Oman Report*

(27 September 2003 to Present)

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This is the *Consolidated Report* of my stay in Oman; at the Middle East College of Information Technology, Muscat (**MECIT**) and the Salalah College of Technology, Salalah, (**SCOT**).

Courses Taught at MECIT

1. **Fall Semester** (September 2003 - January 2004)
   - Mathematics-I (2 Sections)
   - Mathematics-II (2 Sections)
2. **Spring Semester** (February-June 2004)
   - Foundation Mathematics & Statistics (2 Sections)
   - Mathematics-I (1 Section)
   - Mathematics-II (2 Sections)
3. **Summer Semester** (July-September 2004)
   - Mathematics-II (1 Section, done jointly with Colleagues)
4. **Fall Semester** (September 2004 - January 2005)
   - Physics
   - Engineering Mechanics
   - Mathematics-II (2 Sections)
5. **Spring Semester** (February-June 2005)
   - Physics
   - Engineering Mechanics (2 Sections)
   - Mathematics-II (2 Sections)
6. **Fall Semester** (September 2005 - January 2006)
   - College Mathematics (3 Sections)
   - Calculus with Numerical Methods (4 Sections)
   - Engineering Physics (2 Sections)
7. **Spring Semester** (February-May 2006)
   - Calculus with Numerical Methods (6 Sections)
   - Advanced Calculus (1 Section)
   - Engineering Physics (2 Sections)

*Updated on Friday the 09 October 2009

Courses Taught at SCOT

1. **Spring Semester** (May-July 2006)
   - Physics-I (5 Sections)
2. **Fall Semester** (September-December 2006)
   - Physics-I (3 Sections)
3. **Spring Semester** (January-April 2007)
   - Physics-I (3 Sections)
4. **Summer Semester** (May-July 2007)
   - Physics-I (2 Sections)
5. **Fall Semester** (September-December 2007)
   - Physics-I (3 Sections)
   - Physics-II (1 Laboratory Section)
6. **Spring Semester** (January-May 2008)
   - Physics-I (3 Sections)
7. **Summer Semester** (May-July 2008)
   - Physics-I (4 Sections)
8. **Fall Semester** (September-December 2008)
   - Physics-I (3 Sections)
   - Physics-II (1 Laboratory Section)
9. **Spring Semester** (January-May 2009)
   - Physics-I (4 Sections)
10. **Summer Semester** (May-July 2009)
    - Physics-I (4 Sections)
11. **Fall Semester** (September-December 2009)
    - Physics-I (3 Sections)
    - Physics-II (2 Laboratory Sections)

Committees

Committees at MECIT

1. **Disciplinary Committee**
   (October 2003 - September 2004).

2. **Journal Committee**
   (January 2004 to May 2006).

3. **Library Committee**
   (November 2003 to May 2006)
   Actively involved in the Library affairs including correspondence leading to free subscription of Journals/Newsletters/Magazines.

4. **Web-Site Committee**
   (October 2004 to May 2006).

5. **Prizes and Awards Committee**
   (February 2005 to May 2006).

6. **Accreditation Steering Committee**
   (February 2006 to May 2006).

Committees at SCOT

1. **Time Table Committee**
   (September 2006 - January 2009).

2. **Examination Committee**
   (October 2006 - January 2009).

3. **E-Learning and Library Committee**
   (April 2007 to June 2008).

4. **Moderation Committee**
   (September 2007 - January 2009).

5. **Staff Development Committee**
   (November 2007 - January 2009).

6. **Staff Research and Consultancy** (*Chairman*)
   (Group-8, under the Oman Quality Assurance Framework)
   (October 2008 -).

7. **Accreditation Steering Committee**
   (Portfolio Preparation for the Oman Accreditation Council)
   (November 2008 -).

8. **Curriculum Review & Development Committee**
   (February 2009 -).

9. **Academic Journal Committee**
   (September 2009 -).

10. **Staff Handbook Committee**
    (October 2009 -).

11.

