

## CURRICULAM VITAE

1. Name : Dr. Arun Kumar Katiyar  
 2. Designation & Department : Professor (Physics)  
 Department of Applied Sciences & Humanities  
 Institute of Engineering & Technology  
 Sitapur road Lucknow-226021  
 3. E-mail : [akkatiyar@ietlucknow.ac.in](mailto:akkatiyar@ietlucknow.ac.in); [akkatiyariet@gmail.com](mailto:akkatiyariet@gmail.com)  
 4. Mobile No. : 09415039015, 7652011059  
 5. Education Qualifications:

**Ph.D.:** Entitled " *Electron (positron) impact excitation of hydrogen, helium and ions of their iso-electronic sequences*" (University of Roorkee, Roorkee).

**M.Sc.:** Physics (University of Roorkee, Roorkee).

**B.Sc.:** Physics, Chemistry, Maths (Garhwal University, Srinagar (Garhwal)).

6. Field of specialization: Solar Energy  
 7. Experience :  
 (a)Teaching : About 31 Years  
 (b)Research: 20 Years

(c) **Supervision of Ph.D. students:** Two

One awarded on the topic entitled " *Statistical Study of Solar Radiation and its correlation with Atmospheric Parameters*".

Other awarded on the topic entitled " *Investigation of empirical correlation based on geometrical parameters for the estimation of direct and diffuse solar radiation*".

8. Research Project:

A research project under taken from Council of Science & Technology UP entitled *A Study on Analysis of Measurement of Solar Radiation and Development of Empirical Correlation for Estimation of Solar radiation.*

9. Conferences and Courses attended:

SN	Name of Conference/Course	Duration
1.	VI National Workshop on "Atomic and molecular Physics", BHU Varanasi India 1986. "Integrated Rural Energy Planning Exercise" IET	8.12.1986 to 13.12.1986
2	National Symposium on "Scattering theory and its Applications" Jadavpur Calcutta 1987.	2.12.1987 to 4.12.1987
3.	14 th National Training Programme on Luck now.	26.12.1988 to 31.12.1988
4.	National Workshop on Renewable Energy Sources, IET Luck now.	24.3.1990 to 25.3.1990
5.	National Workshop on Renewable Energy Sources in Rural Areas: <i>Prospects &amp; Problem</i> , IET Lucknow.	19.1.1994 to 20.1.1994
6.	QIP Summer School On "Advance Processing of Semiconductors", I I T Delhi.	20.6.1994 to 1.7.1994

7.	National Workshop on Thermal Energy Storage Systems and Materials, D A University Indore.	24.2.1995 to 25.2.1995
8.	National Solar Energy Convention: <i>Academy-Industry Meet, 1995</i> New Delhi.	22.1.1995 to 23.1.1995
9.	National Workshop on “Radiochemistry and Applications of Radioisotopes”, CSJMU Kanpur.	8.4.1999 to 17.4.1999
10.	Management Development Programme on “World Bank Procurement Procedures” for Technical Education Quality Improvement Programme, NIFM Faridabad, Haryana.	21.7.2003 to 26.7.2003
11.	Workshop on “Engineery Shabdavali”, IET Lucknow.	19.3.2005 to 20.3.2005
12.	National Workshop on “Sustainable Pollution Control”, IET Luck now.	8.12.2005 to 9.12.2005
13.	A Short term Programme on “Design & Conduct of Tracer Study for Pass-outs”, NITTTR Chandigarh.	8.11.2006 to 10.11.2006
14.	3 <sup>rd</sup> International Conference on “Solar Radiation and Day Lighting (SOLARIS 2007)” IIT Delhi.	7.02.2007 to 9.02.2007
15.	National Conference on Scientific and Legal challenges of Global warming	26.02.2008 to 27.02.2008
16.	Workshop on Practical on MATLAB for B.Tech Courses	08.04.2008 to 10.04.2008
17.	National Conference on Renewable Energy: NaCORE 2009, Jodhpur India.	05.11.2009 to 07.11.2009

