



**Séminaire – Vendredi 4 décembre 2015 – 10h30**  
**Salle de réunion du LEEC**  
**Université Paris 13 Sorbonne Paris Cité**

## **Self-similarity from Cell City to Insect and Human societies**

Magnus S. Magnusson

University of Iceland, Reykjavik, Iceland

A proposed self-similar hierarchical repeated pattern type, called T-pattern, has been found in many kinds of verbal and nonverbal human, animal and neuronal behavior and interactions (Casarrubea, 2015; Nicol, 2015) and seems characteristic of DNA patterns such as exons and genes. Functional analogies also seem to exist (Magnusson, 2005). Such structural self-similarity over a number of levels of biological organization suggests the possibility of a unified (mathematical) approach.

Living beings are generally composed of organized masses of simpler units. Cities of both insects and modern humans descend from -- and are composed of -- unicellular organism, which themselves are mass societies of even smaller units, proteins. One striking difference is brain size and modern humans are the only primates and large brained animals to live in mass societies or cities. Human mass-societies invented writing, a precondition for a spectacular increase of knowledge and have evolved “holy” or “sacred” strings of words that profoundly and similarly misinform most the individuals of the same society about fundamental causal contingencies and thus sharply constrain (and aligning) their behavioral potentials? Are they analogous to molecules blocking some behavioral (even reproductive) potentials of social insect masses? Could (socio-) proteomics help to explain sometimes apparently brainless behavior of human masses reminiscent of the behavior of the proteins they both descend from and are composed of? Finally, are human abilities possibly not much greater than those of proteins and insects relative to the complexity of their mass societies?