Professional Achievements

In March 2005, I was appointed as the *Regular Correspondent* for the ICFA Beam Dynamics Panel Newsletters, for the regions of Middle East & Africa. ICFA, the International Committee for Future Accelerators, provides a forum to discuss and implement plans for further promoting collaborative accelerator-based science. Its primary purpose is to strengthen collaboration in accelerator-based science, to encourage future projects, and to make recommendations to governments. The formal announcement appeared in the International Committee for Future Accelerators (ICFA) *Beam Dynamics Panel Newsletter*, **No. 36** (April 2005). Further details are available at: http://icfa-usa.jlab.org/archive/newsletter.shtml

Homepages I was instrumental in designing and installing the Department Homepages on the College Intranet: http://stfsvr03/mathsandstats/index.html and http://stfsvr03/physics/index.html. Also available at: http://stdsvr03/mathsandstats/index.html and http://stdsvr03/physics/index.html respectively. The above homepages contain the in-house prepared *Lecture Notes* and *Question Banks*, meeting most of the requirements of all the courses (three-semester sequence in Mathematics, Statistics and Physics respectively) offered by the Department.

Mathematics Olympiad I was part of the three-member team, which jointly conducted the *first* Mathematics Olympiad in the College, on Wednesday the 26th May 2004. The other two members of the team were my Colleagues from the Department, Ms. Lavanya Venkatesan and Ms. Usha Ramanathan. The second Olympiad was conducted on Tuesday the 21 March 2006. These events are now evolving into a National Olympiad with the first *Intercollegiate Mathematics Olympiad* held on Sunday the 07 May 2006, during the Intercollegiate Meet, **QUEST** (6-8 May 2006, http://www.mecit-quest.com/).

Research Summary

Main Fileds of Research: *Mathematical Optics*
I am working towards a unified treatment of light beam optics and polarization, using the standard mathematical machinery of quantum mechanics. Dirac-*like* form of the Maxwell equations is well known in literature. Starting with the Dirac-*like* form of the Maxwells equations a unified treatment of light beam optics and polarization has been obtained. The traditional results (including aberrations) of the scalar optics are modified by the wavelength-dependent contributions. Some of the well-known results in polarization studies are realized as the leading-order limit of a more general framework of our formalism. The existing matrix representations of the Maxwells equations were found to be approximate for the formalism developed here; hence, an exact matrix representation of the Maxwells equations was derived.

A related study was made starting with the scalar approximation of the Maxwells equations. Using the analogy of the Helmholtz equation with the Klein-Gordon equation and the Feshbach-Villars approach to the Klein-Gordon equation a formalism utilizing the powerful techniques of quantum mechanics has been developed for scalar optics including aberrations. This provides an alternative to the traditional *square-root* approach and gives rise to wavelength-dependent contributions modifying the aberration coefficients.

Some of the results have been published and others have been communicated.

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). 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`

  `http://www.patentoffice.nic.in/, http://www.ipindia.nic.in/`

  (*patent in process*, http://www.geocities.com/rohelakhan/quadricmeter.html).

- Sameen Ahmed Khan,
  Conicmeter,
  (*in process*).

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PUBLICATIONS

Contributions to International Reports:

- $\cdots$, Sameen Ahmed KHAN, $\cdots$, (*one of the 250+ Contributors, from 79 Institutions*),
  GLD Detector Outline Document (**GLD DOD**),
  GLD: A Large Detector Concept study for International Linear Collider for TeV Physics
  Report of the
  GLD Concept Study Group,
  World Wide Study of Physics and Detectors for future Linear e^+e^- Colliders, (March 2006).
  GLD: Gaseous tracker based Large Detector.
  E-Print: http://arXiv.org/abs/physics/0607154/.

- $\cdots$, Sameen Ahmed KHAN, $\cdots$, (*one of the 500+ Contributors, from 325 Institutions*),
  International Linear Collider Reference Design Report, (*Four Volumes*)
  ILC Global Design Report and World Wide Study,
  (August 2007).
  ILC: International Linear Collider.
  E-Print: http://arxiv.org/abs/0712.1950/.

A. Review Articles

- Sameen Ahmed Khan,
  Wavelength-Dependent Effects in Light Optics,
  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).

- Sameen Ahmed Khan,
  The Foldy-Wouthuysen Transformation Technique in Optics,
  Invited article in:
  Advances in Imaging and Electron Physics, *Editor*: Peter W. Hawkes,
  (Elsevier, 2008) **Vol. 152**, pp. 49-78 (August 2008).
  (ISBN-10: 0123742196 and ISBN-13: 978-0-12-374219-3).

