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# Keith Critchlow

## Islamic Patterns

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Time Stands Still

Sacred Geometry Design Sourcebook

Homage to Pythagoras

The Magic of M.C. Escher

Symbol of Divine Light

Handasah

Art of Islam

Sacred Geometry of the Starcut Diagram

Drawing Geometry

Mathematics and Art

Pattern in Islamic Art

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Islamic patterns

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The Hidden Geometry of Flowers

Arabic Geometrical Pattern and Design

The Minbar of Saladin

Islamic Art and Architecture

Order in Space

The Sufi Enneagram: Sign of the Presence of God

(Wajhullah)

Islamic Design

Islamic Patterns

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Time Stands Still

Introduction to Sufi Doctrine

Islamic Art and Spirituality  
Islamic Geometric Patterns  
The Art of Orientation  
Beauty, Memory, Unity  
Islamic Patterns  
Islamic Geometry Journal  
The Foundations of Christian Art  
On the Art of Building in Ten Books  
Arts and Crafts of the Islamic Lands  
Art from the Sacred to the Profane  
Islamic Geometric Design  
The Topkapi Scroll  
Islamic Geometric Patterns  
the art and architecture of islamic cairo

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Critchlow  
Islamic  
Patterns*

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## **EATON BRUNO**

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### Time Stands Still

SteinerBooks

This is a cultural history of mathematics and art, from antiquity to the present.

Mathematicians and artists have long been on a quest to understand the physical world they see before them and the abstract objects they

know by thought alone. Taking readers on a tour of the practice of mathematics and the philosophical ideas that drive the discipline, Lynn Gamwell points out the important ways mathematical concepts have been expressed by artists. Sumptuous illustrations of artworks and cogent math diagrams are featured in Gamwell's comprehensive exploration. Gamwell

begins by describing mathematics from antiquity to the Enlightenment, including Greek, Islamic, and Asian mathematics. Then focusing on modern culture, Gamwell traces mathematicians' search for the foundations of their science, such as David Hilbert's conception of mathematics as an arrangement of meaning-free signs, as well as artists' search for the essence of their craft, such as Aleksandr Rodchenko's monochrome paintings. She shows that self-reflection is inherent to the practice of both modern mathematics and art, and that this introspection points to a deep resonance between the two fields: Kurt Gödel posed questions about the

nature of mathematics in the language of mathematics and Jasper Johns asked "What is art?" in the vocabulary of art. Throughout, Gamwell describes the personalities and cultural environments of a multitude of mathematicians and artists, from Gottlob Frege and Benoît Mandelbrot to Max Bill and Xu Bing. *Mathematics and Art* demonstrates how mathematical ideas are embodied in the visual arts and will enlighten all who are interested in the complex intellectual pursuits, personalities, and cultural settings that connect these vast disciplines. *Sacred Geometry Design Sourcebook* MIT Press  
*De Re Aedificatoria*, by

Leon Battista Alberti (1404-1472), was the first modern treatise on the theory and practice of architecture. Its importance for the subsequent history of architecture is incalculable, yet this is the first English translation based on the original, exceptionally eloquent Latin text on which Alberti's reputation as a theorist is founded.

### **Homage to Pythagoras**

Lindisfarne Books

- Lavishly illustrated with hundreds of detailed diagrams and technical illustrations exploring the evolution and importance of the starcut diagram • Shows how the starcut diagram underlies the shaman's dance in China, the Vedic Fire Altar in India, Raphael frescoes, labyrinth

designs, the Great Pyramid in Egypt, and the building of ancient cities • Explains how the starcut diagram was used in building and design, how it relates to Pythagoras's Tetrakys, and how it contains knowledge of the Tree of Life As Malcolm Stewart reveals in this lavishly illustrated study, the squaresquare figure of the Starcut diagram, created only with circles, has extraordinary geometric properties. It allows you to make mathematically exact measurements and build perfectly true level structures without a computer, calculator, slide rule, plumb bob, or laser level. Sharing his extensive research, along with hundreds of detailed diagrams and technical illustrations,

the author shows how the Starcut diagram was the key to the building of humanity's first cities and how it underlies many significant patterns and proportions around the world. Using circles drawn from the vesica piscis, Stewart explains how to create the Starcut diagram and shows how this shape was at the foundation of ancient building and design, illustrating the numerous connections between the diagram and the creation of mandalas and yantras, stained glass windows, architectural ground plans, temples and other sacred buildings, and surveying methods. He also shows how the Starcut diagram reveals ancient geometric knowledge of pi, the Fibonacci sequence,

Pythagorean shapes and seals, the golden ratio, the power of 108 and other sacred numbers, and magic squares. Exploring the Starcut diagram's cosmological and theological implications, Stewart explains how it contains knowledge of the Tree of Life and the Kabbalah. He examines how it relates to the Tetraktys, the key teaching device of Pythagoras, and other cosmograms. Demonstrating the ancient relationships existing between number, geometry, cosmology, and musical harmony, the author shows how the simple shape of the Starcut diagram unifies the many threads of sacred geometry into one beautiful mathematical tapestry.

