

## An Annotated Bibliography of Books for Architecture and Mathematics

- ACKERMAN, JAMES S. *Distance Points: Essays in Theory and Renaissance Art and Architecture*. (Cambridge MA: MIT Press, 1991). *Referenced in Lionel March's article, NNJ vol. 3 no. 2.*
- . *Origins, Imitation, Conventions* (Cambridge: The MIT Press, 2002). *Reviewed by Michael Chapman in the NNJ vol. 5 no. 1.*
- AICHER, OTL. *Analogous and Digital* (Berlin: Ernst & Sohn, 1994). *Referenced in Marco Frascari's article in NNJ vol. 1.*
- ALBERTI, LEON BATTISTA. *The Ten Books of Architecture*, 1755. (Rpt. New York: Dover Publications, Inc., 1986). *Referenced in Marco Frascari's article in NNJ vol. 1 no. 3 and in Reza Sarghangi's article in NNJ vol. 1.*
- . *On the Art of Building in Ten Books*. Joseph Rykwert (Introduction), Robert Tavernor and Neil Leach, trans. (Cambridge, MA: MIT Press, 1991). *Referenced in Stephen Wassell's article in NNJ vol. 1.*
- ALEXANDER, CHRISTOPHER. *A Pattern Language* (New York: Oxford University Press, 1977). *Referenced in Nikos Salingaros' article in NNJ vol. 1.*
- . *A Timeless Way of Building* (New York: Oxford University Press, 1979). *Referenced in Nikos Salingaros' article in NNJ vol. 1.*
- ARTMANN, BENNO. *Euclid: The Creation of Mathematics* (Heidelberg: Springer-Verlag, 1999). *This is the long awaited book by Benno Artmann, who presented a paper on the Cloisters of Hauterive at Nexus '96. Reviewed by Kim Williams in NNJ vol.2.*
- BALMAND, CECIL. *Number Nine: The Search for the Sigma Code* (Munich: Prestel, 1999). *Reviewed by Jay Kappraff in the NNJ vol. 2.*
- BARRALLO, JAVIER (ed.). *Mathematics and Design 98. Proceedings of the Second International Conference on Mathematics and Design*. (San Sebastian, Spain: Universidad del País Vasco, 1998).
- BARRATT, KROME. *Logic and Design in Art, Science and Mathematics* (Great Britain: The Herbert Press, 1989).
- BARROW, JOHN D. *The Artful Universe* (Clarendon, 1996).
- BAGLIVO, J.A. and J. GRAVER. *Incidence and Symmetry in Design and Architecture*. *Recommended by Jay Kappraff.*
- BECK, ANATOLE, MICHAEL BLEICHER and DONALD CROWE. *Excursions in Mathematics. The Millennium Edition*. A.K. Peters, Ltd. *Referenced in Jay Kappraff's article in the NNJ vol. 2.*
- BECKMANN, PETR. *A History of pi*. (New York: The Golem Press, 1971). *Referenced in Mark Reynolds' article in NNJ vol. 1.*
- BENNETT, JAMES A. *The Mathematical Science of Christopher Wren*. (Cambridge: Cambridge University Press, 1982).
- BLACKWELL, WILLIAM. *Geometry and Architecture* (Berkeley: Key Curriculum Press, 1984). *Shows the occurrence and application of the basic geometrical forms in architectural designs. This book represents a lifelong fascination with the endless relationships of geometric forms and the continual discovery and re-discovery of their applications to architecture and design. Recommended by Carlo Sequin and Vera W. de Spinadel.*

- BLASER, WERNER. *Werner Sobek: Art of Engineering. Ingenieur-kunst* (Basel: Birkhauser, 1999). *Reviewed by Holger Falter in the NNJ vol. 1.*
- BOESIGER, WILLY and HANS GIRSBERGER. *Le Corbusier 1910-65* (Basel: Birkhauser, 1999). *Reviewed by Alessandra Capanna in NNJ vol. 2.*
- BOUCHER, BRUCE. *Andrea Palladio: The Architect in His Time* (New York: Abbeville Press, 1994). *Referenced in Stephen Wassell's article in NNJ vol. 1.*
- BOULEAU, C. *The Painter's Secret Geometry*. (New York: Harcourt and Brace, 1963).