B. Refereed Publications

1. Sameen Ahmed Khan,
   Wavelength-dependent modifications in Helmholtz Optics,
   International Journal of Theoretical Physics, **44**(1), 95-125 (January 2005).
   (Kluwer Academic Publishers, https://www.editorialmanager.com/ijtp/).

2. Sameen Ahmed Khan,
   An Exact Matrix Representation of Maxwells Equations,
   Physica Scripta, **71**(5) 440-442 (2005).
   (http://www.physica.org/).

3. Sameen Ahmed Khan,
   The Foldy-Wouthuysen Transformation Technique in Optics,
   Optik-International Journal for Light and Electron Optics, **117**, Issue 10, pp. 481-488 (October 2006).
   (http://www.elsevier-deutschland.de/ijleo/).

4. Sameen Ahmed Khan,
   Maxwell Optics of Quasiparaxial Beams,
   Optik-International Journal for Light and Electron Optics, **120**, Issue ??, pp. ???-??? (??? 2009).
   (http://www.elsevier-deutschland.de/ijleo/).
   (*in press*, Digital Object Identifier, http://dx.doi.org/10.1016/j.ijleo.2008.07.027).

5. Sameen Ahmed Khan,
   Quantum Methodologies in Light Beam Optics.
   (*in preparation*).

6. Sameen Ahmed Khan,
   Generalized Spherometer.
   (*in preparation*).

The corrections to the traditional descriptions rigorously 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 shall be made for a patent in the near future!

C. Expository Publications

1. Fathiya Khamis Al Rawahi, Sameen Ahmed Khan and Abdul Huq,
   Microsoft Excel in the Mathematics Classroom: A Case Study,
   in *Proceedings* of **The Second Annual Conference for Middle East Teachers of Mathematics, Science and Computing** (**METSMaC 2006**), The Petroleum Institute, Abu Dhabi, United Arab Emirates, 14-16 March 2006. *Editors*: Seán M. Stewart, Janet E. Olearski and Douglas Thompson, pp. 131-134 (2006).

2. Sameen Ahmed Khan,
   Microsoft Excel in the Physics Classroom,
   in *Proceedings* of **The Third Annual Conference for Middle East Teachers of Mathematics, Science and Computing** (**METSMaC 2007**),
   The Petroleum Institute, Abu Dhabi, United Arab Emirates, 17-19 March 2007.
   Editors: Seán M. Stewart, Janet E. Olearski, Peter Rodgers, Douglas Thompson and Emer A. Hayes, pp. 171-175 (2007).

3. Sameen Ahmed Khan,
   Data Analysis Using Microsoft Excel in the Physics Laboratory,
   Bulletin of the IAPT, **24**(6), pp. 184-186 (June 2007).
   (**IAPT**: Indian Association of Physics Teachers).

4. Sameen Ahmed Khan,
   Cylindro-Spherometer,
   Bulletin of the IAPT, **26**(1), pp. 4-6 (January 2009).
   (**IAPT**: Indian Association of Physics Teachers).

5. Sameen Ahmed Khan,
   King Faisal International Prize 2009,
   Europhysics News **40**(3), pp. 7 (May-June 2009).
   (Publication of the *European Physical Society*).

6. Sameen Ahmed Khan,
   Spherometer and Cylindrometer, (*communicated*).
   The article discusses the traditional spherometer and some variants such as the ring spherometer and the cylindrometer (also known as Cylindro-Spherometer), fabricated by the author.

7. Sameen Ahmed Khan,
   Quadratic Surfaces.
   (*in preparation*).

8. Sameen Ahmed Khan,
   Coordinate Geometric Approach to.
   (*in preparation*).

9. Sameen Ahmed Khan,
   Doing Numerical Calculus using Microsoft EXCEL.
   (*in preparation*).

10. Sameen Ahmed Khan,
    Numerical Techniques using Microsoft EXCEL.
    (*in preparation*).

11. ..., Sameen Ahmed Khan, ...,
    Numerical Methods with Microsoft Excel.
    (*in preparation*).