13. Publications: 52
- (a) *Published in Journals:* 26 in International Journals  
03 in National Journals
- (b) *In Conferences:* 23 in International and National conferences
- (c) *Book publishing:* 04 (a) Engineering Physics-I,  
(b) Engineering Physics-II  
(c) Engineering Physics: Theory and Practical  
(d) Fundamentals of Laser System and Applications

## LIST OF PUBLICATIONS

(a-1) *In International Journals of Repute:*

1. R. Srivastava and **A.K. Katiyar:**  
Excitation auto ionization in  $\text{Li}^{\dagger}$  ion **Phys. Rev.A 33 3078(1986).**
2. R. Srivastava, **A.K. Katiyar** and I. Khurana:  
1s-2s and 1s-2p excitation of hydrogen by positrons. **J.Phy.B: At. Mol. Phys. 20 1853 (1987).**
3. R. Srivastava and **A.K. Katiyar:**  
 $n^1\text{S}$  and  $n^1\text{P}$  excitations of helium like ions by electrons: A precise distorted wave polarized - orbital approach **Phys. Rev.A 35 1080(1987).**
4. **A.K.Katiyar** and R. Srivastava:  
Electron-photon correlations for  $e^-$ - H ( $1^2\text{S}$  -  $3^2\text{P}$ ,  $3^2\text{D}$ ) collisions **J.Phys. B. At. Mol. Phys. 20 L821-L825 (1987).**

5. **A.K. Katiyar** and R.Srivastava :  
Distorted-wave calculation of the cross sections and correlation parameters for  $e^{\pm}$  - He ( $1\ ^1S$ ,  $2\ ^1S \rightarrow 2\ ^1P$ ,  $3\ ^1S$  and  $3\ ^1P$ ) collisions **Phys. Rev. A** **38** 2767 (1988)
6. **A.K.Katiyar** and R. Srivastava:  
Study of positron-ion collisions: a distorted wave approaches **J. Phy. B. At. Mol. Opt. Phys.** **22** 1253-1261(1988).
7. **A.K.Katiyar** and R.Srivastava:  
Metastable excitations in helium like ions by electrons and positrons: A distorted-wave approach **Phys. Rev. A** **38** (1988)
8. **A.K.Katiyar** and R. Srivastava:  
Differential cross sections and angular-correlation parameters for  $n=3$  excitations in hydrogen by electrons and positrons **Phys. Rev. A** **40** (1989)
9. R.Srivastava, **A.K.Katiyar** and D.K.Rai:  
Distorted- wave approximation for  $e$ -He ( $1\ ^1S$ - $2\ ^1P$ ) excitation: Angular correlation and differential cross sections. **Phys. Rev. A** **40** 2749(1988)
10. Chanchal Kumar Pandey and **A. K. Katiyar**:  
A Short Note on the ratio of monthly mean daily total radiation on tilted surface to that on horizontal surface (**Rde Journal of Reflection des Era** **2** 15-24(2008). ISSN 0973-8576
11. Chanchal Kumar Pandey and **A. K. Katiyar**:  
A New Approach to Estimate daily diffuse Solar Radiation by day temperature, (**Rde Journal of Reflection des Era** **2** 145-154(2008). ISSN 0973-8576
12. Chanchal Kumar Pandey and **A. K. Katiyar**:  
A comparative study to estimate daily diffuse solar radiation over India, **Energy- Elsevier Journal** **34** 1792-1796(2009).
13. Chanchal Kumar Pandey and **A. K. Katiyar**:  
A note on diffuse solar radiation on a tilted surface, **Energy- Elsevier Journal** **34** 1764-1769(2009).
14. **A. K. Katiyar** and C. K. Pande:  
Correlation for estimation of hourly solar radiation. **Int. J. of Energy and Environment** **02** (01), 191-198(2010).
15. **A. K. Katiyar**, Akhilesh Katiyar, Chanchal Kumar Pande and B. Das:  
A Comparative study of monthly mean Clear Sky Radiation over India:**International of Energy and Environment** !(1) 177-182(2010).
16. Chanchal Kumar Pandey and **A. K. Katiyar**:  
Study of ground-reflected component and its contribution in diffuse solar radiation incident on inclined surfaces over India. **Int. J. of Energy and Environment** **01** (03), 547-554(2010).
17. C. K. Pandey and **A. K. Katiyar**:  
Temperature based correlation for the estimation of global solar radiation on horizontal surface: **Int. J. of Energy and Environment** **01** (04), 737-744(2010).
18. **A. K. Katiyar**, Akhilesh Katiyar, C. K. Pande, V. K. Katiyar and S. H. Abdi:  
Correlations for the estimation of monthly mean hourly diffuse solar radiation: A time dependent approach, **Int. J. of Energy and Environment** **01** (05), 833-840(2010).
19. **A. K. Katiyar** and C. K. Pandey:  
Simple Correlation for the estimation of the global solar radiation on horizontal surfaces in India, **Energy- Elsevier Journal** **35** 5043-5048(2010).
20. Chanchal Kumar Pandey and **A. K. Katiyar**:

A Comparative study of solar radiation models on various inclined surfaces for India, **Applied Energy** **88** 1455-1459(2011).

21. **A. K. Katiyar**, C. K. Pande and V. K. Katiyar:  
Correlation Model of Hourly Diffuse Solar Radiation based on ASHRAE Model: *A Study Case in India*: **International Journal of Renewable Energy Technology**; Vol. 3, No.4, 341 – 355(2012).
22. C. K. Pandey and **A. K. Katiyar**:  
Solar Radiation : Models and Measurement Techniques:Journal of Energy: **Journal of Energy**- Volume 2013, Article ID 305207, 8 pages. **Hindawi publication**
23. **A. K. Katiyar** and C. K. Pandey. A review of solar radiation models-Part I. **Journal of Renewable Energy**- Volume 2013, Article ID 168048, 11 pages. **Hindawi publication**.
24. C. K. Pandey and **A. K. Katiyar**: Solar Radiation: Models and Measurement Techniques. **Journal of Energy**- Volume 2013, Article ID 305207, 8 pages. **Hindawi publication**
25. **A. K. Katiyar** and C. K. Pandey: Hourly solar radiation on inclined surfaces: *A case study at Lucknow*.
26. Garima Tiwari, V. K. Katiyar, Vivek Dwivedi, **A. K. Katiyar** and C. K. Pandey: A Comparative study of commonly used Solar Dryers in India. **International Journal of Current Engineering and Technology**, Vol.3, and No.3 (August 2013) (Global Impact factor: 2.2).

*(a-2) In National Journals:*

27. **A. K. Katiyar**, Akhilesh Katiyar, Chanchal Kumar Pande and B. Das:  
A Comparative study of Clear Sky Solar Radiation: A Case Study in Lucknow(India), **Journal PAS Vol. 15 (Physical Science)**, 124-135(2009)
28. Chanchal Kumar Pandey and **A. K. Katiyar**:  
A Comparative study for estimation of hourly sky-diffuse radiation on tilted surface. **Journal PAS Vol. 15 (Physical Science)**, 124-135(2009)
29. **A. K. Katiyar**, V. K. Katiyar\* Akhilesh Kumar and C.K.Pandey:  
Relationship of Sixth Order to Estimate Global Solar Radiation from Hours of Empirical Sunshine (Accepted in **Journal PAS Vol. 15 (Physical Science)**, 124-135(2009)

*b) In National and International Conferences:*

30. R. Srivastava and **A.K.Katiyar**:  
Excitation of Doubly Excited Autoionisation States in ions. XIV International Conference on the Physics of Electronic and Atomic Collisions, **Palo Alto M78 (1985)**.
31. R.Srivastava and **A.K.Katiyar**:  
A Reliable Calculation for  $n^1S$  and  $n^1P$  Excitations in Helium like Ions- International Conference on atomic physics **Tokyo Japan 1986**.
32. **A.K.Katiyar** and R.Srivastava:  
Electron and Positron impact excitation  $n=5$  sublevels in hydrogen VI National Workshop on Atomic and molecular Physics, **BHU Varanasi India 1986**.
33. **A.K.Katiyar** and R.Srivastava:  
 $e^\pm$  - Impact Excitation of Helium Atom in  $3^1L$  ( $L=0,1$ ) States XV International Conference on the Physics of Electronic and Atomic Collisions, **Brighton UK 400(1987)**.

