Resume

Sameen Ahmed Khan, PhD

Department of Mathematics and Sciences
College of Arts and Applied Sciences (**CAAS**), Dhofar University
Salalah, Sultanate of Oman
URL: http://sites.google.com/site/rohelakhan/
Research Listed in Scopus: http://www.scopus.com/authid/detail.url?authorId=8452157800
Email: rohelakhan@yahoo.com GSM: +968-9953XXXX

Professional Summary

- Long academic career including Ten years of research & Eleven years of teaching in Oman.
- Over sixty *Research Articles* and 220+ *Popular Writings*.
- 35 Integer Sequences to *The On-Line Encyclopedia of Integer Sequences.*
- Worked as Assistant Professor at Salalah College of Technology (SCOT), Salalah, Sultanate of Oman, from May-2006 to 2015.
- Worked as Assistant Professor & Assistant Head at Middle East College of Information Technology (MECIT), from September 2003 to May 2006
- Publications arising from my teaching experience (see the expository publications, 5-14)
- CONACYT-UNAM Postdoctoral Fellow, Centro de Ciencias Físicas, Universidad Nacional Autónoma de México, Cuernavaca, MÉXICO (October 2001 — October 2002).
- INFN Post-Doctoral Fellow, Istituto Nazionale di Fisica Nucleare (INFN), Dipartimento di Fisica Galileo Galilei, Università di Padova, ITALY (October 1997 — October 1999).
- Junior Research Fellow, Institute of Mathematical Sciences, Chennai, INDIA.
- Independent Research (see the peer-reviewed publications, 6-12 and the four Book-Chapters)
- Won the State Level Mathematics Olympiads at Junior Level, Senior Level and Undergraduate Level conducted by The Andhra Pradesh Association of Mathematics Teachers (APAMT), Hyderabad, India.
- Young Physicists Colloquium: Lectured at the Young Physicists Colloquium Kolkata (Calcutta), August 1996, Organized by The Indian Physical Society (IPS).

Educational Qualifications

- PhD (Physics), The Institute of Mathematical Sciences, Madras, India (1991-1997).
  - **Dissertation: Quantum Theory of Charged-Particle Beam Optics**, Development of quantum mechanical treatment for the study of transport of charged-particle beams through electromagnetic systems.
  - **Advisor:** Professor Ramaswamy Jagannathan.
- M.S. (Physics), Indian Institute of Technology (IIT), Kanpur, India (1988-1990).
- B.S. Honors (Physics), Osmania University, Hyderabad, India (1985-1988).

Teaching Experience

 # 1 SALALAH COLLEGE OF TECHNOLOGY, SALALAH, SULTANATE OF OMAN.

The college is one of the seven colleges run by Ministry of Man Power. It has the Department of Engineering, Department of Information Technology, Department of Business Studies, Department of Chemical Engineering, English Language Centre and the Educational Technology Centre.

Responsibility: Teaching Physics and establishing physics laboratories.

 # 2 MIDDLE EAST COLLEGE OF INFORMATION TECHNOLOGY, MUSCAT, SULTANATE OF OMAN.

The Middle East College of Information Technology (MECIT) is the first college (established in 2002) dedicated to Information Technology (IT), not only in Oman but in the region of Middle East. MECIT is housed in the Knowledge Oasis Muscat, which incorporates the IT Park of Muscat.

Responsibility: Teaching Physics and Mathematics; and participated as assistant head in establishing the Department of Mathematics and Applied Sciences.
Teaching: Two-semester sequence of Physics for Engineering; Three-Semester Sequence of Engineering Mathematics (Foundation Mathematics, College Mathematics, Calculus with Numerical Methods and Advanced Calculus) and Two-Semester Sequence of Physics (Physics, Engineering Mechanics and Engineering Physics).

Other Academic Activities

- Drafted the syllabus for the new BS Program.
- Set up the Department Homepage on the College Intranet, which contains in-house prepared Lecture Notes and Question Banks, meeting most of the requirements of all the courses offered by the department.
- Conducted the first Mathematics Olympiad in the College on 26 May 2004.
- Served on several College Committees (Disciplinary Committee, Journal Committee, Library Committee, Web-Site Committee, Prizes and Awards Committee, and Accreditation Steering Committee)

Computer Literacy

Operating System	MS-Dos, UNIX/Linux, MS-Windows 95/98/2000/Xp
Languages	FORTRAN, MATHEMATICA
Applications	MS-Office 2000/2003/Xp, LaTeX, MATHEMATICA

Research Experience

#1 CONACYT-UNAM Postdoctoral Fellow, Centro de Ciencias Físicas, Universidad Nacional Autónoma de México, Cuernavaca, MÉXICO (October 2001 — October 2002).
Advisor: Professor Kurt Bernardo Wolf.

