

Louis Hirsch KAUFFMAN

Academician, International Academy for Systems and Cybernetic Sciences (2010)



Professor Department of Mathematics, Statistics, and Computer Science, University of Illinois at Chicago, researcher in the fields of cybernetics, topology and foundations of mathematics and physics

<http://www.math.uic.edu/~kauffman/>

topologist working in Knot Theory

and its relationships with statistical mechanics, quantum theory, algebra & combinatorics

http://en.wikipedia.org/wiki/Louis_Kauffman

Representation and exploration of topology, fractals and recursions using computers, logical & diagrammatic algebras, Hopf algebras, relations of topology with statistical mechanics and quantum field theory, foundations of discrete physics, quantum computing

combinatorial Knot Theory and Higher Dimensional Manifolds

<http://www.math.uic.edu/~kauffman/569.html>

Explorations & Visualizations of Higher Dimensional Julia Sets

<http://www.asci.org/artsci2002/artworks/Sunday/explorations.htm>

Ph.D. in mathematics from Princeton University in 1972,

known for the introduction and development of the bracket polynomial and **Kauffman polynomial**

$$F(K)(a, z) = a^{-w(K)} L(K)$$

Founding editor & one of the managing editors of the ***Journal of Knot Theory and Its Ramifications***, editor of the ***World Scientific Book Series On Knots and Everything***.

From 2005 to 2008, President of the **American Society for Cybernetics**

http://en.wikipedia.org/wiki/American_Society_for_Cybernetics

Recipient of the **Warren McCulloch Award of the American Society for Cybernetics** in 1993.

Award of the Alternative Natural Philosophy Association for his work in discrete physics in 1996.

He plays clarinet in the *ChickenFat Klezmer Orchestra* in Chicago.

SELECTED BOOKS:

1987, *On Knots*, Princeton University Press 498 pp.

1993, *Quantum Topology* (Series on Knots & Everything), with Randy A. Baadhio, World Scientific Pub Co Inc, 394 pp.

1994, *Temperley-Lieb Recoupling Theory and Invariants of 3-Manifolds*, with Sostenes Lins, Princeton University Press, 312 pp.

1999, *Ideal Knots*, with Andrzej Stasiak and Vsevolod Katritch, World Scientific Publishing Company, 414 pp.

2001, *Knots and Physics* (Series on Knots and Everything, Vol. 1), World Scientific Publishing Company, 788 pp.

2006, *Formal Knot Theory*, Dover Publications, 272 pp.