34. **A.K.Katiyar** and R.Srivastava:  
3s and 3P Excitation by Electros and Positrons, XV International Conference on the Physics of Electronic and Atomic Collisions, **Brighton UK 199(1987)**.
35. **A.K.Katiyar** and R.Srivastava:  
 $e^{\pm}$  - Impact Excitation of Metastable States in Helium like Ions .National Symposium on Scattering theory and its Applications, **Jadavpur Calcutta 1987**.
36. **A.K.Katiyar** and R.Srivastava:  
Excitation of Hydrogen and Helium like Ions by Positrons. VII National Workshop on Atomic and molecular Physics.
37. R.Srivastava, **A.K.Katiyar** and D.K.Rai:  
A Study of 2-<sup>1</sup>P Excitation in Helium by Electrons: Angular Correlation and Differential Cross Sections. XVI International Conference on the Physics of Electronic and Atomic Collisions, **New York, 180(1989)**.
38. **A.K.Katiyar** and R.Srivastava:  
Positron Impact Excitations in ions: A Distorted Wave Approach. XVI International Conference on the Physics of Electronic and Atomic Collisions, **New York, 180(1989)**.
39. **A.K.Katiyar** and V.K.Katiyar:  
Correlation for the estimation of monthly mean hourly values of global solar radiation on a horizontal surface. 3<sup>rd</sup> International Conference on solar radiation and Day Light, February 7-9, 2007, **New Delhi, India**.
40. **A.K.Katiyar** and V.K.Katiyar:  
Empirical Relationship of Sixth Order to Estimate Global Solar Radiation from Hours of Sunshine. 3<sup>rd</sup> International Conference on solar radiation and Day Light, February 7-9, 2007, **New Delhi, India**.
41. **A.K.Katiyar** and V.K.Katiyar:  
A new solar correlation for India, World Renewable Energy Congress IX and Exhibition, August 19-25, 2006 **Florence Italy**.
42. V. K. Katiyar, Akhilesh Kumar, Chanchal Kumar and **A. K. Katiyar**:  
Estimation of monthly mean daily diffuse radiation on inclined surface of plane region of Uttar Pradesh, India. World Renewable Energy Conference – Pacific Rim Region October 30 to November 1, 2007 **Taiwan, China**.
43. Akhilesh Katiyar, Chanchal Kumar Pandey, **A. K. Katiyar** and V.K. Katiyar:  
A Study of monthly mean hourly diffuse solar radiation on horizontal surface. *National Conference on Scientific and Legal challenges of Global warming Kanpur Indi*, February 25-26, 2008
44. Chanchal Kumar Pandey, **A. K. Katiyar**, Akhilesh Katiyar and V.K. Katiyar:  
A Comparative study of monthly mean daily diffuse radiation on a tilted surface at Lucknow, India. *National Conference on Scientific and Legal challenges of Global warming Kanpur India*, February 25-26, 2008
45. Chanchal Kumar Pandey and **A. K. Katiyar**:  
Estimation of the Monthly Mean Daily Diffuse Solar Radiation from the Day Temperature: *4<sup>th</sup> International Conference on solar radiation and day Lighting* December 4-5, 2008 Hon Kong, China.
46. **A. K. Katiyar**, C.K.Pandey and Akhilesh Kumar:  
Time Based Correlation for the Estimation of Monthly Mean Hourly Values of Diffuse Solar Radiation on Horizontal Surface: *4<sup>th</sup> International Conference on solar radiation and day Lighting* December 4-5, 2008 Hon Kong, China.
47. **A. K. Katiyar**, C.K.Pandey, Akhilesh Kumar and S. H. Abdi:

Ground reflected radiation incident on an inclined plane at Lucknow, India: *NaCORE 2009 National Conference on Renewable Energy*, Jodhpur, November 5-7,2009.