Research: Unified treatment of light beam optics and polarization.
The CONACYT-UNAM Fellowships are awarded by the Ministry of Science, Mexico to do research in Mexican Institutions.

#2 INFN Post-Doctoral Fellow, Istituto Nazionale di Fisica Nucleare (INFN), Dipartimento di Fisica Galileo Galilei, Università di Padova, ITALY (October 1997 — October 1999).

Advisor: Professor Modesto Pusterla.

Research: Beam Halo Problem.
INFN, the Italian National Agency for Nuclear Physics awards thirty Fellowships every year, based on a very competitive world-wide selection.
#3 Junior Research Fellow, Institute of Mathematical Sciences (IMSc), Chennai, India (1991-1997)
IMSc was set up in 1963 as a centre of advanced study to carry out research in frontline areas of physics and mathematics.

HONORS AND AWARDS

#1 Mathematics Olympiads: Won the State Level Mathematics Olympiads at: Junior Level (1983), Senior Level (1985) and Undergraduate Level (1986 to 1988), conducted by The Andhra Pradesh Association of Mathematics Teachers (APAMT), Hyderabad, India. The Mathematics Talent Exams (widely known as Mathematics Olympiads) are conducted to spot mathematical talent. The above Olympiads were conducted in the southern Indian state of Andhra Pradesh, which is the home to about seventy-six million people.

#2 Young Physicists Colloquium: Gave a Lecture at the Young Physicists Colloquium Kolkata (Calcutta), August 1996, Organized by the Indian Physical Society (IPS). This annual event has about twenty-five speakers, who present their research.

#3 Reviewer and Referee:

- Serving on the Board of Advisors, RFID Association, India. http://www.rfida.org/.
- Served as a Referee for several *Peer-Reviewed Journals*.
- Member of the Review Panel, *International Conference on Applied Information and Communications Technology*, (22-23 March 2011 at MECIT, the Middle East College of Information Technology, Muscat, Sultanate of Oman). http://www.mecit.edu.om/conf2011/
- The *Regular Correspondent* for the ICFA Beam Dynamics Panel *Newsletters*, for the regions of *Middle East & Africa*. http://icfa-usa.jlab.org/archive/newsletter.shtml

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PROFESSIONAL AFFILIATIONS

- Member of American Physical Society
- Optical Society of America
- International Association of Mathematical Physics

PUBLICATIONS SUMMARY (Numbering over 250):

Total Citations: 950+ **h-index 13** **i10-index 25** **Based on Google Scholar** **http://scholar.google.com/citations?user=hZvL5eYAAAAJ**		
S. No.	**Type**	**Number**
1	Peer-Reviewed Journals	**22**
2	Book Chapters	**10**
3	Books	**3**
4	Lecture Notes	**4**
5	Conference Proceedings	**12**
6	E-Prints (http://arxiv.org/a/khan_s_1)	**8**
7	Expository Publications	**18**
8	Popular Writings (including Expository Publications)	**220+**
9	Contributions to International Reports	**6**

Patents

Quadricmeter is the instrument devised to identify (distinguish) and measure the various parameters (axis, foci, latera recta, directrix, etc.,) completely characterizing the important class of surfaces known as the quadratic surfaces. Quadratic surfaces (also known as quadrics) include a wide range of commonly encountered surfaces including, cone, cylinder, ellipsoid, elliptic cone, elliptic cylinder, elliptic hyperboloid, elliptic paraboloid, hyperbolic cylinder, hyperbolic paraboloid, paraboloid, sphere, and spheroid. Quadricmeter is a generalized form of the conventional spherometer and the lesser known cylindrometer (also known as the "Cylindro-Spherometer" or Sphero-Cylindrometer"). With a conventional spherometer it was possible only to measure the radii of spherical surfaces. Cylindrometer can measure the radii of curvature of a cylindrical surface in addition to the spherical surface. In both the spherometer and the cylindrometer one assumes the surface to be either spherical or cylindrical respectively. In the case of the quadricmeter, there are no such assumptions.