- BOVILL, CARL. *Fractal Geometry in Architecture and Design* (Boston: Birkhauser, 1996; distributed by Springer-Verlag, New York). "My intention in this book was to explain the essence of fractal geometry to the design community. Many of the fractals can be drawn by hand and fractal rhythms for use in design can be derived from musical scores. This approach was taken to make the material more approachable. Much of the literature on fractal geometry is hidden behind computer programs or complex mathematical notation systems." (Comments by Carl Bovill, author.) *Reviewed by Leonard K. Eaton in the NNJ vol. 1. Referenced by Michael Oswald in the NNJ vol. 3 no. 1.*
- BIGGS, R. *Geometry of Meaning* (A.M. Young, 1984). *Referenced in Adriana Rossi's article in NNJ vol. 1.*
- BRUMBAUGH, R. *Plato's Mathematical Imagination: The Mathematical Passages in the Dialogues and Their Interpretation*.
- BRUNES, TONS. *The Secrets of Ancient Geometry and Its Use*, 2 vols (Copenhagen: Rhodos International Science Publishers, 1967). *The founder of the Sacred Cut geometry.*
- BURKERT, WALTER. *Lore and Science in Ancient Pythagoreanism* (Cambridge: Harvard University Press, 1972. 1962).
- BUTLER, CHRISTOPHER. *Number Symbolism* (New York, 1970).
- CAPANNA, ALESSANDRA. *Le Corbusier. Padiglione Philips. Bruxelles*. (Turin: Testo & Immagine, 2000). *Reviewed by Maurizio Vianello in the NNJ vol.3 no. 1.*
- CASSIRER, ERNST. *The Philosophy of Symbolic Forms*. (New Haven: Yale University Press, 1965).
- CATALANO, EDUARDO. *Structure and Geometry*. (Cambridge: Cambridge Architectural Press, 1986). *This is a bilingual book (English, Spanish), that shows part of the buildings designed by Catalano, an argentine architect who has lived in Cambridge, Massachusetts, since 1951 (Recommended by Vera W. de Spinadel).*
- CHITHAM, ROBERT. *The Classical Orders of Architecture* (New York: Rizzoli, 1985). *This classic text is no longer in print. If you want to do a search for it, click here.*
- CLAWSON, C. CALVIN. *Mathematical Mysteries. The Beauty and Magic of Numbers* (New York: Plenum Press, 1996). *Referenced in Marco Frascari's article in the NNJ vol. 1.*
- COHEN, PRESTON SCOTT. *Contested Symmetries and Other Predicaments in Architecture*. (New York: Princeton Architectural Press, 2001). *Reviewed by Jin-Ho Park in the NNJ vol. 5 no. 1*
- COOK, THEODORE ANDREA. *The Curves of Life*, 1914 (rpt. New York: Dover Publications, 1979). Subtitle: "An Account of Spiral Formations and Their Application to Growth in Nature, to Science and to Art; with special reference to the Manuscripts of Leonardo Da Vinci."
- DI CRISTINA, GIUSEPPE (ed.). *Architecture and Science* (London: Wiley-Academy, 2001). *Reviewed by Michael Chapman in the NNJ vol. 4 no. 2.*
- CRITCHLOW, KEITH. *Islamic Patterns: An Analytical and Cosmological Approach* (reprint, New York: Thames and Hudson, 1992).

- . *Order in Space* (New York: Viking Press, 1970; reprint, Thames and Hudson, 1990).
- CROUCH, DORA P. and JUNE G. JOHNSON. *Traditions in Architecture: Africa, America, Asia, and Oceania* (Oxford: Oxford University Press, 2001). *Reviewed by William D. Sapp in the NNJ vol.3 no.2.*
- CROWE, DONALD W. and DOROTHY K. WASHBURN. *Symmetries of Culture: Theory and Practice of Plane Pattern Analysis*. Seattle, WA: University of Washington Press, 1988.