Popular Writings†

1. Sameen Ahmed Khan and Azher Majid Siddiqui,
   A German Synchrotron Radiation Facility for the Middle East,
   Renaissance, Vol. **14**, No. 2, pp. 37-40 (February 2004).
2. Sameen Ahmed Khan,
   SESAME Synchrotron-Light for Experimental Science and Applications in the Middle East,
   Islamic Voice, Vol. bd 17-03 No. 207, pp. 20 (March 2004, Muharram-Safar 1425).
3. Sameen Ahmed Khan,
   E-Learning Challenges in the Middle East.
   in Proceedings of the International Conference in E-Business
   E-Business in GCC Challenges and Prospects (**EGCC'04**),
   (19 May 2004, Majan College (University College), Muscat, Sultanate of Oman).
4. Sameen Ahmed Khan,
   Need to Create Science Centres in the Muslim World,
   Young Muslim Digest, **Vol. 26**, Issue 7, pp. 13-16 (September 2004).
5. Sameen Ahmed Khan, **The Plague of Spam: The Unsolicited E-Mails**,
   Youth Observer, **Vol. No. 3**, pp. 11 (November 2004 - Ramadhan 1425).
   Supplement to Oman Observer, **Vol. 23, No. 358**, (Saturday the 06 November 2004).
   (**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
6. *Reported by* Sameen Ahmed Khan,
   Oman Issues Stamp in Braille,
   Islamic Voice, Vol. **17-11, No. 215**, pp. 3 (November 2004).
7. Sameen Ahmed Khan,
   Joint visits to CERN with SESAME,
   Letter in *CERN Courier*, **44** (10), pp. 34 (December 2004).
   (**CERN**: European Organization for Nuclear Research).
8. Sameen Ahmed Khan,
   Google Scholar Launched,
   Science Reporter, **42**(1) pp. 16 (January 2005).
   (National Institute of Science Communication and Information Resources, India).
9. Sameen Ahmed Khan,
   The Google Scholar,
   Youth Observer, pp. 7 (February 2005 - Dhul Hajjah 1425).
   Supplement to *Oman Observer*, **Vol. 24, No. 83**, (Saturday the 05 February 2005).
   (**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
10. Sameen Ahmed Khan,
    Sergio Fubini (1928-2005),
    Obituary in *IAMP News Bulletin*, pp. 4-5 (April 2005).
    (**IAMP**: International Association of Mathematical Physics);
    AAPPS Bulletin, **15**(3), pp. 31 (June 2005).
    (**AAPPS**: Association of Asia Pacific Physical Societies).
    Archived in:
    the *Biographies Collection*,
    Center for History of Physics, *Niels Bohr Library & Archives*,
    American Institute of Physics, http://www.aip.org/history/.
11. Sameen Ahmed Khan,
    CERN's Early History Revisited,
    Letter in *Physics Today*, **58**(4) pp. 87 (April 2005).

†This List is Incomplete!

