

Technical Writings*

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Contributions to International Reports:

1. ..., A. Sameen KHAN, ..., (*one of the 300+ Contributors, from 73 Institutions*),
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ACFA Linear Collider Working Group Report,
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Report of the GLD Concept Study Group,
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Lecture Notes:

1. Sameen Ahmed Khan,
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Middle East College of Information Technology,
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The Notes cover the *Foundation Mathematics* and the Three-Semester Sequence of *Engineering Mathematics*, *College Mathematics*, *Calculus with Numerical Methods* and *Advanced Calculus*.
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3. Sameen Ahmed Khan,
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A. Books

1. Sameen Ahmed Khan,
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2. Sameen Ahmed Khan,
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3. Sameen Ahmed Khan,
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B. Review Articles and Book Chapters

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Number Theory and Resistor Networks,
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(Hard Cover: pp. 99-154, ISBN-10: 1622577884 and ISBN-13: 978-1-62257-788-0).
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6. Sameen Ahmed Khan,
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C. Refereed Publications

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Quantum-like approach to the transversal and longitudinal beam dynamics. The halo problem,
European Physical Journal A **7**(4), 583-587 (2000).
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18. Sameen Ahmed Khan,
Hamilton's Optical-Mechanical Analogy in the Wavelength-dependent Regime,
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25. Sameen Ahmed Khan and Ramaswamy Jagannathan,
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27. Sameen Ahmed Khan,
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59 pages, (*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!

D. E-Prints[†]
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An alternate way to obtain the aberration expansion in Helmholtz Optics,
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2. Sameen Ahmed Khan,
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3. Sameen Ahmed Khan,
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4. Sameen Ahmed Khan,
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7. Sameen Ahmed Khan,
Primes in Geometric-Arithmetic Progression,
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8. Sameen Ahmed Khan,
Coordinate Geometric Generalization of the Spherometer and Cylindrometer,
 35 pages, *E-Print archive arXiv*: <http://arxiv.org/abs/1311.3602/>.
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A Statistical Approach to Prime Gaps and Andrica's Conjecture,
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E. In Proceedings & Preprints

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F. Expository Publications

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6. Fathiya Khamis Al Rawahi, Sameen Ahmed Khan and Abdul Huq,
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- Ramaswamy Jagannathan and Sameen Ahmed Khan,
Quantum Mechanics of Charged Particle Beam Optics.
- Sameen Ahmed Khan,
Quantum Methodologies in Maxwell Optics.
- Sameen Ahmed Khan,
Aberrations in Helmholtz Optics.
- Sameen Ahmed Khan,
Relativistic Quantum Mechanics of Charged Particle Beam Optics.
- Sameen Ahmed Khan,
Quantum Techniques in Light Beam Optics.
- Sameen Ahmed Khan,
Quantum Mechanical Techniques in Light-Beam Optics.
- Sameen Ahmed Khan,
Mathematical Properties of Resistor Networks.
- Sameen Ahmed Khan,
Synchrotron Radiation from Prediction to Production.
- Sameen Ahmed Khan,
Carbon Nanotubes, Their Functionalization and Device Applications.
- Sameen Ahmed Khan,
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- Sameen Ahmed Khan,
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- S. A. Khan,
Anomalous moments ... Thomas-BMT ...
- S. A. Khan and R. Jagannathan,
Quantum theory of aberrations in charged-particle beam optics.
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Integer Sequences

<http://www.research.att.com/~njas/sequences/>, <http://NeilSloane.com/>
<http://oeis.org/>, <http://www.oeisf.org/>
<http://SameenAhmedKhan.webs.com/integer-sequences.html>

- **Integer Sequences in Resistor Networks:**
 Sequence A174283, Sequence A174284, Sequence A174285, Sequence A174286, Sequence A176497, Sequence A176498, Sequence A176499, Sequence A176500, Sequence A176501 and Sequence A176502.
- **Integer Sequences for Primes in Arithmetic Progression:**
 Sequence A206037, Sequence A206038, Sequence A206039, Sequence A206040, Sequence A206041, Sequence A206042, Sequence A206043, Sequence A206044, Sequence A206045, Sequence A227281, Sequence A227282, Sequence A227283, Sequence A227284, Sequence A227285 and Sequence A227286.
- **Integer Sequences for Primes in Geometric-Arithmetic Progression:**
 Sequence A209202, Sequence A209203, Sequence A209204, Sequence A209205, Sequence A209206, Sequence A209207, Sequence A209208, Sequence A209209, Sequence A209210 and Sequence A227280.

N. J. A. Sloane (*Editor*), *The On-Line Encyclopedia of Integer Sequences*, published electronically at: <http://oeis.org/> (2012).
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Patents

1. 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_jour

<http://www.patentoffice.nic.in/>, <http://www.ipindia.nic.in/>

(*patent in process*, <http://SameenAhmedKhan.webs.com/quadricmeter.html>).

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.

2. Sameen Ahmed Khan,
Conicmeter.
(patent in process, <http://SameenAhmedKhan.webs.com/conicmeter.html>).