



**European Centre  
for Soft Computing**

**COST Action IC0702**

**Work Group C**

- **In many applications data is derived from a human perception or estimation of some quantity, because**
  - **an objective measurement device is not available,**
  - **a precise physical measurement would be too costly.**
- **Classical statistics has few other possibilities than treating such data as if it were crisp (usually infeasible: families of distribution functions).**
- **Specialized statistical techniques are needed, geared towards the fuzzy character of such data.**



# Psychological vs. Statistical Complexity



- **Statistical complexity of a model:**
  - number of free parameters
  - description length of the model
- **Psychological simplicity of a model:**
  - How intuitive and easy to understand is a model?  
(for a human, who is not a data analysis expert)
  - Focus is on qualitative characteristics.
  - Essential in (industrial) applications.
- **Local models versus global model.**