12. Sameen Ahmed Khan,
The Google Desktop Search,
Youth Observer, pp. 5 (April 2005 - Safar 1426).
Supplement to *Oman Observer*, **Vol. 24, No. 139**, (Saturday the 02 April 2005).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
13. Sameen Ahmed Khan,
Forty Years of ICTP; Atomic and Molecular Physics Programmes at ICTP,
ISAMP News Letter, **Vol. 1, Issue 1**, pp. 4-6 (21 April 2005).
(**ISAMP**: Indian Society of Atomic and Molecular Physics).
ICTP, the Abdus Salam International Centre for Theoretical Physics is located in Trieste, the Science City in Italy.
14. Sameen Ahmed Khan,
Conference Report: **Higher Education in Developing Countries: With a Focus on Muslim Contexts**,
(Held at the Aga Khan University Institute for the Study of Muslim Civilisations, **AKU-ISMC**, 24-25 February 2005, London, UK),
Islamic Voice, Vol. **18-05** No. 221, pp. 29 (May 2005, Rabbi-Al-Awwal 1426);
Young Muslim Digest, **Vol. 27**, Issue 4, pp. 41 (June 2004);
Pakistan Link, pp. ??? (Friday the 10 June 2005). (Published from Irvine, California, USA);
Renaissance, Vol. **15**, No. 7, pp. 44-45 (July 2005).
15. Sameen Ahmed Khan,
CERN and the World Wide Web,
Youth Observer, pp. 6 (May 2005 - Rabee Al Awwal 1426).
Supplement to *Oman Observer*, **Vol. 24, No. 174**, (Saturday the 7 May 2005).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
16. Sameen Ahmed Khan,
Sergio Fubini, MESC and SESAME,
Letter in *CERN Courier*, **45**(4), pp. 44 (May 2005).
(**MESC**: Middle East Scientific Cooperation;
CERN: European Organization for Nuclear Research).
17. Sameen Ahmed Khan,
Three Physicists win the King Faisal International Prize,
AAPPS Bulletin, **15**(3), pp. 34-35 (June 2005).
(**AAPPS**: Association of Asia Pacific Physical Societies).
The Prizes are awarded every year by the King Faisal Foundation (**KFF**), Saudi Arabia.
18. Sameen Ahmed Khan,
2004 - the Year of Jubilees; Fifty Years of CERN; Forty Years of ICTP, Ten Years of ESRF User Operation,
IRPS Bulletin, **19** (1), 4-8 (June 2005).
(**IRPS**: International Radiation Physics Society);
ICFA Beam Dynamics Newsletter, **37**, pp. 12-18 (August 2005).
(**ICFA**: International Committee for Future Accelerators).
19. Sameen Ahmed Khan,
Hans Bethe Dead,
Science Reporter, **42**(6) pp. 20-21 (June 2005).
(National Institute of Science Communication and Information Resources, India).
Physics Nobel Laureate: Hans Albrecht Bethe, (1967).
20. Sameen Ahmed Khan,
SESAME a mini-CERN in the Middle East,
Youth Observer, pp. 7 (June 2005 - Rabee Al Thani 1426).
Supplement to *Oman Observer*, **Vol. 24, No. 202**, (Saturday the 04 June 2005).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).

21. Sameen Ahmed Khan,
King Faisal International Prize 2005,
The Washington Report on Middle East Affairs, Vol. **XXIV**, No. 5, pp. 82 (July 2005).
Available at *Encyclopedia Britannica Online*, Article No. 9045247.
(http://www.britannica.com/eb/topic-316098/article-9045247/).
The Prizes are awarded every year by the King Faisal Foundation (**KFF**), Saudi Arabia.
22. Sameen Ahmed Khan,
King Faisal Foundation & its Prizes,
Young Muslim Digest, Vol. **27**, Issue 6, pp. 33-35 (August 2005).
The Prizes are awarded every year by the King Faisal Foundation (**KFF**), Saudi Arabia.
23. Sameen Ahmed Khan,
Forty Years of Plasma Physics at ICTP,
PSSI Newsletter, Vol. **20**, No. 2, pp. 3 (2005).
(**PSSI**: Plasma Science Society of India).
ICTP, the Abdus Salam International Centre for Theoretical Physics is located in Trieste, the Science City in Italy.
24. Sameen Ahmed Khan,
India and the Jubilees of CERN and ICTP,
Bulletin of the IAPT, **22**(9), pp. 322-326 (September 2005).
(**IAPT**: Indian Association of Physics Teachers).
25. Sameen Ahmed Khan,
Synchrotron Light in the Middle East,
Europhysics News **36**(5), pp. 169 (September/October 2005).
(Publication of **EPS**: the European Physical Society).
26. Sameen Ahmed Khan,
A Date with Dates,
Youth Observer, pp. 4 (October 2005 Ramadhan 1426 AH).
Supplement to *Oman Observer*, **Vol. 24, No. 328**, (Saturday the 08 October 2005).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
27. Sameen Ahmed Khan,
Forty Years of ICTP and its Materials Science Programmes,
MRSI Newsleteer, Vol. **B 05**, Number 4, pp. 4-5 (October 2005).
(**MRSI**: Materials Research Society of India).
ICTP, the Abdus Salam International Centre for Theoretical Physics is located in Trieste, the Science City in Italy.
28. Sameen Ahmed Khan,
Role of Physics Institutions in International Collaborations,
10 pages Poster under the theme, *Physics & Economic Development*,
For the *Proceedings* of the
World Conference on Physics and Sustainable Development (**WCPSD**),
(31 October - 02 November 2005, Durban, South Africa).

