. In charge of Committee for Continuing Education of Department of Physics, College of Science, Al-Mustansiriyah University, since 2016.

4. Publications

1. **Ahmed A. Al-Rubaiee**, Ahmed K.A., Al-Jebori M.A. Increasing the range of stopping power of heavy charged particles at energies ($1 < E(\text{MeV/u}) \leq 0.1$) // The 5th scientific conference, College of Science, Al-Mustansiriyah Journal of Science, Iraq-Baghdad, 23-24 October 2001, 21p.
2. **Ahmed A. Al-Rubaiee**, Ahmed K.A., Al-Jebori M.A. Calculation of the range of heavy charged particles ($Z_1 \geq 2$) for different targets // The 5th scientific conference, College of Science, Al-Mustansiriyah Journal of Science, Iraq-Baghdad, 23-24 October 2001, 23p.
3. Lokhtin K.S., Parfenov U.V., **Al-Rubaiee A.A.** Determination the characteristics of the primary cosmic rays // International Baikal conference, Russia, CORAN 13-18 September 2004, 53 p.
4. **Al-Rubaiee A.A.** Lateral distribution function of Cherenkov light in extensive air shower // Irkutsk state university, theoretical and scientific conference, PP. 170-172, 2005.
5. **Al-Rubaiee A.A.**, Gress O.A., Kachanov A.A. et al. Parameterization for the Cherenkov light lateral distribution function in extensive air showers // Proc. 29 ICRC, Pune India (Aug. 03-10, 2005). Tata institute of fundamental research, Mumbai 2005, Vol. 6, PP. 249-252.
6. **Al-Rubaiee A.A.**, Gress O.A., Lokhtin K.S. et al. Parameterization of the Cherenkov light lateral distribution function in extensive air shower // International Baikal conference, Russia, CORAN 12-17 September 2005, PP. 179-181.
7. **Al-Rubaiee A.A.**, Gress O.A., Lokhtin K.S. et al. Identification of the particles generated extensive air shower and determination of their energy on the bases of LDF of Cherenkov light // International Baikal conference, Russia, CO RAN 12-17 September 2005, PP. 182-184.
8. **Al-Rubaiee A.A.**, Gress O.A., Lokhtin K.S., Parfenov Yu. V. and Sinegovskii S. I., Modeling and parameterization of the spatial distribution of Čerenkov light from extensive air showers // Russian Physics Journal, Vol. 48, No.10, PP. 1004-1011, 2005.
9. **Al-Rubaiee A.A.**, Gress O.A., Lokhtin K.S., Sinegovskii S.I., Spatial Distribution Of Čerenkov Light From Extensive Air Showers// Russian Physics Journal, Vol. 49, No. 7, PP. 727-733, 2006.
10. **Al-Rubaiee A.A.**, Sinegovski S.I., Determination of the type and energy of a cosmic ray particle based on the spatial distribution function of Čerenkov light from extensive air showers// Russian Physics Journal, V. 49. No. 6, PP. 673-675, 2006.
11. **Ahmed Aziz Al-Rubaiee**, Characteristics Of The Longitudinal Extensive Air Showers// Al-Mustasiriyah J. Sci., Vol. 20, No. 1, P. 62-69, 2009.
12. **Al-Rubaiee A.A.**, Estimation of the Primary Cosmic Ray Characteristics at Chacaltaya Observation Level, Al-Mustansiriyah university, College of education, Vol. 1, No. 57, PP. 542, 2009.
13. **Al-Rubaiee A.A.**, Estimation of Cosmic Ray Composition Around the Knee From Cherenkov Radiation Approximation at the Yakutsk Array, Al-Mustansiriyah university, College of education, Vol. 3, No. 41, PP. 630, 2009.
14. **Al-Rubaiee Ahmed A.** Extension of the Cherenkov Light LDF Approximation In EAS At The Energy Range $10^{16} - 2 \cdot 10^{18}$ eV// Proc. 31 ICRC, Lodz Poland (July 07-15, 2009), PP. 1-3, 2009.
15. **Ahmed Aziz Al-Rubaiee**, Sabah Toma Murad, The Extrapolation Of The Lateral Distribution function Approximation Of Cherenkov Radiation At The Energy Range $10^{16} - 2 \cdot 10^{18}$ eV, the 6th scientific conference in College of Science, Al-Mustansiriyah J. Sci., Vol. 21, No. 6, PP.57-62, 2010.

