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## Magnus S Magnusson

University of Iceland, Iceland

msm@hi.is

## BIOGRAPHY

Magnus S Magnusson completed his PhD at University of Copenhagen in 1983. He is a Research Professor, Founder and Director of the Human Behavior Laboratory, University of Iceland. He is the author of the T-pattern model and detection software THEMETM, focused on real-time organization of behavior. He was co-directed a two-year DNA analysis project and presented numerous papers and talks in ethology, neuroscience, mathematics, religion, proteomics, mass spectrometry and nanoscience. He was Deputy Director at Museum of Mankind during 1983 to 1988, National Museum of Natural History, Paris. He is a repeated invited Professor at the University of Paris (V, VIII and XIII). Since 1995, he focused on collaboration between 40 universities based on "Magnusson's Analytical Model" initiated at the Sorbonne, Paris.

## T-PATTERNS, T-STRINGS AND SELF-SIMILARITY FROM THE RNA WORLD TO HUMAN MASS-SOCIETIES AND CULTURE: A BIOMATHEMATICAL CONTINUUM?

This research study concerns outcomes of a longstanding primarily ethological (i.e. biology of behavior) project beginning in the early 1970's concerning social interaction and organization in social insects and primates including humans and inspired mainly by the work of K. Lorenz, K. von Frisch and N. Tinbergen for which they shared a Nobel Prize in Medicine or Physiology in 1973. The smallest animals they studied were social insects with no implication of nano scale actors or self-similarity. The present project has focused on developing pattern definitions and corresponding detection tools resulting in the T-pattern, a self-similar fractal-like pattern recurring with statistically significant translation symmetry, and corresponding detection algorithms implemented in the dedicated THEMETM software. This has allowed abundant detection of T-patterns in human, animal and neuronal interactions bringing to light T-patterned temporal self-similarity across more than nine orders of magnitude in interaction between and within brains and spatial between T-patterned strings (called T-strings), notably, DNA and texts. The RNA world invented its evolving external memory as the purely informational T-patterned DNA strings and now there is only a DNA world. Similarly, humans created their evolving external memory as the purely informational T-strings of written language and thus in a biological eye blink made possible the development of modern science and technology and now the only big-brain mass-societies are text based. Only mass-societies in proteins and human rely on such voluminous durable "stringomes" external to their citizens where various sub-sets are massively copied, distributed, interpreted, promoted and even enforced for the creation of specialized citizens, tools and materials. Extensive temporal and spatial self-similar patterning thus exist from nano to human scales all patterned in a way reflecting the ancient structure of their nano scale predecessors, an unbroken biomathematical continuum from the RNA world to modern human societies and culture.