`http://www.wcpsd.org/posters/economic/Sameen_Ahmed_KHAN.pdf`

29. Sameen Ahmed Khan,
Report of the World Conference on Physics and Sustainable Development,
(31 October - 02 November 2005, Durban, South Africa, http://www.wcpsd.org/)
ICFA Beam Dynamics Newsletter, **38**, pp. 7-10 (December 2005).
(**ICFA**: International Committee for Future Accelerators);
Bulletin of the IAPT, **23**(1), pp. 20-22 (January 2006).
(**IAPT**: Indian Association of Physics Teachers);
AAPPS Bulletin, **16**(1), pp. 37-38 (February 2006).
(**AAPPS**: Association of Asia Pacific Physical Societies).
IRPS Bulletin, **20**(1), 33-35 (April 2006).
(**IRPS**: International Radiation Physics Society).

30. Sameen Ahmed Khan,
Physics and Sustainable Development,
ISAMP News Letter, **Vol. 1, Issue 5**, pp. 8-11 (21 December 2005).
(**ISAMP**: Indian Society of Atomic and Molecular Physics).
31. Fathiya Khamis Al Rawahi, Sameen Ahmed Khan and Abdul Huq,
Microsoft Excel in the Mathematics Classroom: A Case Study,
in *Proceedings* of **The Second Annual Conference for Middle East Teachers of Mathematics, Science and Computing** (**METSMaC 2006**),
The Petroleum Institute, Abu Dhabi, United Arab Emirates, 14-16 March 2006.
Editors: Seán M. Stewart, Janet E. Olearski and Douglas Thompson, pp. 131-134 (2006).
32. *Reported* by Sameen Ahmed Khan,
2006 UNESCO Avicenna Prize for Ethics in Science awarded to Dr. Abdullah Daar of Oman,
Islamic Voice, **19-05** No. 233, pp. 8 (May 2006);
Radiance Viewsweekly, **Vol. XLIII**, No. 49, pp. 28 (07-13 May 2006);
Renaissance, **Vol. 16**, No. 11, pp. ??-?? (November 2006).
33. Shaima Ahmed Abdul Rasool Al Zadjali and Sameen Ahmed Khan,
Sultan Qaboos Grand Mosque the Crowning Glory of Oman,
Islamic Voice, Vol. **19-05** No. 233, pp. 38 (May 2006).
(in the section, *History & Heritage*).
34. Sameen Ahmed Khan,
Medieval Arab Understanding of the Rainbow Formation,
Europhysics News **37**(3), pp. 10 (May/June 2006).
(Publication of **EPS**: the European Physical Society).
35. Sameen Ahmed Khan,
Origins of the Word Mosque,
Islamic Voice, **19-06** No. 234, pp. 20 (June 2006).
(in the section, *History & Heritage*);
Radiance Viewsweekly, **Vol. XLIV**, No. 20, pp. 32 (29 October - 04 November 2006).
36. Sameen Ahmed Khan,
Abdus Salam and the International Centre for Theoretical Physics,
Review of Religions, **101** (8), pp. 58-63 (August 2006).
37. Sameen Ahmed Khan,
What is Mathematics?,
Youth Observer, pp. 14 (October 2006 Ramadhan 1427 AH).
Supplement to *Oman Observer*, **Vol. 25, No. 327**, (Saturday the 07 October 2006).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
38. Sameen Ahmed Khan,
A Date with Tradition,
Radiance Viewsweekly, **Vol. XLIV**, No. 17, pp. 28-29 (1-7 October 2006).
39. Sameen Ahmed Khan,
Olive the Blessed Tree,
Radiance Viewsweekly, **Vol. XLIV**, No. 18, pp. 22-23 (8-14 October 2006);
Youth Observer, pp. 12 (November 2006 Shawwal 1427 AH).
Supplement to *Oman Observer*, **Vol. 25, No. 355**, (Saturday the 04 November 2006).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
40. Sameen Ahmed Khan,
The Sajdah Tilawat (Prostration Verses in the Quran),
Radiance Viewsweekly, **Vol. XLIV**, No. 20, pp. 7 (29 October - 04 November 2006);
Islamic Voice, **20-10** No. 250, pp. 31 (October 2007).