16. **Ahmed Aziz Al-Rubaiee**, Sarah Hussein Ali, Longitudinal Development And The Inelasticity Of Extensive Air Showers, the 6th scientific conference in College of Science, Al-Mustansiriyah J. Sci., Vol. 21, No. 5, PP. 34-40, 2010.
17. **Ahmed Aziz Al-Rubaiee**, Sarah Hussein Ali, Sabah Toma Murad, The lateral distributions of Cherenkov radiation in 10-100 TeV of light primary particles, the 17th scientific Conference of College of Education, Vol. 3, PP. 1091-1100, 2010.
18. Sarah Hussein Ali, **Ahmed Aziz Al-Rubaiee**, Determination of energy spectrum and mass composition based on Cherenkov light lateral distribution function, College of Science, Al-Mustansiriyah Journal of Science, Vol. 22, No. 2, PP. 151-158, 2011.
19. **Ahmed Aziz Al-Rubaiee**, Sarah Hussein Ali, The lateral distribution function of Cherenkov light radiated by particles in EAS, College of Science, Al-Mustansiriyah Journal of Science, Vol. 22, No. 7, PP. 91-96, 2011.
20. **Al-Rubaiee Ahmed A.**, Sarah Hussein Ali, Muhammed Ali Abid Kadhum, Abdulla Ahmed Rasheed, Sabah Toma Murad, Cherenkov light LDF extension for primary protons and Iron nuclei initiated air showers at ultra high energy cosmic rays, the 18th scientific Conference of College of Education, Al-Mustansiriyah University, Vol. 2, PP. 131-134, 2011.
21. **Al-Rubaiee Ahmed**, Muhammed Ali, Sarah Hussein, Simulation of Cherenkov light lateral distribution function in extensive air showers for Tunka25 EAS Array, the 7th scientific conference in College of Science, Al-Mustansiriyah J. Sci., Vol. 22, No. 4, PP. 265-271, 2011.
22. **Al-Rubaiee Ahmed**, Muhammed Ali, Omer Ahmed Muafaq, Simulation of Lateral Distribution Function of Cherenkov Light in Extensive Air Showers for Yakutsk Array, Journal of the College of Basic Education, Vol. 18, No. 74, PP. 1-6, 2012.
23. **Ahmed Aziz Al-Rubaiee**, Sanaa Rasool Salim, Khaled A. Ahmad, Increasing The Energy Range of Cherenkov Light LDF Approximation at High Energies ($E \geq 10^{16}$ eV), Journal of the College of Basic Education, Vol. 18, No. 73, PP. 21-25, 2012.
24. Abdulla Ahmed Rasheed **Al-Rubaiee Ahmed A.**, Muhammed Ali Abid Kadhum, Modeling and Parameterization of Cherenkov Light from Extensive Air Showers, Al-Mustansiriyah University, Journal of College of Education, Vol. 3, No. 33, PP. 431-441, 2012.
- 25- **Ahmed A. Al-Rubaiee**, Investigating of Cherenkov Radiation by Reconstructing of Tunka EAS Array Parameters, the 19th scientific Conference of College of Education, Al-Mustansiriyah University, Vol. 3, PP. 362-371, 2012.
- 26- **Al-Rubaiee Ahmed A.**, Taha Hussein Lazem, Sarah Hussein Ali, Studying of Longitudinal Cascade Properties in Extensive Air Shower, College of Education, Al-Mustansiriyah University, Vol. 3, PP. 1-14, 2013.
- 27- **Al-Rubaiee Ahmed A.**, Sarah Hussein Ali, Taha Hussein Lazem, Reconstruction of primary energy and Estimation of Lateral distribution function of Primary particles, College of Science, Al-Mustansiriyah Journal of Science, Vol. 24, No. 3, PP. 83-90, 2013.
- 28- **Al-Rubaiee A. Ahmed**, Ahmed Jumaah, Estimation of Lateral Distribution Function in Extensive Air Showers by Using AIRES Simulation System, International Journal of Applied and Natural Sciences (IJANS), Vol. 2, No. 2, PP. 41-44, 2013.
- 29- **Al-Rubaiee A. Ahmed**, Ahmed Jumaah, Investigating of longitudinal development parameters through air shower simulation by different hadronic models, International Journal of Applied and Natural Sciences (IJANS), Vol. 2, No. 4, PP. 135-140, 2013.
- 30- Hadi J. M. AL-Agealy, **Al-Rubaiee A.A.** and Mudhafar J. Sahib, Theoretical study of the rate photon yield in quark-gluon interaction, the 20th scientific Conference of College of Education, Al-Mustansiriyah University, 2013.

