Why

We want relative entropy for densities.

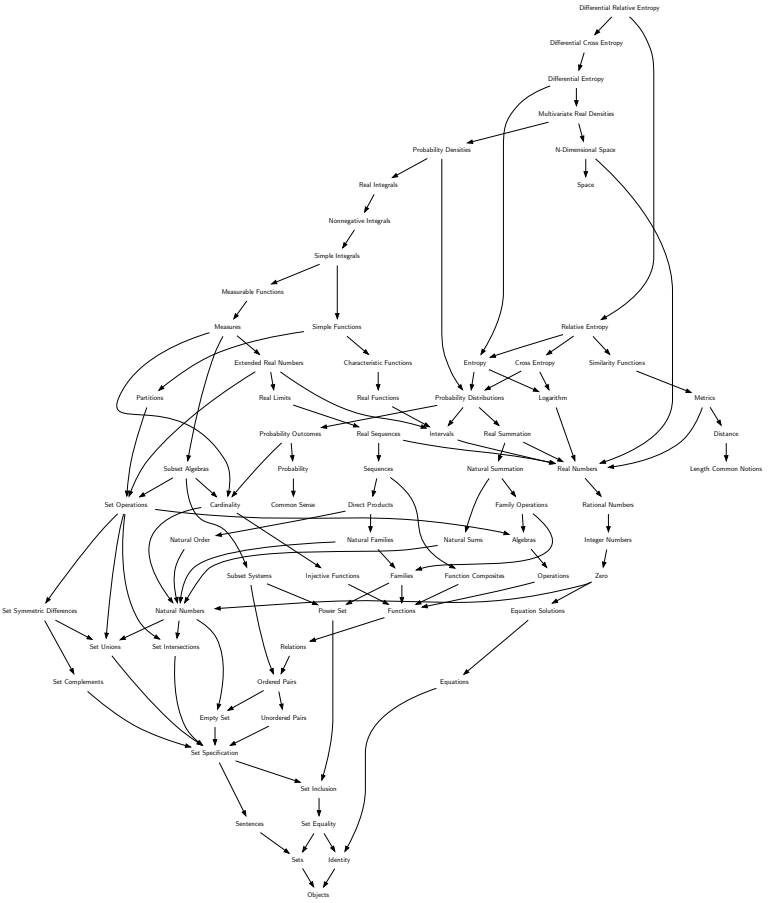
What

The differential relative entropy of a second density with respect to the first density is the cross entropy of the second with respect to the first less the differential entropy of the first.

Notation

Let f and g be densities. The relative entropy of f with respect to g is

$$h(g, f) = h(f)$$


Differential Relative Entropy
Differential Cross Entropy
Differential Entropy
Multivariate Real Densities
Probability Densities
N-Dimensional Space
Space
Real Integrals
Nonnegative Integrals
Simple Integrals
Measurable Functions
Measures
Simple Functions
Relative Entropy
Extended Real Numbers
Characteristic Functions
Entropy
Cross Entropy
Similarity Functions
Partitions
Real Limits
Real Functions
Probability Distributions
Logarithm
Metrics
Probability Outcomes
Real Sequences
Intervals
Real Summation
Distance
Subset Algebras
Probability
Sequences
Natural Summation
Real Numbers
Length Common Notions
Set Operations
Cardinality
Common Sense
Direct Products
Family Operations
Rational Numbers
Natural Order
Natural Families
Natural Sums
Algebras
Integer Numbers
Subset Systems
Injective Functions
Families
Function Composites
Operations
Zero
Set Symmetric Differences
Natural Numbers
Power Set
Functions
Equation Solutions
Set Unions
Set Intersections
Relations
Set Complements
Ordered Pairs
Equations
Empty Set
Unordered Pairs
Set Specification
Set Inclusion
Sentences
Set Equality
Sets
Identity
Objects