41. Sameen Ahmed Khan,
The Google Literacy Project,
Radiance Viewsweekly, **Vol. XLIV**, No. 24, pp. 27 (26 November - 02 December 2006);
Youth Observer, pp. 5 (December 2006 Dhul Qaada 1427 AH).
Supplement to *Oman Observer*, **Vol. 26, No. 18** (Saturday the 02 December 2006).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
42. Zahra Mohammed Ambu Saidi and Sameen Ahmed Khan,
Satellites,
Youth Observer, pp. 14 (December 2006 Dhul Qaada 1427 AH).
Supplement to Oman Observer, **Vol. 26, No. 18** (Saturday the 02 December 2006).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
43. Sameen Ahmed Khan,
Fifty Years of UNSCEAR the UN Scientific Committee on the Effects of Atomic Radiation,
IRPS Bulletin, **20**(3), 15-16 (December 2006).
(**IRPS**: International Radiation Physics Society);
Bulletin of the IAPT, **24**(2), pp. 49 & 52 (February 2007).
(**IAPT**: Indian Association of Physics Teachers);
AAPPS Bulletin, **17** (1), pp. 32-33 (February 2007).
(**AAPPS**: Association of Asia Pacific Physical Societies).
44. Sameen Ahmed Khan,
The 15th Asian Games Conclude in Qatar;
Lady Sprinter Debunks Hijab Myth on Track,
Radiance Viewsweekly, **Vol. XLIV**, No. 28, pp. 96-97 (31 December 2006 - 6 January 2007).
45. *Reported* by Sameen Ahmed Khan,
Sprinter in Hijab wins Gold at the 15th Asian Games,
Islamic Voice, **20-01** No. 241, pp. ?? (January 2007, Zil-Hijjah 1427/Muharram 1428).
46. Sameen Ahmed Khan,
Physics,
Youth Observer, pp. 14 (January 2007 - Dhul Hijjah 1427 AH).
Supplement to Oman Observer, **Vol. 26, No. 63** (Tuesday the 16 January 2007).
(**OEPNPA**: Oman Establishment for Press, News, Publication and Advertising in co-operation with the Ministry of Education).
47. *Reported* by Sameen Ahmed Khan,
The King Faisal International Prizes for 2007,
Islamic Voice, **20-02** No. 242, pp. ?? (February 2007, Muharram/Safar 1428);
Radiance Viewsweekly, **Vol. XLIV**, No. 33, pp. 28-29 (4-10 February 2007);
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49. Sameen Ahmed Khan,
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63. Sameen Ahmed Khan,
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64. Sameen Ahmed Khan,
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65. Sameen Ahmed Khan,
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Islamic Voice, **Vol. 21-05**, No. 257, pp. ?? (May 2008);
American Journal of Islamic Social Sciences (**AJISS**), **Vol. 25**, No. 3, pp. 158-160 (Summer 2008).
66. Sameen Ahmed Khan,
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Bulletin of the IAPT, **26**(1), pp. 4-6 (January 2009).
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69. Sameen Ahmed Khan,
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70. Sameen Ahmed Khan,
Need to Create Regional Science Centres in the Developing Countries,
For the *Proceedings* of **Higher Education in Developing Countries: With a Focus on Muslim Contexts**, The Aga Khan University Institute for the Study of Muslim Civilisations, (**AKU-ISMC**), (24-25 February 2005, London, UK).
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71. Sameen Ahmed Khan,
E-Learning Challenges and Prospects in the Middle East,
The Online Virtual Conference of the **World Forum on Information Society** (**WFIS**),
(31 March - 13 November 2005), *Pre-Cursor* to the **IRFD World Forum 2005**,
14-16 November
Conference on Digital Divide, Global Development and the Information Society,
Organized by **United Nations World Summit on the Information Society**,
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(**IRFD**: International Research Foundation for Development).
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72. Sameen Ahmed Khan,
Medieval Arab Contributions to Optics;
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73. Sameen Ahmed Khan,
Doing Numerical Calculus using Microsoft EXCEL.
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74. Sameen Ahmed Khan,
Numerical Techniques using Microsoft EXCEL.
(*in preparation*).
75. ..., Sameen Ahmed Khan, ...,
Numerical Methods with Microsoft Excel.