- DAVIS, PHILIP J. and RUEBEN HERSH. *Descartes' Dream: The World According to Mathematics* (Harcourt, Brace, Jovanovich, 1986).
- DEVLIN, KEITH. *Mathematics : The Science of Patterns : The Search for Order in Life, Mind and the Universe*. Scientific American Paperback Library (W.H. Freeman, 1997).
- DILKE, O.A.W. *Mathematics and Measurement*. (Berkeley CA: University of California Press/British Museum, 1987). *Referenced in Lionel March's article, NNJ vol. 3 no. 4.*
- DOCZI, GYORGY. *The Power of Limits: Proportional Harmonies in Nature, Art & Architecture* (Boulder: Shambala, 1981).
- DODDS, GEORGE and ROBERT TAVERNOR (eds). *Body and Building: Essays on the Changing Relation of Body and Architecture* (Cambridge MA: MIT Press, 2002).
- DUNLAP, RICHARD A. *The Golden Ratio and Fibonacci Numbers*. World Scientific Publishing, 1998.
- DÜRER, ALBRECHT. *The Painter's Manual: A Manual of Measurement of Lines, Areas and Solids by Means of Compass and Ruler*. W. L. Strauss, ed. and trans. (New York: Abaris Books, 1977). *Referenced in Lionel March's article, NNJ vol. 3 no. 2 and in Paul Rosin's article, NNJ vol. 3 no. 2.*
- ECO, UMBERTO. *Art and Beauty in the Middle Ages* (New Haven: Yale University Press, 1988). *Referenced in Marcello Spigaroli's article in the NNJ vol. 1 and in Nancy Wu's article in the NNJ vol. 2.*
- . *The Aesthetics of Thomas Aquinas* (Cambridge, MA: Harvard University Press, 1988). *Referenced in Marcello Spigaroli's article in the NNJ vol. 1.*
- EDGERTON, SAMUEL Y. *The Renaissance Rediscovery of Linear Perspective*.
- EDWARDS, EDWARD V. *Pattern and Design with Dynamic Symmetry*, 1932. (Rpt. New York: Dover Publications, Inc., 1967). *"This book is probably the most successful and interesting practical application to emerge from the strikingly original theory of dynamic symmetry developed by Jay Hambidge"* (Comments from the book's cover).
- EGLASH, RON. *African Fractals: Modern Computing and Indigenous Design* (New Brunswick, New Jersey: Rutgers University Press, 1999), 258 pp. *Reviewed by Abdul Karim Bangura in the NNJ vol. 2.*
- EHRENKRANTZ, EZRA D. *The Modular Number Pattern*. (London: Alec Tiranti, 1956). *Referenced in Lionel March's article, NNJ vol. 3 no. 2.*
- EL-SAID, ISSAM, TAREK EL-BOURI (ed.) and KEITH CRITCHLOW (ed.) *Islamic Art and Architecture* (Garnet Publishing, 1993.) *Originally published in 1972 with the subtitle "The System of Geometric Design", the reprint is now available.*
- EMMER, MICHELE (ed.) *The Visual Mind: Art and Mathematics* (Cambridge, MA: MIT Press, 1993).
- ERLANDE-BRANDENBURG, ALAIN. *Cathedrals and Castles: Building in the Middle Ages* (New York: Harry N. Abrams, 1995). *Referenced in Mark Reynolds' article in NNJ vol. 1.*
- EUCLID. *The Thirteen Books of Euclid's Elements*, 3 vols. Sir Thomas Heath, ed., 2nd ed. (New York: Dover Books, 1956).

- EVANS, ROBIN. *The Projective Cast: Architecture and Its Three Geometries* (Cambridge, MA: MIT Press, 1995). *Referenced by Michael Ostwald in NNJ vol.2 no.2; Referenced by Michael Ostwald in NNJ vol. 3 no. 1.*
- . *Translations from Drawing to Building*. (Cambridge, MA: MIT Press, 1997).