- 31- Hadi J. M. AL-Agealy, **Al-Rubaiee A.A.** and Mudhafar J. Sahib, Theoretical Studies and Calculation of the Coupling Constant Strength For Quark Gluon Interaction, the 15th scientific Conference of College of Basic Education, Al-Mustansiriyah University, 2013.
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- 33- **A.A Al-Rubaiee**, U. Hashim and Y. Al-Douri "Extension of Cherenkov Light LDF parameterization for Yakutsk EAS array", Journal of Astrophysics, Vol. 2014, Article ID 492814, <http://dx.doi.org/10.1155/2014/492814>, 6 pages, 2014.
- 34- **A.A. Al-Rubaiee**, U. Hashim, T. H. Lazem, Y. Al-Douri "A Study of Extensive Air Shower Characteristics by Estimating Depth of Shower Maximum Using Heitler Toy Model", IEEE Xplore, The 2nd International Conference on Electronic Design (ICED14), Penang, Malaysia, 19-21 August 2014, PP.465-467. **2014**
35. **A.A. Al-Rubaiee**, Extension of Cherenkov Light LDF Parametrization for Tunka and Yakutsk EAS Arrays, J. Astrophys. Astr., DOI 10.1007/s12036-014-9305-x, Vol. 35, Issue 4, PP. 631-638, **2015**.
- 36- **A.A. Al-Rubaiee**, U. Hashim, M.K Md Arshad, A. Rahim Ruslinda, R.M Ayub, A.Wesam Al-Mufti, Y. Al-Douri, A. J. Altaiee, " Investigating the Characteristics of Longitudinal Profile of Primary Particles in Extensive Air Showers ", the 3rd International Conference on Advanced Material Engineering and Technology (ICAMET 2014), 4-5 Dec 2014, Vietnam, published in *Applied Mechanics and Materials*, Vols. 754-755, PP. 859-864. [doi:10.4028/www.scientific.net/AMM.754-755.859](https://doi.org/10.4028/www.scientific.net/AMM.754-755.859), **2015**.
- 37- **A.A. Al-Rubaiee**, U. Hashim, M.K Md Arshad, A. Rahim Ruslinda, R.M Ayub, A. S. Ibraheam, Y. Al-Douri, Muhammed Ali Abed and Sarah Hussein Ali, Estimating of Cherenkov Radiation in Extensive Air Showers Using CORSIKA Code for Tunka133 EAS Cherenkov Array, the 3rd International Conference on Advanced Material Engineering and Technology (ICAMET 2014), 4-5 Dec 2014, Vietnam, published in *Applied Mechanics and Materials*, Vols. 754-755, PP. 807-811. [doi:10.4028/www.scientific.net/AMM.754-755.807](https://doi.org/10.4028/www.scientific.net/AMM.754-755.807), **2015**.
- 38- **A.A. Al-Rubaiee**, U. Hashim, M. Marwah and Y. Al-Douri "Study of Cherenkov Light Lateral Distribution Function around the Knee Region in Extensive Air Showers", Serb. Astron. J., No. 190, 79 - 85 **2015**.
- 39- **A.A Al-Rubaiee**, U. Hashim and Y. Al-Douri "Investigating the Cherenkov Light Lateral Distribution Function for Primary Proton and Iron Nuclei in Extensive Air Showers", Physics of Particles and Nuclei Letters", Vol 12, No 6 (**2015**).
- 40- Abdul halim Kh. Ali, **A. A. Al-Rubaiee**, Marwah M. Abdulsttar, Coordination Spheres Effect on Recomposition Atoms in Alloys, College of Science, Al-Mustansiriyah Journal of Science, No. 4, Vol. 27, pp. 76-78, **2016**.
- 41- Marwah M. Abdulsttar, **A. A. Al-Rubaiee**, Abdul Halim Kh. Ali, Demonstrating of Cosmic Ray Characteristics by Estimating the Cherenkov Light Lateral Distribution Function for Yakutsk EAS Array as a Function of the Zenith Angle, International Letters of Chemistry, Physics and Astronomy, Vol. 67, PP. 21-30, **2016**.
- 42- Marwah M. Abdulsttar, **A. A. Al-Rubaiee**, Abdul Halim Kh. Ali, Parameterization of Cherenkov Light Lateral Distribution Function as a Function of the Zenith Angle around the Knee Region, International Letters of Chemistry, Physics and Astronomy, Vol. 66, PP. 71-78, **2016**.
- 43- Marwah M. Abdulsttar, **A. A. Al-Rubaiee**, Cherenkov light lateral distribution function estimation as a function of zenith angle, Journal of Applied Physical Science International, Vol. 7, Issue 3, PP. 112-118, **2016**.