### **The Magic of M.C.**

**Escher** Springer  
 Across the Islamic world, illuminating Korans from Morocco to Malaysia, and adorning mosques, mausoleums and palaces, are hidden some of the most exquisite geometrical devices ever conceived by man. In this excellent little book, geometer Daud Sutton unravels the mystery of Islamic patterns, explaining where they come from, how to draw them, and hinting at the Divine messages they encode. WOODEN BOOKS are small but packed with information.  
 "e;Fascinating"e;  
 FINANCIAL TIMES.  
 "e;Beautiful"e;  
 LONDON REVIEW OF BOOKS. "e;Rich and Artful"e;  
 THE LANCET.  
 "e;Genuinely mind-

expanding"e;  
 FORTEAN TIMES. "e;Excellent"e;  
 NEW SCIENTIST.  
 "e;Stunning"e;  
 NEW YORK TIMES. Small books, big ideas.

**Symbol of Divine Light** World Wisdom, Inc

There are two key aspects to the visual structure of Islamic design: calligraphy using Arabic script, and abstract ornamentation using a varied visual language. Focusing on the construction and meaning of Islamic geometric patterns this book offers insight into Islamic culture and is a resource for anyone interested in this artistic tradition. --  
 Dust Jacket.

Handasah Courier Corporation  
 Issam El-Said pinpoints the rules of composition that form the basis of the

geometric concepts of Islamic art. He then shows how intricate patterns are based on these basic principles. Fully illustrated in three colors to show the development of the patterns, this book offers an insight into how craftsmen and designers in the Muslim world achieved monumental feats of artistic expression using the simplest of tools. Chapter I presents graphical analyses of numerous complex patterns, to reveal the numerical rationale behind them. In Chapter II, the author analyses the system of measure used in ancient Egypt, before the use of numbers for calculating measurements. He shows how measuring cords and a geometric method based on a

grid-pattern originating from the circle were employed by master craftsmen in the design of Islamic art and architecture. The book offers an insight into how craftsmen and designers in the Muslim world have achieved monumental feats of artistic expression with harmony and precision, using the simplest of tools such as a ruler, a string and templates, together with a system of measure that is both simple and sophisticated.

*Art of Islam* Wooden Books Journals  
Keith Critchlow, an internationally-renowned scholar, has studied a wide range of Neolithic artifacts. In *Time Stands Still*, he adopts a technique of cross-cultural comparison to uncover

some previously unknown characteristics of the Neolithic peoples. Critchlow uses ancient manuals on temple building from Indian Vedic sources, for example, and applies them to British sites, with fascinating results. He examines Chinese pictographs for evidence of sighting instruments and scientific tools. And, perhaps most significantly, he offers evidence that carved stone spheres having regular mathematical symmetries in Scotland predate Plato's writings on geometric figures by more than a thousand years. The findings contained in this remarkable and groundbreaking book will awaken a renewed sense of wonder for our ancient human

past. *Sacred Geometry of the Starcut Diagram* World Wisdom, Inc  
The Art of Orientation celebrates the origins, meanings, and functions of the mosque throughout the world using a careful selection of one hundred and twenty-five artifacts--including intricately designed pulpits, prayer rugs, lamps, and manuscripts. Tracing the evolution of the mosque from the Prophet's humble mud-brick structure in Medina to the imposing stone assemblies of Cairo and Istanbul, an interdisciplinary group of leading Arab and international authors present a personal, insightful, and accessible survey of Islamic masterpieces past and present.



*Drawing Geometry*  
Floris Books - Floris Books  
Since precious few architectural drawings and no theoretical treatises on architecture remain from the premodern Islamic world, the Timurid pattern scroll in the collection of the Topkapi Palace Museum Library is an exceedingly rich and valuable source of information. In the course of her in-depth analysis of this scroll dating from the late fifteenth or early sixteenth century, Gülru Necipoğlu throws new light on the conceptualization, recording, and transmission of architectural design in the Islamic world between the tenth and sixteenth centuries. Her text has

particularly far-reaching implications for recent discussions on vision, subjectivity, and the semiotics of abstract representation. She also compares the Islamic understanding of geometry with that found in medieval Western art, making this book particularly valuable for all historians and critics of architecture. The scroll, with its 114 individual geometric patterns for wall surfaces and vaulting, is reproduced entirely in color in this elegant, large-format volume. An extensive catalogue includes illustrations showing the underlying geometries (in the form of incised "dead" drawings) from which the individual patterns are generated. An essay by Mohammad

al-Asad discusses the geometry of the muqarnas and demonstrates by means of CAD drawings how one of the scroll's patterns could be used to design a three-dimensional vault.