- Sameen Ahmed Khan,
  Quadricmeter,
  Official Journal of the Patent Office, Issue No. **43/2008**, Part-I, pp. 25296 (24 October 2008).
  Application No.: **2126/MUM/2008 A**, International Classification: **B69G1/36**,
  Controller General of Patents Designs and Trade Marks, Government of India.
  http://ipindia.nic.in/ipr/patent/journal_archieve/journal_2008/patent_journal_2008.htm
  http://ipindia.nic.in/ipr/patent/journal_archieve/journal_2008/pat_arch_102008/official_journal_24102008_part_i.pdf
  http://www.patentoffice.nic.in/, http://www.ipindia.nic.in/
  (*patent in process*, **http://SameenAhmedKhan.webs.com/quadricmeter.html**).

Publications

LECTURE NOTES

1. Sameen Ahmed Khan, *Lecture Notes in Mathematics*, Middle East College of Information Technology, Muscat, Sultanate of Oman (2005). http://www.mecit.edu.om/
   * The Notes cover the *Foundation Mathematics* and the Three-Semester Sequence of *Engineering Mathematics*, *College Mathematics*, *Calculus with Numerical Methods* and *Advanced Calculus*.

2. Sameen Ahmed Khan, *Lecture Notes in Physics*, Middle East College of Information Technology, Muscat, Sultanate of Oman (2005). http://www.mecit.edu.om/
   * The Notes cover the Two-Semester Sequence of *Physics* along with *Engineering Physics* and *Engineering Mechanics*.

3. Sameen Ahmed Khan, *Lecture Notes in Physics*, Salalah College of Technology E-Learning Website, http://www.sct.edu.om/, Salalah, Sultanate of Oman (2010).
   * The Notes cover the Two-Semester Sequence of *Physics for Engineering*.

4. Sameen Ahmed Khan, *Physics Laboratory Manual*, Salalah College of Technology E-Learning Website, http://www.sct.edu.om/, Salalah, Sultanate of Oman (2010).
   * The Notes cover over twenty experiments for the Two-Semester Sequence of *Physics for Engineering*.

BOOKS

1. Sameen Ahmed Khan, *International Year of Light and Light-based Technologies*, LAP LAMBERT Academic Publishing, Germany (Thursday the 30 July 2015), 96 pages. http://www.lap-publishing.com/, http://isbn.nu/9783659764820/. **ISBN-13:** 978-3-659-76482-0, **ISBN-10:** 3659764825 and **EAN:** 9783659764820.
2. Sameen Ahmed Khan, *Introductory Physics Laboratory Manual*, LAP LAMBERT Academic Publishing, Germany (Wednesday the 19 August 2015), 168 pages. http://www.lap-publishing.com/, http://isbn.nu/9783659771897/. **ISBN-13:** 978-3-659-77189-7, **ISBN-10:** 3659771899 and **EAN:** 9783659771897
3. Sameen Ahmed Khan, *Objective Questions in Introductory Physics*, LAP LAMBERT Academic Publishing, Germany (Friday the 9 October 2015), 408 pages. http://www.lap-publishing.com/, http://isbn.nu/9783659786198. **ISBN-13:** 978-3-659-78619-8 and **ISBN-10:** 3659786195 and **EAN:** 9783659786198

BOOK CHAPTERS

1. R. Jagannathan and S. A. Khan, **Wigner functions in charged particle optics,** *in*: Selected Topics in Mathematical Physics–Professor R. Vasudevan Memorial Volume, *Editors*: R. Sridhar, K. Srinivasa Rao, and V. Lakshminarayanan (Allied Publ., Delhi, India 1995), pp. 308-321. (ISBN-10: 8170234883 and ISBN-13: 978-8170234883).

2. R. Jagannathan and S. A. Khan**, Quantum theory of the optics of charged particles**, Chapter-4 in *Advances in Imaging and Electron Physics, Editors*: P. W. Hawkes, B. Kazan and T. Mulvey, (Academic Press, San Diego) **97**, 257-358 (1996). (ISBN-10: 0120147394 and ISBN-13: 978-0120147397). **http://dx.doi.org/10.1016/S1076-5670(08)70096-X**

3. Sameen Ahmed Khan, **Wavelength-Dependent Effects in Light Optics**, Chapter-6 in *New Topics in Quantum Physics Research*, Editors: Volodymyr Krasnoholovets and Frank Columbus, (Nova Science Publishers, New York, 2006, http://www.novapublishers.com/) pp. 163-204 (30 December 2006). (ISBN-10: 1600210287 and ISBN-13: 978-1600210280).