- 44- Abdul halim Kh. Ali, **A. A. Al-Rubaiee**, Computer Simulation of Fine Structures in A-M Alloy, Diyala Journal of Pure Science, No. 3, Vol. 13, **2017**.
45. Bahjat B. Kadhim, **A.A. Al- Rubaiee** and Methaq T. Matrood, Structural and electronic properties of InGaP nanocrystal diamantane drug carrier, American Journal of Materials Science, Vol. 7, No. 1, PP. 12-17, **2017**.
- 46- **A. A. Al-Rubaiee** , Marwah Mudher Abdulsttar, Hassan Abdullah Mahdi , Cherenkov Light Lateral Distribution Function Estimation as a Function of Particle Type, College of Science, Al-Mustansiriyah Journal of Science, Vol. 28, No.1, PP. 187-194, **2017**.
- 47- Zena Fadhel Khahdhum, Hassan Abdullah Mahdi, **A. A. Al-Rubaiee**, Approximating the Lateral Distribution Function of Cherenkov Radiation as a Function of the Particle Type for Tunka-133 Array, Journal of Al-Nahrain University- Science, Vol. 21, No. 2, PP. 92-97, **2018**.
- 49- Hassanen Abdulhussaen Jassim, **A. A. Al-Rubaiee**, Iman Tarik Al-Alawy, Theoretical Study of Extensive Air Shower Effects in Atmosphere by Simulating the Lateral structure of Several Cosmic Radiations, Indian Journal of Public Health Research and Development, Vol. 9, No. 12, PP. 1307-1311, **2018**.
48. Hassan Abdullah Mahdi, **A. A. Al-Rubaiee**, Nadheer Jassim Mohammed, Laser Applications in Some Clinical Blood Constituents Analysis (Bilirubin, Triglyceride and Hemoglobin), Indian Journal of Public Health Research and Development, Vol. 10, No. 5, PP. 435-439, **2019**.
49. Adnan M. A. Al-Maamury, Fatima Q. Al-Rawi, **A. A. Al-Rubaiee**, The Effect of the Basilar Membrane Roughness on the Otoacoustic Emissions, Indian Journal of Public Health Research and Development, Vol. 10, No. 5, PP. 652-656, **2019**.
51. Hassan Abdullah Mahdi, **A. A. Al-Rubaiee**, Muhanad M. Azzawi, Considered Absorption Spectra for Identification of Blood Constituents, Indian Journal of Public Health Research and Development, Vol. 10, No. 7, PP. 590-593, **2019**.
52. Hassanen Abdulhussaen Jassim, **A. A. Al-Rubaiee**, Iman Tarik Al-Alawy, Thinning Energy Effect on the Fluctuations of Charged Particles Lateral Distribution Produced in Extensive Air Showers, Conference: Meeting and Nanotechnology: Principles and Applications, Nov. 22-23, 2018, Malaysia. **Published in** Experimental and Theoretical Nanotechnology Journal, Vol. 4, No. 3, 257-262, **2020**, Online in www.arXiv:2008.02081.
53. Abbas Rahi Raham, **A. Al-Rubaiee**, Majida H. Al-Kubaisy, Investigating the Longitudinal Development of EAS with Ultra High Energies, International Laser Technology and Optics Symposium (iLATOS 2019), Le Grandeur Palm Resort Johor, 3rd & 4th September **2019**; published in *J. Phys. Conf. Ser.* 1484 (**2020**) 1, 012024.
54. M. M. Falah, **A. A. Al-Rubaiee**, B. Hariharan, Parametric analysis of the Lateral Distribution Function of Cherenkov light for Yakutsk EAS Array in the Energy Range 1–20 PeV, International Laser Technology and Optics Symposium (iLATOS 2019), Le Grandeur Palm Resort Johor, 3rd & 4th September **2019**; published in *J. Phys. Conf. Ser.* 1484 (**2020**) 1, 012023.
55. Abbas Rahi Raham, **A. A. Al-Rubaiee**, Majida H. Al-Kubaisy, Suror Noori Esmaeel, Studying the thinning Effect of Longitudinal development in Extensive Air Showers for Primary proton and Iron Nuclei at Ultra-High Energies, Mustansiriyah Journal of Science, Vol. 31, No. 3, PP. 114-118, DOI: <http://doi.org/10.23851/mjs.v31i3.843>, **2020**.
56. Fatma Mohammed Hadi, Rafed Abass Ali, **Al-Rubaiee A. A.**, Mathematical Model of the Electronic Coefficients for Different Concentrations of Argon and Mercury Mixture, published in IOP Conference Series: Materials Science and Engineering, Volume 928, 2nd International Scientific Conference of Al-Ayen University (ISCAU-2020) 15-16 July 2020, Thi-Qar, Iraq.
57. Fatma Mohammed Hadi, Rafed Abass Ali, **Al-Rubaiee A. A.**, Simulation Analyses and Investigation of the Induced Electric Field and Ar-Hg Mixture on the Gas Discharge Processes, Al-Mustansiriyah Journal of Science, Vol. 31, No. 3, PP. 126-131, DOI: <http://doi.org/10.23851/mjs.v31i3.874>, **2020**.
58. Omar Ahmed Muaffaq, Firas Mahmood Hady, Faissal Gazi Hammody and **Ahmed A. Al-Rubaiee**, Energy levels and electromagnetic transition of ⁹⁰⁻⁹⁴MO nuclei using IBM-I, the 4th Scientific Conference of Science College (29-30 April 2019)/ University of Thi-Qar, Vol. 7, No.2,