- FIELD, J.V. *The Invention of Infinity: Mathematics and Art in the Renaissance*. (Oxford: Oxford University Press, 1997). *Reviewed by Mark Peterson in the NNJ vol.1.*
- FIELD, MICHAEL and MARTIN GOLUBITSKY. *Symmetry in Chaos: A Search for Pattern in Mathematics, Art and Nature* (Oxford: Oxford University Press, 1992).
- . *Chaotische Symmetrien*. Micha Lotrovsky, trans. (Basel: Birkhauser, 1993). *German translation of Symmetry in Chaos.*
- . *La Symétrie du Chaos*. Christian Jeanmougin, trans. (Paris: Inter Editions, 1993). *French translation of Symmetry in Chaos.*
- FOMENKO, ANATOLII T. and RICHARD LIPKIN. *Mathematical Impressions* (Providence, Rhode Island: American Mathematical Society, 1990).
- FOSTER, RICHARD. *Patterns of Thought: The Hidden Meaning of the Great Pavement of Westminster Abbey* (London: Jonathan Cape, 1991, ISBN 0-224-02910-X). *Referenced in John Sharp's article in NNJ vol. 1.*
- FREEDMAN, RICHARD and GEORGE L. HERSEY. *Possible Palladian Villas (Plus a Few Instructively Impossible Ones)* (Cambridge, MA: MIT Press, 1992).
- FRIEDBERG, RICHARD. *An Adventurer's Guide to Number Theory* (New York: McGraw-Hill, 1968). *Referenced in Marco Frascari's article in NNJ vol. 1.*
- FURNARI, MICHELE. *Formal Design in Renaissance Architecture: From Brunelleschi to Palladio* (New York: Rizzoli, 1995).
- GABRIEL, J. FRANCOIS (ed.). *Beyond the Cube: The Architecture of Space Frames and Polyhedra* (New York: John Wiley, 1997). *Referenced in George Hart's article, NNJ vol. 4 no. 2.*
- GARLAND, TRUDI HAMMEL. *Math and Music* (Palo Alto: Dale Seymour Publications, 1995). *Referenced in Mark Reynolds' article in NNJ vol. 1.*
- Gast, Klaus-Peter. *Le Corbusier: Paris—Chandigarh* (Basel: Birkhäuser, 2000). *Reviewed by Steven Fleming and Michael Ostwald in NNJ vol.3 no. 1.*
- GERDES, PAULUS. *Geometry From Africa. Mathematical and Educational Explorations*. (Washington, DC: Mathematical Association of America, 1999).
- GHEORGHIU, V. and V. DRAGOMIR. *Geometry of Structural Forms* (Elsevier, 1978). *Referenced in Adriana Rossi's article in NNJ vol. 1.*
- GHYKA, MATILA. *The Geometry of Art and Life*, 1946 (slightly corrected reproduction, New York: Dover Publications, 1977). *The Author believes that there are such things as "the mathematics of Life" and "the Mathematics of Art" and that the two coincide. Using simple mathematical formulas...Prof. Ghyka shows the fascinating relationships between geometry, aesthetics, nature and the human body* (Comments from the book's cover). *Please be aware that Ghyka's work has been subject to severe criticism recently* (NNJ Reader's comment).
- GLEICK, JAMES. *Chaos: Making a New Science*. (New York: Penguin Books, 1988. *Though I have heard this book criticized as oversimplified, I found it a very interesting introduction to chaos and fractals. The clear writing style is helpful, and more precise information may be gleaned from further reading* (Comments by Kim Williams).

- GOMBRICH, ERNST HANS. *The Sense of Order : A Study in the Psychology of Decorative Art*. The Wrightsman Lectures, V. 9 (Phaidon Press, 1995).
- GRACE, W. *Geometry for Architects* (Stipes Dover, 1975). Referenced in Adriana Rossi's article in NNJ vol. 1.
- GRUNBAUM, B. and G.C. SHEPARD. *Tilings and Patterns*. (W.H.Freeman, 1986).