4. Sameen Ahmed Khan, **The Foldy-Wouthuysen Transformation Technique in Optics**, Chapter-2 in *Advances in Imaging and Electron Physics, Editor:* Peter W. Hawkes, **152**, 49-78 (August 2008). (ISBN-10: 0123742196 and ISBN-13: 978-0-12-374219-3). Elsevier, **http://dx.doi.org/10.1016/S1076-5670(08)00602-2**

5. Sameen Ahmed Khan, **Number Theory and Resistor Networks**, Chapter-5 in *Resistors: Theory of Operation, Behavior and Safety Regulations*, Editor: Roy Abi Zeid Daou, (Nova Science Publishers, New York, 2013, http://www.novapublishers.com/), pp. 99-154 (May 2013). (Hard Cover: ISBN-10: 1622577884 and ISBN-13: 978-1-62257-788-0). (ebook: ISBN-10: 1626187959 and ISBN-13: 978-1-62618-795-5).

6. Sameen Ahmed Khan, **Coordinate Geometric Generalization of the Spherometer and Cylindrometer**, Chapter-8 in *Advances in Engineering Research*, Volume 10, Editor: Victoria M. Petrova, (Nova Science Publishers, New York, 2015, http://www.novapublishers.com/), pp. 163-190 (10 July 2015). (Hard Cover: ISBN-10: 1634827848 and ISBN-13: 978-1-63482-784-3). (ebook: ISBN-10: 1634828151 and ISBN-13: 978-1-63482-815-4).

7. Sameen Ahmed Khan, **International Year of Light and History of Optics**, Chapter-1 in *Advances in Photonics Engineering, Nanophotonics and Biophotonics*, Editor: Tanya Scott, (Nova Science Publishers, New York, 2016, http://www.novapublishers.com/), pp. 1-56 (15 March 2016). (Hard Cover: ISBN-10: 163484498X and ISBN-13: 978-1-63484-498-7). (ebook: ISBN-10: 1634845307 and ISBN-13: 978-1-63484-530-4). https://www.novapublishers.com/catalog/product_info.php?products_id=57128

8. G. B. V. S. Lakshmi, Shumaila, Sameen Ahmed Khan, Azher M. Siddiqui, **Thin Films: Polyaniline and Poly(3-methylthiophene)**, in *Encyclopedia of Plasma Technology* (First Edition), Editor: J. Leon Shohet (Taylor & Francis Encyclopedia Program), pp. 1442-1451, (Monday the 12 December 2016). ISBN-10: 146650059X and ISBN-13: 9781466500594. http://dx.doi.org/10.1081/E-EPLT-120053953 and https://www.crcpress.com/Encyclopedia-of-Plasma-Technology/Shohet/9781466500594.

9. Sameen Ahmed Khan, **Quantum Methodologies in Maxwell Optics**, Chapter-2 in *Advances in Imaging and Electron Physics, Editor*: Peter W. Hawkes, **201**, 57-135 (Tuesday the 08 August 2017). (ISBN-10: 0128120894 and ISBN-13: 9780128120897). Elsevier, **http://dx.doi.org/10.1016/bs.aiep.2017.05.003**, ISSN: 1076-5670. (Available online since Monday the 26 June 2017).

10. Sameen Ahmed Khan, **Synchrotron Radiation from Prediction to Production**, Chapter-4 in *Horizons in World Physics*, Volume **294**, Editor: Albert Reimer, (Nova Science Publishers, New York, 2017, http://www.novapublishers.com/), pp. 123-178 (01 November 2017). (Hard Cover: ISBN-10: 1536125156 and ISBN-13: 978-1-53612-515-3). (ebook: pp. 123-178, ISBN-10: 1-5361-2544-X and ISBN-13: 978-1-53612-544-3).