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59. Kadhom F. Fadhel, **A. A. Al-Rubaiee**, Hassanen Abdulhussan Jassim, Iman Tarik Al-Alawy, Estimating the Lateral Distribution of High Energy Cosmic Ray Particles by Depending on Nishimura-Kamata-Greisen Function, Ibn Al-Haitham 2nd. International Conference for Pure and Applied Science (IHICPAS), 9-10 December, Baghdad, Iraq - 2020.

60. **A. A. Al-Rubaiee**, Hassanen Abdulhussan Jassim, Iman Tarik Al-Alawy, Modulating the lateral profile in extensive air showers for Yakutsk EAS array, Journal of Astrophysics and Astronomy, Vol. 42, p. 52, 2021.

61. Kadhom F. Fadhel, **A. A. Al-Rubaiee**, Mass Composition Investigation Of Ultra-High Energy Particles Via The Longitudinal Development Study, 3rd International Scientific Conference of Alkafeel University (ISCKU), 22-23 March 2021, Al-Najaf, Iraq.

62- Kadhom F. Fadhel, **A. A. Al-Rubaiee**, Reconstruction of Air-Shower Parameters Through the Lateral Distribution Function of Ultra-High Energy Particles, Mustansiriyah international conference on applied physics (MICAP-2021), 28-29 June, Baghdad, Iraq; Acta Physica Polonica A, No. 4 Vol. 140, PP. 344-349, 2021.

63- Kadhom F. Fadhel, **A. A. Al-Rubaiee**, Simulation and Parameterization of Longitudinal Development Using Different Hadronic Interaction Models, Al-Mustansiriyah Journal of Science, Volume 32, Issue 4, DOI: <http://doi.org/10.23851/mjs.v32i4.1035>, 2021.