48. Chanchal Kumar Pandey and **A. K. Katiyar**:  
Statistical Approach for the Estimation and Validation of Diffuse Irradiation Models on Various Inclined Surfaces for India: *Renewable Energy and Environment for Sustainable Development meet*, New Delhi, India.
49. **A. K. Katiyar**, Akhilesh Katiyar, C. K. Pande and B. Das:  
A Comparative Study of Clear Radiation for Lucknow: *Renewable Energy and Environment for Sustainable Development meet*, New Delhi, India.
50. **A. K. Katiyar** and C.K.Pandey:  
Analysis of solar radiation at Lucknow: A case study. *National Conference on Renewable Energy and Energy Management (NCREEM-2011) SR Group of Institution, Jhansi*, October 8-9, 2011.
51. **A. K. Katiyar** and C.K.Pandey:  
Comparison of Lower and Higher Solar Radiation on Inclined Surfaces: *International Conference on New Energy and Sustainable Development, Beijing China*, June 14-16 2013
52. **A. K. Katiyar** and C. K. Pandey :Comparison of Lower and Higher Solar Radiation on Inclined Surfaces: *A ccepted for presentation in International Conference on Solar Radiation Beijing China*.

#### **10. Administrative Experiences:**

About 30 years worked at additional different positions in the Institute/University/Govt. along with teaching work such as:

- (i) **Warden**: About 13 years at IET Lucknow.
- (ii) **Dy. Chief Warden**: About one year at IET Lucknow.
- (iii) **Head of Department**: 06 years at IET, CSJM University Kanpur.
- (iv) **Director (Officiating)**: For short period at IET, CSJM University Kanpur.
- (v) **Dy. Coordinator**: Entrance Exam for PGDCA at IET Lucknow.
- (vi) **Asstt. Coordinator**: Combined Entrance Exam during 95-96 and 96-97 at IET Lucknow. This examination is conducted by UP Govt. for admission to B.Tech. Courses in state engineering institutions and state quota in regional engineering institutions of other states (state level test)
- (vii) **Dy.Registrar**: At IET Lucknow.
- (viii) **Member secretary**: Purchase committee at IET Lucknow to look after the purchase at institute level.
- (ix) **Officer in Charge**: Central Store at IET Lucknow.
- (x) **Officer in Charge**: Horticulture at IET Lucknow.
- (xi) **Nodal Officer Procurement**: To look after procurement of institute materials under TEQIP a World Bank Project.
- (xii) **In-Charge Quality Assurance**: To look after quality assurance of World Bank-TEQIP project at UP State level.
- (xiii) **Chairman, ISTE Chapter**: Worked as Chairman of ISTE at IET, CSJM University Kanpur Chapter.
- (xiv) **Proctor**: August 2004 to October 2005 at IET Lucknow.

- (xv) **Dy. Dean Academic:** At IET Lucknow.
- (xvi) **Dy. Coordinator:** Written Examination Committee (UP Jal Nigam)-2008 for recruitment of Assistant Engineers and Junior Engineers.
- (xvii) **Center Superintendent:** Worked as Center Superintendent for many regular semester and various entrance examinations at CSJM University Kanpur and at IET Lucknow.
- (xviii) **Dy. Coordinator:** State Entrance Examination Cell of GB Technical University Lucknow during 2010.
- (xix) **Controller of Examination:** Worked as Controller of Examination at IET Lucknow for about 18 months.
- (xx) **Dean Under Graduate Studies & Entrepreneurship:** Working as Dean Under Graduate Studies & Entrepreneurship of Dr. APJ Abdul Kalam Technical University Lucknow.
- (xxi) **Dean Applied Sciences:** Working as Dean Applied Sciences of Dr. APJ Abdul Kalam Technical University Lucknow
- (xxii) **Head of Department:** Presently working as Head of department of Applied Sciences of the Institute.
- (xxiii) **Coordinator:** State Entrance Examination Cell of Dr. APJ Abdul Kalam Technical University Lucknow during 2018.
- (xxiv) **Coordinator:** Self Financing Courses IET Lucknow.

#### **11. Membership:**

Life member of Indian Society for Technical Education (ISTE) New Delhi.

#### **12. Other Information:**

I worked several times as Head examiner for the evaluation of Physics answer books of UP Technical University/GB Technical University/Dr. APJ Abdul Kalam Technical University Lucknow. I also worked as member of various committees for inspections and enquiries of various colleges of State.