- GUDERIAN, DIETMAR. *Mathematik in der Kunst der letzten dreißig Jahre (Mathematics in the Art of the Last Thirty Years)*. (Edition Galerie Lahumière, 1990). *The mathematical way of thinking has always had a profound influence on the artistic tendencies of man, both in painting and sculpture. this book, however, does not return to the beginnings of the relationship between mathematics and art but picks up from the last 30 years and concentrates on the art of the last decade up to the present (Recommended by Vera W. de Spinadel).*
- GUTHRIE, KENNETH SYLVAN, JOSCELYN GODWIN and DIOGENES LAERTIUS. *The Pythagorean Sourcebook and Library. An Anthology of Ancient Writings Which Relate to Pythagoras and Pythagorean Philosophy* (Grand Rapids, Michigan: Phanes Press, 1991).
- HALE, JONATHAN. *The old way of seeing. How architecture lost its magic (and how to get it back)*. (Boston, 1994). *This is a work everybody must love. Hale is no precise scientist, but his wonderful intuition - including the intrinsic feeling that intellect and intuition must meet again in the centuries to come is challenging. I am deeply convinced that future research will confirm his "vision" (Recommended by Joachim Langheim).*
- HAMBIDGE, JAY. *The Elements of Dynamic Symmetry*, 1948 (rpt. New York: Dover Publications, 1967). *Part I contains the fundamental rectangles with their simple divisions based on the proportioning law found in nature; Part II the compound rectangles with their more subtle subdivisions, many of which were taken from or suggested by analysis of objects of Greek art. The elementary principles in Part I will give the student a working use of the idea. Much of Part II may be used for reference and for further study (From the book's Preface).*
- HANCOX, JOY. *The Byrom Collection and the Globe Theatre Mystery* (London: Jonathan Cape, 1997). *Reviewed by John Sharp in the NNJ vol. 1.*
- HART, GEORGE W. and HENRI PICCIOTTO. *Zome Geometry: Hands-on Learning with Zome Models* (Key Curriculum Press, 2001).
- HARGITTAI, ISTVÁN and MAGDOLNA HARGITTAI. *Symmetry: A Unifying Concept* (Bollinas, California: Shelter Publications, 1994). *A fascinating, highly-visual journey through the worlds of symmetry, with 550 photos and some 300 drawings. From Snowflakes to starfish, from dandelions to BMW's, from fences to Finonacci, and from crystals to Coke machines, this is a thought-provoking and stimulating display of visual imagery...describing 15 aspects of symmetry...It will help you train your eye and mind to see new patterns and make new connections (Recommended by Vera W. de Spinadel).*
- HARGITTAI, ISTVÁN and CLIFFORD PICKOVER (eds.). *Spiral Symmetry* (World Scientific Publishing, 1992).
- HASTINGS, HAROLD and GEORGE SUGIHARA. *Fractals: A User's Guide for the Natural Sciences* (New York: Oxford University Press, 1993). *"This book has many different fractal analysis techniques defined with examples. Some of the examples demonstrate how to use fractal procedure with data sets that are not large. There are also some listed computer programs that can be used" (Comments by Carl Bovill, author of Fractal Geometry in Architecture and Design).*
- HEILBRON, J.L. *The Sun in the Church. Cathedrals as Solar Observatories*. Cambridge, MA: Harvard University Press, 1999. *Reviewed by Paul Calter and Kim Williams in the NNJ vol.3 no. 1.*
- . *Geometry Civilized: History, Culture and Technique*. (Oxford: Clarendon Press, 1998).

- HERSEY, GEORGE L. *The Monumental Impulse: Architecture's Biological Roots* (Cambridge, Massachusetts: MIT Press, 1999). *Reviewed by Michael Ostwald in the NNJ vol.4 no.2.*
- . *Pythagorean Palaces: Magic and Architecture in the Italian Renaissance.*
- HERZ-FISCHLER, ROGER. *The Shape of the Great Pyramid.* (Waterloo, Ontario: Wilfrid Laurier University Press, 2000). *Reviewed by Mark A. Reynolds in the NNJ vol.3 no.2.*
- . *A Mathematical History of the Golden Number* (New York: Dover Publications, 1998).