*Mathematics and Art*

Hirmer Verlag GmbH

A beautiful and original book from a renowned thinker and geometrist

**Pattern in Islamic Art** Princeton

University Press

Homage to Pythagoras

collects essential

documents by people

at the leading edge of

the sacred sciences

today. These articles--

both scholarly and

sympathetic to the

Pythagorean

perspective--are proof

of the contemporary

interest in Pythagoras'

philosophy as a living

reality and provide a

major addition to the field of Pythagorean studies and traditional mathematics.

Contents: Introduction by Christopher

Bamford "Ancient

Temple Architecture"

by Robert Lawlor "The

Platonic Tradition on

the Nature of

Proportion" by Keith

Critchlow "What is

Sacred Architecture?

by Keith Critchlow

"Twelve Criteria for

Sacred Architecture"

by Keith Critchlow

"Pythagorean Number

as Form, Color, and

Light" by Robert Lawlor

"The Two Lights" by

Arthur Zajonc "Apollo:

The Pythagorean

Definition of God" by

Anne Macaulay "Blake,

Yeats, and Pythagoras"

by Kathleen Raine

About the Authors

ROBERT LAWLOR is the

author of Sacred

Geometry; Earth

Honoring; and Voices of the First Day. After training as a painter and a sculptor, he became a yoga student of Sri Aurobindo and lived for many years in Pondicherry, India, where he was a founding member of Auroville. In India, he discovered the works of the French Egyptologist and esotericist, R. A. Schwaller de Lubicz, which led him to explore the principles and practices of ancient sacred science. KEITH CRITCHLOW is the author of *Order in Space; and Time Stands Still*. A painter, Critchlow discovered geometry intuitively. A period of intensive geometric practice and work with Buckminster Fuller led him to recognize that the universal principles of

geometry are revealed and confirmed both by the area of design where art and mathematics meet and in the study of nature and ancient and medieval sacred cosmological architecture of temples, cathedrals, and mosques. He has been a senior lecturer at the Architectural Association in London and taught Islamic Art at the Royal College of Art. He has also participated as geometer in various sacred architectural projects, and is a cofounder of *Temenos*, a journal devoted to the arts and imagination, and *Kairos*, a society that investigates, studies, and promotes traditional values of art and science. ARTHUR ZAJONC is Professor of

Physics at Amherst College, where his research has concerned the nature of light and the experimental foundations of quantum mechanics. He has also taught and written extensively on interdisciplinary aspects of science, the history of science, culture, and spirituality, especially the works of Goethe and Rudolf Steiner. He is the author *Catching the Light* and *The New Physics and Cosmology*, featuring dialogues with the Dalai Lama. He has been a visiting scientist at many laboratories and was a Fulbright professor. ANNE MACAULAY lives in Scotland where she has, for many years, studied the origins of the alphabet, the

history of the guitar, the figure of Apollo, and other mysteries surrounding Pythagorean thought. She has lectured at Research into Lost Knowledge Organization (RILKO) and was a trustee of the Salisbury Center in Edinburgh. KATHLEEN RAINE was a British poet with an international reputation as a scholar of the imagination. A renowned student of William Blake, a penetrating critic, and a profound autobiographer, she wrote numerous books and articles. Kathleen Raine was a cofounder and the editor of *Temenos*. *Connections* SUNY Press The first edition of *Connections* was chosen by the National

Association of Publishers (USA) as the best book in OC Mathematics, Chemistry, and Astronomy OCo Professional and ReferenceOCO in 1991. It has been a comprehensive reference in design science, bringing together in a single volume material from the areas of proportion in architecture and design, tilings and patterns, polyhedra, and symmetry. The book presents both theory and practice and has more than 750 illustrations. It is suitable for research in a variety of fields and as an aid to teaching a course in the mathematics of design. It has been influential in stimulating the burgeoning interest in the relationship

between mathematics and design. In the second edition there are five new sections, supplementary, as well as a new preface describing the advances in design science since the publication of the first edition. Contents: Proportion in Architecture; Similarity; The Golden Mean; Graphs; Tilings with Polygons; Two-Dimensional Networks and Lattices; Polyhedra: Platonic Solids; Transformation of the Platonic Solids I; Transformation of the Platonic Solids II; Polyhedra: Space Filling; Isometries and Mirrors; Symmetry of the Plane. Readership: Polytechnic students, architects, designers, mathematicians and general readers."