PEER-REVIEWED JOURNALS

1. S. A. Khan and R. Jagannathan, **Quantum mechanics of charged particle beam transport through magnetic lenses,** *Physical Review* **E 51**, 2510-2515 (1995). **http://dx.doi.org/10.1103/PhysRevE.51.2510**

2. M. Conte, R. Jagannathan, S. A. Khan and M. Pusterla, **Beam optics of the Dirac particle with anomalous magnetic moment,** *Particle Accelerators* **56**, 99-126 (1996). **http://cds.cern.ch/record/307931/files/p99.pdf**

3. S. A. Khan and M. Pusterla, **Quantum-like approach to the transversal and longitudinal beam dynamics. The halo problem,** *European Physical Journal*, **A 7** (4), 583-587 (2000). **http://dx.doi.org/10.1007/s100500050430**

4. Sameen Ahmed Khan and Modesto Pusterla, **Quantum approach to the halo formation in high current beams,** *Nuclear Instruments and Methods in Physics Research (NIMS)* **A 464**, 461-464 (2001). **http://dx.doi.org/10.1016/S0168-9002(01)00108-5**

5. Sameen Ahmed Khan and Kurt Bernardo Wolf, **Hamiltonian orbit structure of the set of paraxial optical systems,** *Journal of the Optical Society of America (JOSA)*, **19** (12), 2436-2444 **(**December 2002). **http://dx.doi.org/10.1364/JOSAA.19.002436**

6. Sameen Ahmed Khan, **Wavelength-dependent modifications in Helmholtz Optics**, in *International Journal of Theoretical Physics*, **44** (1), 95-125 (January 2005). Kluwer Academic Publishers, http://dx.doi.org/10.1007/s10773-005-1488-0

7. Sameen Ahmed Khan, **An Exact Matrix Representation of the Maxwell's Equations**, *Physica Scripta*, **71** (5), 440-442 (2005). **http://dx.doi.org/10.1238/Physica.Regular.071a00440**

8. Sameen Ahmed Khan, **The Foldy-Wouthuysen Transformation Technique in Optics**, *Optik - International Journal for Light and Electron Optics*, **117** (10), 481-488 (October 2006). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2005.11.010**

9. Sameen Ahmed Khan, **Maxwell Optics of Quasiparaxial Beams**, *Optik - International Journal for Light and Electron Optics*, **121** (5), 408-416 (March 2010). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2008.07.027**

10. Sameen Ahmed Khan, **Can the Photon Velocity be derived from the Klein-Gordon equation?**, *Optik - International Journal for Light and Electron Optics*, **122** (15), 1324-1325 (August 2011). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2010.08.016**.

11. Sameen Ahmed Khan, **Farey Sequences and Resistor Networks**, *Mathematical Sciences - Proceedings of the Indian Academy of Sciences*, **122** (2), 153-162 (May 2012). (Publication of the Indian Academy of Sciences (**IAS**), Copublished with Springer). **http://dx.doi.org/10.1007/s12044-012-0066-7**. **Larger Version:** *E-Print*: **http://arxiv.org/abs/1004.3346/**.

12. Sameen Ahmed Khan, **Aberrations in Maxwell Optics**, *Optik - International Journal for Light and Electron Optics*, **125** (3), 968-978 (February 2014). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2013.07.097**.

13. Sameen Ahmed Khan and Farooq Ahmed Khan, **Phenomenon of Motion of Salt along the Walls of the Container**, *International Journal of Current Engineering and Technology* (**IJCET**), **5** (1), 368-370 (February 2015). ISSN: 2277-4106 and 2347-5161 (http://inpressco.com/category/ijcet/). **http://dx.doi.org/10.14741/Ijcet/22774106/5.1.2015.66**

14. Sameen Ahmed Khan, **Primes in Geometric-Arithmetic Progression**, *Global Journal of Pure and Applied Mathematics* (GJPAM), **12** (2), 1161-1180 (March-April 2016). Print ISSN: 0973-1768 and Online ISSN: 0973-9750. **http://www.ripublication.com/gjpam.htm**

15. Sameen Ahmed Khan, **Passage from scalar to vector optics and the Mukunda-Simon-Sudarshan theory for paraxial systems**, *Journal of Modern Optics*, **63** (17), 1652-1660 (September 2016). Taylor & Francis, **http://dx.doi.org/10.1080/09500340.2016.1164257** (Available online since Friday the 25 March 2016).

16. Sameen Ahmed Khan, **Quantum Methodologies in Helmholtz Optics**, *Optik - International Journal for Light and Electron Optics*, **127** (20), 9798–9809 (October 2016). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2016.07.071** (Available online since Tuesday the 26 July 2016).