- HILDEBRANDT, STEFAN and ANTHONY TROMBA. *The Parsimonious Universe: Shape and Form in the Natural World* (Copernicus Books, 1996).
- HISCOCK, NIGEL. *The Wise Master Builder: Platonic Geometry in Plans of Medieval Abbeys and Cathedrals.* (Hampshire UK: Ashgate, 2000).
- HOCKNEY, DAVID. *Secret Knowledge: Rediscovering the lost techniques of the old masters* (London: Thames and Hudson, 2001). *Reviewed by David Vila Domini in the NNJ vol. 4 no. 2.*
- HOFSTADTER, D.R. *Gödel, Escher, Bach: An Eternal Golden Braid* (New York: Basic Books, 1979).
- HUNTLEY, H.E. *The Divine Proportion: A Study in Mathematical Beauty* (New York: Dover Publications, 1970). *"This is a delightful book to read...It wanders here and there through some of the most attractive byways of simple mathematics, returning always to the oddities and pleasures of the golden section"* (Comments from the book's cover).
- IAMBlichus. *The Theology of Arithmetic*, Robin Waterfield, trans. (Grand Rapids, Michigan: Phanes Press, 1988).
- IFRAH, GEORGES. *From One to Zero: a Universal History of Numbers* (New York: John Wiley, 1999). *Now back in print. Referenced by Michael Ostwald in NNJ vol.2.*
- ITTEN, JOHANNES. *Design and Form: The Basic Course at the Bauhaus and Later.* (New York: John Wiley, 1975).
- IVINS, WILLIAM M. *Art and Geometry: A Study of Space Intuitions* (New York: Dover Publications).
- JABLAN, SLAVIK. *Theory of Symmetry and Ornament.* (Belgrade, Yugoslavia: Matematički Institut, 1995).
- JAMES, JAMIE. *The Music of the Spheres: Music, Science and the Natural Order of the Universe.* (New York: Springer Verlag, 1995).
- JOSEPH, GEORGE GHEVERGHESE. *The Crest of the Peacock* 2nd. ed. (London: Penguin Books, 2000). *Reviewed by Karim Abdul Bangura in NNJ vol.3 no.2.*
- KAPRAFF, JAY. *Connections : the Geometric Bridge between Art and Science.* 2nd edition. (Singapore: World Scientific, 2002). *The new edition. Reviewed by Slavik Jablan in the NNJ vol. 4 no. 2.*
- KEPES, G. (ed.). *Module, Proportion, Symmetry, Rhythm* (New York: George Braziller, 1966). *Recommended by Slavik Jablan.*
- KEMP, MARTIN. *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven: Yale University Press, 1992).
- KOESTLER, ARTHUR. *The Sleepwalkers.* (London: Arkana/Penguin Books, 1989).
- KRAUSSE, JOACHIM (ed.). *Your Private Sky : R. Buckminster Fuller : The Art of Design Science* (Lars Muller Publishers, 1999). *Reviewed by Kim Williams in the NNJ vol. 2.*
- KRIER, ROB. *Architectural Composition* (London: Academy Editions, 1988). *Referenced by Michael Ostwald in the NNJ vol.2.*

- KROME, BARRATT. *Logic and Design: In Art, Science and Mathematics* (London: The Herbert Press Ltd., 1980).
- LAUWERIER, HANS. *Fractals: Endlessly Repeated Geometrical Figures*. Princeton Science Library, Sophia Gill-Hoffstadt, trans. (Princeton University Press, 1991). *Referenced in Mikiten-Saligaros-Yu in the NNJ vol.2.*
- LAWLOR, ROBERT. *Sacred Geometry: Philosophy and Practice* (New York: Thames and Hudson, 1989). "This is an introduction to the geometry which, as the ancients taught and modern science now confirms, underlies the structure of the universe...Robert Lawlor sets out the system of number, shape and proportions that determines the dimension and form of both man-made and natural structures, from Gothic cathedrals to flowers, from music to the human body" (Comments from the book's cover).