In March 2005, I was appointed as the *Regular Correspondent* for the ICFA Beam Dynamics Panel Newsletters, for the regions of Middle East & Africa. ICFA, the International Committee for Future Accelerators, provides a forum to discuss and implement plans for further promoting collaborative accelerator-based science. Its primary purpose is to strengthen collaboration in accelerator-based science, to encourage future projects, and to make recommendations to governments. Further details at:

http://icfa-usa.jlab.org/archive/newsletter.shtml

Participation in Conferences & Visits to Institutions

1. 19 May 2004
   International Conference in E-Business
   E-Business in GCC Challenges and Prospects (**EGCC'04**),
   Majan College (University College)
   Muscat, Sultanate of Oman.
   Presentation: **E-Learning Challenges in the Middle East**.
2. 23-30 August 2004
   The Institute of Mathematical Sciences (**IMSc/Matscience**),
   Chennai (Madras), India.
3. 24-25 February 2005
   Higher Education in Developing Countries: With a Focus on Muslim Contexts,
   The Aga Khan University Institute for the Study of Muslim Civilisations (**AKU-ISMC**), London, UK.
   Talk: **Need to Create Regional Science Centres in the Developing Countries**.
4. 31 March - 13 November 2005
   The Online Virtual Conference of the **World Forum on Information Society** (**WFIS**),
   Pre-Cursor to the **IRFD World Forum 2005**
   14-16 November
   Conference on Digital Divide, Global Development and the Information Society,
   Organized by **United Nations World Summit on the Information Society**,
   Tunis, Tunisia.
   (**IRFD**: International Research Foundation for Development).
   Presentation: **E-Learning Challenges and Prospects in the Middle East**.
5. 08-09 May 2005
   ICT 2005: The business value of IT
   Muscat, Sultanate of Oman.
6. 31 October - 02 November 2005
   World Conference on Physics and Sustainable Development (**WCPSD**)
   Durban, South Africa.
   Poster Presentation: **Role of Physics Institutions in International Collaborations**.
7. 14-15 November 2005
   The Second Engineering Students Gathering
   College of Engineering
   Sultan Qaboos University
   Muscat, Sultanate of Oman.
   (Participated as a *Referee* for the Project Presentations).
8. 23-24 January 2006
   PEIE's Smart Manufacturing Conference,
   Muscat, Sultanate of Oman.
   (**PEIE:** Public Establishment for Industrial Estates, http://www.peie.om/).
9. 23-25 November 2006
   Dipartimento di Fisica Galileo Galilei
   Università di Padova
   Istituto Nazionale di Fisica Nucleare (**INFN**),
   Sezione di Padova, Padua/Padova
   ITALY.
   Collaboration: **The Halo Problem in Accelerator Beams**.
10. 27 November - 01 December 2006
    Workshop on Economic Development for Physicists from Developing Countries (**EDPDC**),
    Held at: The Abdus Salam International Centre for Theoretical Physics (**ICTP**), Trieste
    ITALY.
11. 15-18 August 2007
    The Institute of Mathematical Sciences (**IMSc/Matscience**),
    Chennai (Madras), INDIA.

- 23-28 May 2010 (**SCHEDULED**)
  International Particle Accelerator Conference (**IPAC-2010**),
  Kyoto, JAPAN.
  Poster-I: **Quantum Theory of Accelerator Optics** (**ID: 1668**).
  Under the
  Main Classification: 05 Beam Dynamics and Electromagnetic Fields.
  Sub Classification: D01 - Beam Optics - Lattices, Correction Schemes, Transport.
  Poster-II: **Quantum Methodologies in Light Beam Optics** (**ID: 1669**).
  Under the
  Main Classification: 05 Beam Dynamics and Electromagnetic Fields.
  Sub Classification: D01 - Beam Optics - Lattice, Correction Schemes, Transport.
- July-August 2010 (**SCHEDULED**)
  The Institute of Mathematical Sciences (**IMSc/Matscience**),
  Chennai (Madras), India.
- 28 March - 01 April 2011 (**SCHEDULED**)
  Particle Accelerator Conference (**PAC-2011**),
  New York, USA.
- 01-06 September 2011 (**SCHEDULED**)
  International Particle Accelerator Conference (**IPAC-2011**),
  Valencia, SPAIN.
- 2012 (**SCHEDULED**)
  International Particle Accelerator Conference (**IPAC-2012**),
  USA.
- 2013 (**SCHEDULED**)
  International Particle Accelerator Conference (**IPAC-2013**),
  Shanghai, CHINA (**Probable Location**).