17. Sameen Ahmed Khan, **Quantum Methods in Light-Beam Optics**, *Optics & Photonics News* (OPN), **27** (12), 47 (December 2016). (Monthly, Publication of the Optical Society of America). http://www.osa-opn.org/home/articles/volume_27/december_2016/features/optics_in_2016/
    * One of the thirty papers selected under the theme, *Optics in 2016*, highlighting the most exciting peer-reviewed optics research to have emerged over the past 12 months.

18. Sameen Ahmed Khan, **Hamilton's Optical-Mechanical Analogy in the Wavelength-dependent Regime**, *Optik - International Journal for Light and Electron Optics*, **130C**, 714-722 (February 2017). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2016.10.112** (Available online since Wednesday the 02 November 2016).

19. Sameen Ahmed Khan, **Linearization of Wave Equations**, *Optik - International Journal for Light and Electron Optics*, **131**, 350-363 (February 2017). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2016.11.073** (Available online since Wednesday the 16 November 2016).

20. Sameen Ahmed Khan, **Polarization in Maxwell Optics**, *Optik - International Journal for Light and Electron Optics*, **131**, 733-748 (February 2017). Elsevier, **http://dx.doi.org/10.1016/j.ijleo.2016.11.134** (Available online since Monday the 28 November 2016).

21. Sameen Ahmed Khan, **Coordinate Geometric Generalization of the Spherometer**, *Far East Journal of Mathematical Sciences* (FJMS), **101** (03), 619-642 (February 2017). Print ISSN: 0972-0871 and Online ISSN: 0973-7006. **http://dx.doi.org/10.17654/MS101030619**

22. Sameen Ahmed Khan, **Aberrations in Helmholtz Optics**, *Optik - International Journal for Light and Electron Optics*, **153C**, 164-181 (January 2018). Elsevier, **https://doi.org/10.1016/j.ijleo.2017.10.006** (Available online since Thursday the 05 October 2017).

23. Sameen Ahmed Khan and Modesto Pusterla, **On the form of Lorentz-Stern-Gerlach force,** (*submitted*).

24. Sameen Ahmed Khan, Ramaswamy Jagannathan and Rajiah Simon, **Foldy-Wouthuysentransformation and a quasiparaxial approximation scheme for the scalar wave theory of light beams,** (*submitted*).

The corrections to the traditional descriptions derived in the above articles have a significant bearing on the celebrated Scherzer Theorem in the wavelength-dependent regime in electron microscopy and the algebraically equivalent system of fiber optics. An application for a patent shall be made in the near future!

PUBLICATIONS IN CONFERENCE PROCEEDINGS

1. S. A. Khan and R. Jagannathan, **Theory of relativistic electron beam transport based on the Dirac equation,** *in: Proceedings of the 3rd National Seminar on Physics and Technology of Particle Accelerators and their Applications* **PATPAA-93** (25-27 November 1993, Kolkata (Calcutta)), *Editor*: S. N. Chintalapudi (IUC-DAEF, Kolkata (Calcutta)), pp. 102–107. **http://cds.cern.ch/record/263573**

2. R. Jagannathan and S. A. Khan, **Quantum mechanics of accelerator optics,** *ICFA Beam Dynamics Newsletter*, **13**, 21 - 27 (April 1997). (**ICFA**: International Committee for Future Accelerators).

3. S. A. Khan, **Quantum theory of magnetic quadrupole lenses for spin-½ particles,** *in: Proceedings of the 15th Advanced ICFA Beam Dynamics Workshop on Quantum Aspects of Beam Physics*, (4-9 January 1998, Monterey, California USA), *Editor*: Pisin Chen, (World Scientific, Singapore, 1999), pp. 682-694.

4. Sameen A. Khan, **Quantum aspects of accelerator optics** *in*: *Proceedings* of the *1999 Particle Accelerator Conference* **PAC99**, (29 March - 02 April 1999, New York City, NY), *Editors*: A. Luccio and W. MacKay, (IEEE Catalogue Number: 99CH36366) pp. 2817-2819. **http://dx.doi.org/10.1109/PAC.1999.792948**

5. Sameen A. Khan and Modesto Pusterla, **Quantum mechanical aspects of the halo puzzle,** *in*: *Proceedings* of the *1999 Particle Accelerator Conference* **PAC99** (29 March - 02 April 1999, New York City, NY), *Editors:* A. Luccio and W. MacKay, (IEEE Catalogue Number: 99CH36366) pp. 3280-3281. **http://dx.doi.org/10.1109/PAC.1999.792276**

6. Sameen A. Khan and Modesto Pusterla, **Quantum-like approaches to the beam halo problem,** *in*: Proceedings of the *6th International Conference on Squeezed States and Uncertainty Relations* **ICSSUR'99**, (24-29 May 1999, Napoli, Italy, *Editors*: D Han, Y S Kim, and S Solimeno, (*NASA Conference Publication Series* 2000-209899) pp. 438-441 (July 2000).