**Geometric Concepts**

**in Islamic Art** Getty Publications

"This is the remarkable story of one of the masterpieces of Islamic art, the Minbar of Saladin. Made in the middle of the 12th century, this wooden pulpit, perhaps the finest ever seen, stood in the al-Aqsa Mosque in Jerusalem for some eight hundred years until it was burned down in 1969 by a tourist claiming to be acting on orders from God. Its loss to the Muslim world was immense, and so the decision was taken by the mosque's guardians, the Jordanian royal family, to rebuild it."--BOOK JACKET.

*Islamic patterns* Simon and Schuster  
Titus Burckhardt was a renowned expert on the art of traditional

worlds. This book takes the reader through the history of Christian art, focusing especially upon architecture, iconography, and illumination.

Mathematics and Art  
Bloomsbury Publishing USA

Surveys the history of the mosque lamp and its numerous variants and the deep significance of light and the lamp in religion.

*The Hidden Geometry of Flowers* Schocken Books Incorporated  
Man and his measure - Geometric patterns in Islamic design - Architecture - Designs.  
Arabic Geometrical Pattern and Design  
Garnet Publishing

This edition of renowned philosopher Frithjof Schuon's writings on the subject of art, selected and

edited by his wife Catherine Schuon, contains over 270 photographs-200 color and 70 black and white. He then deals with the spiritual significance of the artistic productions of Christianity, Islam, Hinduism, Buddhism, and the Far-Eastern world, while also covering the subjects of beauty and the sense of the sacred, the crafts, poetry, music, and dance, and dress and ambience.

**The Minbar of Saladin** World

Wisdom, Inc  
Ancient architects and artists had a way of striking resonant chords in the viewers of their work. This book points to a possible way of returning a sense of unity to the visual arts through a combination of

theoretical ideas and practical methods, of narrative description and visual exercises. Proportion, the use of number and geometry as design tools, is seen in the context of the search for the beautiful. From the theoretic, symbolic mathematics of the Pythagoreans, Platonists, and Neo-Platonists, the book proposes an aesthetic theory, a way of approaching beauty, rooted in the idea of psyche and expressed through the ancient sciences of arithmetic, geometry, music, and astronomy. Topics treated include: an explanation of the concept of symbolic or qualitative number; an introduction to Pythagorean and Platonic numerical philosophy; the nature

of beauty and its relation to number; the derivation of the ancient musical octave; the Golden Section, its mathematics, geometry, and relation to philosophy, particularly its role as a geometrical logos; and the connection of these ideas to the numerical-geometrical canons of classical architecture. These concepts are illustrated step by step as applied to the elements and archetypal compositions of classical architecture, such as the order and portico, using arithmetic, geometric, and harmonic ratio methods. The proportional idea is illustrated with reconstructions of exemplary buildings based on the methods

described, following through the historical periods of Egypt, Greece, Rome, the Middle ages, the Italian Renaissance, and the Enlightenment. Though the book is focused on architecture, the methods presented may be used by artists and designers in any visual field. The book suggests several pathways on which contemporary designers might move toward creating a sane and beautiful world through a merger of art and science.

**Islamic Art and Architecture** Springer  
Science & Business  
Media  
Islam.

**Order in Space** Ithaca  
Press  
The main focus of this unique book is an in-depth examination of the polygonal



technique; the primary method used by master artists of the past in creating Islamic geometric patterns. The author details the design methodology responsible for this all-but-lost art form and presents evidence for its use from the historical record, both of which are vital contributions to the understanding of this ornamental tradition. Additionally, the author examines the historical development of Islamic geometric patterns, the significance of geometric design within the broader context of Islamic ornament as a whole, the formative role that geometry plays throughout the Islamic ornamental arts (including calligraphy, the floral idiom, dome decoration, geometric

patterns, and more), and the underexamined question of pattern classification. Featuring over 600 beautiful color images, *Islamic Geometric Patterns: Their Historical Development and Traditional Methods of Construction* is a valuable addition to the literature of Islamic art, architecture and geometric patterns. This book is ideal for students and scholars of geometry, the history of mathematics, and the history of Islamic art, architecture, and culture. In addition, artists, designers, craftspeople, and architects will all find this book an exceptionally informative and useful asset in their fields. Jay

Bonner is an architectural ornamentalist and unaffiliated scholar of Islamic geometric design. He received his MDes from the Royal College of Art in London (1983). He has contributed ornamental designs for many international architectural projects, including the expansion of both the al-Masjid al-Haram (Grand Mosque) in Mecca, and the al-Masjid an Nawabi (Prophet's Mosque) in

Medina, as well the Tomb of Sheikh Hujwiri in Lahore, and the Ismaili Centre in London – to name but a few. He is committed to the revitalization of Islamic geometric design through the teaching of traditional methodological practices. To this end, in addition to publishing, Jay Bonner has lectured and taught design seminars at many universities and conferences in North America, Europe, North Africa and Asia.