Annual Report*

(15 October 2001 - 13 October 2002)

This is the Annual Report of my Post-Doctoral stay at:
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http://rohelakhan.googlepages.com/
http://www.imsc.ernet.in/~jagan/khan-cv.html

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A. Articles

1. Sameen Ahmed Khan and Kurt Bernardo Wolf,
   Hamiltonian orbit structure of the set of paraxial optical systems,
   Journal of the Optical Society of America **A 19** (12), 2436-2444 (December 2002).

2. Sameen Ahmed Khan, Ramaswamy Jagannathan and Rajiah Simon,
   Foldy-Wouthuysen transformation and a quasiparaxial approximation scheme for the scalar wave theory of light beams,
   14 pages, (*communicated*).

3. Sameen Ahmed Khan,
   Analogies between light optics and charged-particle optics,
   ICFA Beam Dynamics Newsletter, **27**, pp. 42-48 (June 2002).
   (**ICFA**: International Committee for Future Accelerators).
   Cited in:
   The Net Advance of Physics
   (Review Articles and Tutorials in an Encyclopaedic Format), at http://web.mit.edu/redingtn/www/netadv/Xoptics.html

*Updated on Friday the 30 June 2006

B. E-Prints[†]
http://arXiv.org/

1. Sameen Ahmed Khan,
   An alternate way to obtain the aberration expansion in Helmholtz Optics,
   40 pages, *E-Print*: http://arXiv.org/abs/physics/0210001/.
2. Sameen Ahmed Khan,
   Maxwell Optics: I. An exact matrix representation of the Maxwell equations in a medium,
   10 pages, *E-Print*: http://arXiv.org/abs/physics/0205083/.
3. Sameen Ahmed Khan,
   Maxwell Optics: II. An Exact Formalism,
   23 pages, *E-Print*: http://arXiv.org/abs/physics/0205084/.
4. Sameen Ahmed Khan,
   Maxwell Optics: III. Applications,
   13 pages, *E-Print*: http://arXiv.org/abs/physics/0205085/.
5. Sameen Ahmed Khan,
   Wavelength-Dependent Effects in Maxwell Optics,
   58 pages, *E-Print*: http://arXiv.org/abs/physics/0210027/.

Non-Technical Writings[‡]

A. Report

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

B. Articles

1. Azher Majid Siddiqui and Sameen Ahmed Khan,
   SESAME, the First International Science Centre in the Middle East: A Step towards the Renaissance of Science in the Islamic Countries,
   Journal of Islamic Science, **17** No. 1-2, pp 9-34 (January-December 2001/1421-22 AH).
   (Published by **MAAS**, the Muslim Association for the Advancement of Science, Aligarh, India).
2. Sameen Ahmed Khan,
   A Synchrotron Radiation Facility in the Middle East,
   ICO Newsletter, **51** pp. 3 (April 2002);
   Supplement to Optics & Photonics News (OPN), **13** No. 4, (April 2002).
   (**ICO**: International Commission for Optics).

[†]These E-Prints are being combined into long *Reports* and *Review Articles*

[‡]This list is incomplete!

3. Sameen Ahmed Khan,
Prospects for an Asian Accelerator Laboratory,
AAPPS Bulletin, **12** (2), 21-27 (June 2002).
(**AAPPS**: Asociation of Asia Pacific Physical Societies).
4. Sameen Ahmed Khan,
Electron Beams for Radiation,
Kiran, **13**(3), 40-42 (July 2002).
(**Kiran**: the Bulletin of **ILA**: the Indian Laser Association).
5. Sameen Ahmed Khan,
A German Synchrotron for the Middle East,
IRPS Bulletin, **16** (2), 5-8 (August 2002).
(**IRPS**: International Radiation Physics Society).
6. Sameen Ahmed Khan,
When will there be an Asian Accelerator Laboratory?,
ICFA Beam Dynamics Newsletter, **28**, 49-54, (September 2002).
(**ICFA**: International Committee for Future Accelerators).
7. Azher Majid Siddiqui and Sameen Ahmed Khan
Ion Beam Channeling and Accelerator Programmes in India,
MRSI Newsleteer, Vol. **B 02**, Number 4, pp. 3-5 (October 2002).
(**MRSI**: Materials Research Society of India).
8. Sameen A. Khan and Susan M. Reiss,
Donated Synchrotron will Further Middle East Cooperation;
Sharing Synchrotrons,
Optics & Photonics News (OPN), **13** (11), pp. 14-15 (November 2002).
9. Sameen Ahmed Khan,
The Middle East Synchrotron Facility can bring Regional Cooperation,
DOMES, **11**(2), pp. 57-71 (Winter/December 2002).
(**DOMES**: Digest of Middle East Studies).
10. Keith JACKSON, Sameen Ahmed KHAN, Abebe KEBEDE and Azher Majid SIDDIQUI
SESAME the Nearest Synchrotron Radiation Facility to Africa,
at the website of the *African Synchrotron User Forum*, (20 March 2003).
http://www.physics.ncat.edu/∼michael/asn/Africasynchrotron/index.html

Participation in Conferences

1. 10-14 December 2001
Mathematical Results in Quantum Mechanics,
Held at: Taxco, **MÉXICO**.

2. 02-06 September 2002
IV International Workshop on Classical and Quantum Integrable Systems,
Held at: Centro de Ciencias Físicas, Universidad Nacional Autónoma de México (**UNAM**), Cuernavaca, Morelos, **MÉXICO**.