7. S. A. Khan, **Quantum mechanical formalism of beam optics**, *in*: *Proceedings of the 18th Advanced ICFA Beam Dynamics Workshop on Quantum Aspects of Beam Physics* (15-20 October 2000, Capri, Italy), *Editor*: Pisin Chen, (World Scientific, Singapore, June 2002). pp. 517-526. **http://dx.doi.org/10.1142/9789812777447_0042**

8. Sameen Ahmed Khan, **Analogies between light optics and charged-particle optics,** *ICFA Beam Dynamics Newsletter*, **27**, 42-48 (June 2002). (**ICFA**: International Committee for Future Accelerators).

9. Sameen Ahmed Khan, **Quantum Aspects of Charged-Particle Beam Optics**, *in*: *Proceedings* of the *Fifth Saudi International Meeting on Frontiers of Physics 2016*, **SIMFP 2016**, (16-18 February 2016, Department of Physics, Jazan University, Gizan, Saudi Arabia). *Editors*: Ali Al-Kamli, Nurdogan Can, Galib Omar Souadi, Mohamed Fadhali, Abdelrahman Mahdy and Mahmoud Mahgoub, *AIP Conference Proceedings*, **1742**, 030008-1–030008-4 (10 June 2016). (American Institute of Physics); **http://dx.doi.org/10.1063/1.4953129**

10. Riti Sethi, Pravin Kumar, Sameen Ahmed Khan, Anver Aziz and Azher M. Siddiqui, **Effect of Nitrogen Ion Implantation on the Structural and Optical Properties of Indium Oxide Thin Films**, *in*: *Proceedings* of the *Fifth Saudi International Meeting on Frontiers of Physics 2016*, **SIMFP 2016**, (16-18 February 2016, Department of Physics, Jazan University, Gizan, Saudi Arabia). *Editors*: Ali Al-Kamli, Nurdogan Can, Galib Omar Souadi, Mohamed Fadhali, Abdelrahman Mahdy and Mahmoud Mahgoub, *AIP Conference Proceedings*, **1742**, 030016-1–030016-5 (10 June 2016). (American Institute of Physics); **http://dx.doi.org/10.1063/1.4953137**

E. Expository Publications

1. Sameen Ahmed Khan, **The World of Synchrotrons,** *Resonance Journal of Science Education*, **6** (11), 77-84 (November 2001), (Monthly Publication of the Indian Academy of Sciences (**IAS**), Copublished with Springer). *E-Print*: http://arXiv.org/abs/physics/0112086. **http://dx.doi.org/10.1007/BF02868247**
   Cited in the sections on *Synchrotrons* in
   THE NET ADVANCE OF PHYSICS (Review Articles and Tutorials in an Encyclopedic Format). http://web.mit.edu/redingtn/www/netadv/Xsynchrotr.html

2. Sameen Ahmed Khan, **Introduction to Synchrotron Radiation,** *Bulletin of the IAPT*, **19** (5), 149-153 (May 2002). (**IAPT**: Indian Association of Physics Teachers).

3. Sameen Ahmed Khan, **Electron Beams for Radiation, Kiran**, **13** (3), 40-42 (July 2002). (**Kiran**: Bulletin of the Indian Laser Association).

4. Sameen Ahmed Khan, **Synchrotron Radiation (in Asia)**, ATIP Report No. **ATIP02.034**, 28 pages (21 August 2002). (The Asian Technology Information Programme, Tokyo, Japan, 2002).

5. Azher Majid Siddiqui and Sameen Ahmed Khan, **Ion Beam Channeling and Accelerator Programmes in India**, *MRSI Newsletter*, Vol. **B 02**, Number 4, pp. 3-5 (October 2002). (**MRSI**: Materials Research Society of India).

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