64. Itab F. Hussein, **Al-Rubaiee A. A.**, Investigating the Ground Energy Distribution of Particles Produced in Extensive Air Showers, Malaysian Journal of Science (MJS), Vol. 41, No. 2, PP. 69-80, June 2022.

65. Itab F. Hussein, **Al-Rubaiee A. A.**, Estimating the Longitudinal Development of Atmospheric Cascades at High Energies, 3rd international scientific conference of Al-Ayen University, 4 November 2021, Al-Ayen University AIP conference proceedings-Lecture notes in electrical engineering-Indian journal of Ichthyology- International journal of modern education and computer science.

66. Itab F. Hussein, **A. A. Al-Rubaiee**, Simulating and Modeling the Extensive Air Showers Development through the Estimating of the Energy of Created Particles, Mustansiriyah Journal of Science, Vol. 33, No. 3, 2022.

67. Shaimaa Rahem, **A. A. Al-Rubaiee**, Investigating the Mass Composition of Ultra-High Energy Particles via Studying the Shower longitudinal Profile, AIP Conference Proceedings, 2022, **accepted**.

68. Shaimaa Rahem, **A. A. Al-Rubaiee**, Investigating the Energy Distribution of Pions that Initiated by Primary Proton and Iron Nuclei, Mustansiriyah Journal of Education, 2022, **submitted**.

69. Shaimaa Rahem, **A. A. Al-Rubaiee**, Study the Characteristics of Pionic Cascade Produced by Primary Proton in Extensive Air Showers, journal of educational and scientific studies, 2022, **accepted**.

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5. Supervision of Higher studies

- 1- Supervision of Master thesis of Sara Husain Ali “Estimation for Cherenkov Light lateral distribution function and inelasticity in Extensive Air Showers”. (2009)
- 2- Supervision of Master thesis of Muhammed Ali Abid Kadhum “ Lateral distributions of high energy cosmic rays in extensive air showers simulated with CORSIKA code”.(2010)
- 3- Supervision of Master thesis of Taha Hussein “Estimation of energy spectrum and mass composition of high energy cosmic rays”.(2011)
- 4- Supervision of Master thesis of Ahmed Jumaa “Studying of Air shower development by AIREs system”.(2012)
- 5- Supervision (2) of Ph.D. thesis of Mudhafar J. Sahib “Theoretical treatment to the dynamics of quark gluon interaction”.(2012)
- 6- Supervision of Ph.D. thesis of Marwah Muhsen Ali “Study of Cherenkov Light Parameters around Knee and Ankle Regions of Cosmic Ray Energy Spectrum”.(2015)
- 7- Supervision of Ph.D. thesis of Hassanen Abdulhussien Jassim “Investigating the lateral structure of electromagnetic cascade in extensive air showers”.(2017)
- 8- Supervision of Ph.D. thesis of Abbas Rahi Raham “Simulation and Parameterization of Longitudinal Cascade Development of High Energy Particles”.(2018)
- 9- Supervision of M.Sc. thesis of Falah Hassan Ali “Modeling and simulation of Cherenkov radiation for Yakutsk EAS array at ultra-high energies”.(2018)
- 10- Supervision (2) of M.Sc. thesis of Fatima Qassim Abdul-Majeed “The effect of cochlear roughness on the hearing mechanism”.(2018)
- 11- Supervision of M.Sc. thesis of Fatma Mohammed Hadi “Mathematical model of the electronic coefficients for different concentrations of argon and mercury mixture”.(2019)
- 12- Supervision (2) of Ph.D. thesis of Shaimaa Hussein Ameen “Nuclear structure of neutron-rich nuclei in the framework of the HF-RPA”.(2020)
- 13- Supervision of M.Sc. thesis of Kadhoom Fakhri Nadhom “Reconstruction of Shower Parameters Size and Lateral Shape of Muons and Electrons through Different Models Reconstruction of Shower Parameters Size and Lateral Shape of Muons and Electrons through Different Models”.(2020)
- 14- Supervision of Ph.D. thesis of Itab Fadhel Hussein “Reconstructing the Primary Energy Spectrum and Maximum Depth of Hadrons Through Surface Array Detectors”.(2020)
- 15- Supervision of M.Sc. thesis of Shaymaa Rahim “Study the Characteristics of Pions Resulting from the Interaction of Primary Particles with Atomic Nuclei in Atmosphere”.(2021)

