Magnus S Magnusson, J Chromatogr Sep Tech 2016, 7:4(Suppl)
http://dx.doi.org/10.4172/2157-7064.C1.012

2nd International Conference on
Current Trends in Mass Spectrometry
July 20-22, 2016 Chicago, USA

Magnus S Magnusson
University of Iceland, Iceland

Similarity of hierarchical structured clustering in human and neuronal interactions and on DNA: Structural and functional analogies

Hierarchical structured clustering (HSC) seems characteristic of the structure of the universebalancing a small number of forces, some pulling others pushing apart, the self-similar fractal distribution of matter in the universe thus reflecting HST rather than just dispersion or clumping. HSC also characterizes a proposed pattern type, called T-pattern, detected in the temporal organization of many kinds of verbal and non-verbal human, animal and neuronal behavior and interactions and is also characteristic of the structure of DNA. Functional analogies seem to exist between the occurrence of T-patterns in "cell city" and in human cities. Structural self-similarity over many levels of biological organization suggests the possibility of a unified (mathematical, bioinformatics and system biological) approach. The T-patternis described as a repeated hierarchical and self-similar tree structure based on a single non-terminal relation, called a critical interval (CI) relationship. Theinstancesof a T-pattern may be seen as repeated statistical pseudo-fractal objects characterized by statistically significant translation symmetry. THEMEtm (by M.S. Magnusson, ©PatternVision Ltd) is special purpose T-pattern detection and analysis PC software using a specialCI detection algorithm combined with an evolution algorithm, presented here together with results from the analysis of behaviorand interactions.From the relatively slow time scale of human and animal interactions to the much faster interactions within populations of neurons in living rat brains. Analogies are discussed between T-pattern structure and functions in the cities of proteins (cell city) and human cities, especially regarding specialization and the particular case of religious behavior.

Biography

Magnus S Magnusson is a Research Professor have received his PhD in 1983 from University of Copenhagen. Author of the T-pattern model and the corresponding detection algorithms in THEME. He has focused on real-time organization of behavior, co-directed DNA analysis, numerous papers and invited talks at numerous conferences and universities in Europe, USA and Japan. Deputy Director 1983-1988, Anthropology Laboratory, Museum of Natural History, Paris.Repeatedly invited temporary Professor at the University of Paris.Since 1991, Founder and Director of the Human Behavior Laboratory, University of Iceland. Since 1995, he is in collaboration between 24 universities based on "Magnusson's analytical model" initiated at the Sorbonne, Paris.

magnussonms@gmail.com