- LE CORBUSIER. *Le Modulor and Modulor 2*. English edition (Basel: Birkhauser, 2000). *Reviewed by Michael Ostwald in the NNJ vol. 3 no. 1.*
- . *Towards a New Architecture* (London: Architectural Press, 1927). *Referenced in Nikos Salingaros' article in NNJ vol. 1.*
- LEYTON, MICHAEL. *A Generative Theory of Shape*. (Berlin: Springer-Verlag, 2001). *Referenced in Michael Leyton's article in NNJ vol.3 no. 2.*
- . *Symmetry, Causality, Mind*. (Cambridge MA: MIT Press, 1999). *Referenced in Michael Leyton's article in NNJ vol.3 no. 2.*
- LINN, CHARLES. F. *The Golden Mean: Mathematics And The Fine Arts* (New York: Doubleday, 1974). *Referenced by Michael Ostwald in the NNJ vol.2.*
- MANDELBROT, BENOIT. *The Fractal Geometry of Nature* (New York: W.F. Freeman, 1983). "Mandelbrot is the person who brought together many diverse and strange areas of mathematics and explained and organized them as fractal geometry. Fractal is his term. This book is sometimes hard to follow, but wonderfully illustrated and fun to look and read through" (Comments by Carl Bovill, author of *Fractal Geometry in Architecture and Design*). *Referenced by Michael Ostwald in the NNJ vol. 3 no. 1.*
- MARCH, LIONEL. *Architectonics of Humanism : Essays on Number in Architecture*. (London: Academy Editions, 1998). *A crucial companion to Wittkower's classic Architectural Principles in the Age of Humanism, March's new classic examines the role of number and number symbolism in the cultures which most influenced the Renaissance, culminating in a brilliant series of analyses of several works by Alberti, Serlio, and Palladio. Reviewed by Mark Peterson in the NNJ vol. 2.*
- MARCH, LIONEL and PHILIP STEADMAN. *The Geometry of Environment: An Introduction to Spatial Organization in Design* (London: RIBA Publications, 1971).
- MARCHANT, PAUL. *Unity in Pattern: A Study Guide in Traditional Geometry*. (London: The Prince of Wales Institute of Architecture, 1997).
- MASI, FAUSTO. *The Pantheon as an Astronomical Instrument* (Rome: Edizioni Internazionali di Letteratura e Scienze, 1996). *Referenced by Michael Ostwald in the NNJ vol. 2.*
- MARTIN, ELIZABETH (ed.). *Architecture as a Translation of Music*. Pamphlet Architecture no. 16. (Princeton, NJ: Princeton Architectural Press, 1995).
- MAUDE, THOMAS. *Guided by a Stone-Mason : The Cathedrals, Abbeys and Churches of Britain Unveiled* (I B Tauris & Co Ltd, 1997). *Referenced in Nancy Wu's article in the NNJ vol. 2.*
- MCCLAIN, ERNEST. *The Pythagorean Plato: Prelude to the Song Itself*. (Nicholas Hays, 1994).
- MACDONALD, WILLIAM L. *The Pantheon: Design, Meaning and Progeny* (Harvard University Press, 1981).
- MICHELL, JOHN. *The Dimensions of Paradise* ( rpt. London: Thames and Hudson, 1988).

- NAREDI-RAINER, PAUL VON. *Architektur und Harmonie: Zahl, Mass und Proportion in der abendländischen Baukunst* (Cologne, 1982).
- NECIPOGLU, GULRU and MOHAMMAD AL-ASAD. *The Topkapi Scroll: Geometry and Ornament in Islamic Architecture*. (Santa Monica, CA: 1995).
- NELSON, DAVID, GEORGE GHERVEGHESE JOSEPH and JULIAN WILLIAMS. *Multicultural Mathematics: Teaching Mathematics from a Global Perspective* (Oxford: Oxford University Press, 1993).