- 16- Supervision of Ph.D. thesis of Samaher Waheed Hashim “Reconstructing the Energy Spectrum and Mass Composition of Primary Particles That Passes Through A Dielectric Medium For Different Cherenkov Arrays”.(2021)
- 17- Supervision of Ph.D. thesis of Saba Mustafa Hussein “Theoretical study of fugacity temperature and chemical potential parameters effect on photons emission from Quark Gluon interaction”.(2022)
- 18- Supervision of Ph.D. thesis of Muthana Jawad Abd Alhussein“(2022)
- 19- Supervision of Ph.D. thesis of Rawaa Yaseen Taha, A Theoretical Study of muons versus electrons produced from different primary particles, 2023.

6. Symposia and conferences

- The 5th scientific conference, College of Science, Al-Mustansiriyah University, Iraq-Baghdad, 2001.
- International Baikal conference 2004, Russia, Irkutsk.
- International Baikal conference 2005, Russia, Irkutsk.
- International Cosmic Ray Conference, Pune, India (Aug. 03-10, 2005). Tata institute of fundamental Research, Mumbai.
- International Cosmic Ray Conference, Łódź, Poland (July 07-15, 2009), University of Łódź, Department of High Energy Astrophysics.
- The 6th scientific conference, College of Science, Al-Mustansiriyah University, Iraq-Baghdad, February 2011.
- The 17th scientific conference, College of Education, Al-Mustansiriyah University, Iraq-Baghdad, May 2010.
- The 18th scientific conference, College of Education, Al-Mustansiriyah University, Iraq-Baghdad, May 2011.
- The 19th scientific conference, College of Education, Al-Mustansiriyah University, Iraq-Baghdad, April 2012.
- The conference of Institute of International Education (IIE) in “Modern teaching methodology and excellence in university teaching” by January 28-30, 2013, Erbil, Iraq.
- The conference of Institute of International Education (IIE) in “Student and Faculty Evaluation and Assessment” by June 25-27, 2013, Erbil, Iraq.
- The 20th scientific conference, College of Education, Al-Mustansiriyah University, Iraq-Baghdad, April 2013.
- The 15th scientific conference, College of basic Education, Al-Mustansiriyah University, Iraq-Baghdad, April 2013.
- The 4th scientific conference, College of Science, Thi Qar University, Iraq-Thi Qar, May 2013.
- The conference of Institute of International Education (IIE) in “Building Academic Research Capacity” by February 3-5, 2014, Erbil, Iraq.
- The 2nd International Conference on Electronic Design (ICED14), (19-21 Aug.), Penang, Malaysia, 2014.
- The 3rd International Conference on Advanced Material Engineering and Technology (ICAMET 2014), 4-5 Dec. 2014, Vietnam.
- The 1st ICSSSA scientific conference, College of Science, Al-Mustansiriyah University, Iraq-Baghdad, 26-27th September 2018.
- MNPA conference, University of Malaya, Kuala Lumpur, Malaysia, 22-23 Nov. 2018
- International Laser Technology and Optics Symposium 2019 (iLATOS2019), Malaysia
- 21th international scientific conference of Al-Ayen University (15-17 July), United Arab Emirates, 2020.
- Ibn Al-Haitham 2nd. International Conference for Pure and Applied Science (IHICPAS), 9-10 December, Baghdad, Iraq - 2020.
- International Scientific Conference of Alkafeel University, 22-23 March 2021, Al-Najaf, Iraq.
- Mustansiriyah international conference on applied physics (MICAP-2021), 28-29 June, Baghdad, Iraq.

- The 3rd international scientific conference of Al-Ayen University, 4 November, United Arab Emirates, 2021.
- Al-Hikma 2nd international conference on natural and applied science (HICNAS_2023)

6. Membership of societies

- Member of the Iraqi Society for Mathematics and Physics (since 1993).