- NEUGEBAUER, OTTO. *The Exact Sciences in Antiquity* (Harper, 1962).
- NEWMAN, ROCHELLE and DONNA M. FOWLER. *Space, Structure, & Form (The Golden Relationship : Art, Math and Nature) Referenced by Paul Calter in NNJ vol. 2*.
- NICHOLAS OF CUSA. *The Layman on Wisdom and the Mind*. Centre for Reformation and Renaissance Studies Translation Series, 4. (Ottawa: Dovehouse, 1989).
- NICOLETTI, MANFREDI. *Sergio Musmeci. Organicità di forme e forze nello spazio*. Universale di architettura, 54 (Turin: Testo & Immagine, 1999). *Reviewed by Alessandra Capanna in the NNJ vol. 2*.
- NICOMACHUS OF GERASA. *Introduction to Arithmetic*. M.L. D'Ooge, trans. (Ann Arbor: University of Michigan Press, 1938). *Referenced in Jay Kappraff's article in the NNJ vol. 2*.
- NICOMACHUS. *The Manual of Harmonics*. F.R. Levin, trans. (Grand Rapids, MI: Phanes Press, 1994). *Referenced in Jay Kappraff's article in the NNJ vol. 2*.
- PACIOLI, LUCA. *The Divine Proportion (De divina proporzione)*.
- PADOVAN, RICHARD. *Proportion: Philosophy, Science and Architecture* (London: E & F N Spon, 1999).
- PALESCA, CLAUDE V. *Humanism in Italian Musical Thought*. (New Haven CT: Yale University Press, 1985). *Referenced in Lionel March's article, NNJ vol. 3 no. 2*.
- PALLADIO, ANDREA. *The Four Books on Architecture*. Trans. Robert Tavernor and Richard Schofield (Cambridge, Massachusetts: MIT Press, 1997). *The new translation, in hardback. Referenced in Stephen Wassell's article in NNJ vol. 1*.
- . *Four Books of Architecture*. IsaacWare, ed. (New York: Dover Publications, 1976). *The classic translation, in paperback*.
- PEAK, D. and M. FRAME, *Chaos Under Control* (New York: W.H. Freeman and Company, 1994). *Referenced in Reza Sarhangi's article in the NNJ vol. 1*.
- PEARCE, PETER. *Structure in Nature Is a Strategy for Design* (Cambridge, MA: MIT Press, 1990).
- PEDRETTI, CARLO. *Leonardo Architect*. (New York: Rizzoli, 1985.)
- PENNICK, NIGEL. *Sacred Geometry: Symbolism and Purpose in Religious Structures* (Holmes Publishing Group, 1994).
- PÉREZ-GÓMEZ, ALBERTO and LOUISE PELLETIER (eds.). *Architectural Representation and the Perspective Hinge* (Cambridge, MA: MIT Press, 1997). *Referenced in Michael Ostwald's article in NNJ vol. 2*.
- PEITGEN, HEINZ OTTO, et al. *Chaos and Fractals: New Frontiers of Science*. (New York: Springer-Verlag, 1992). *"This is by far the most understandable mathematical book on chaos and fractal geometry. The book covers a wide range of topics some of which are more difficult mathematically than others. This is an essential book if one wants to deepen his or her understanding"* (Comments by Carl Bovill, author of *Fractal Geometry in Architecture and Design*).
- PLATO. *The Collected Dialogues*. Edith Hamilton and Huntington Cairns, eds. Bollingen Series LXXI (Princeton: Princeton University Press, 1989).



- PLUMMER, L. GORDON. *The Mathematics of the Cosmic Mind*. (Wheaton IL: Theosophical Publishing House).
- ROBERTSON, E.G. *Decorative cast iron of Australia* (Viking O'Neil Penguin Books Australia, 1990).
- RODRIGUES, JOSÉ FRANCISCO and KIM WILLIAMS (eds.). *Nexus IV: Architecture and Mathematics* (Fucecchio, Florence: Kim Williams Books, 2002). *Papers presented at Nexus 2002*.
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