Why

[1]

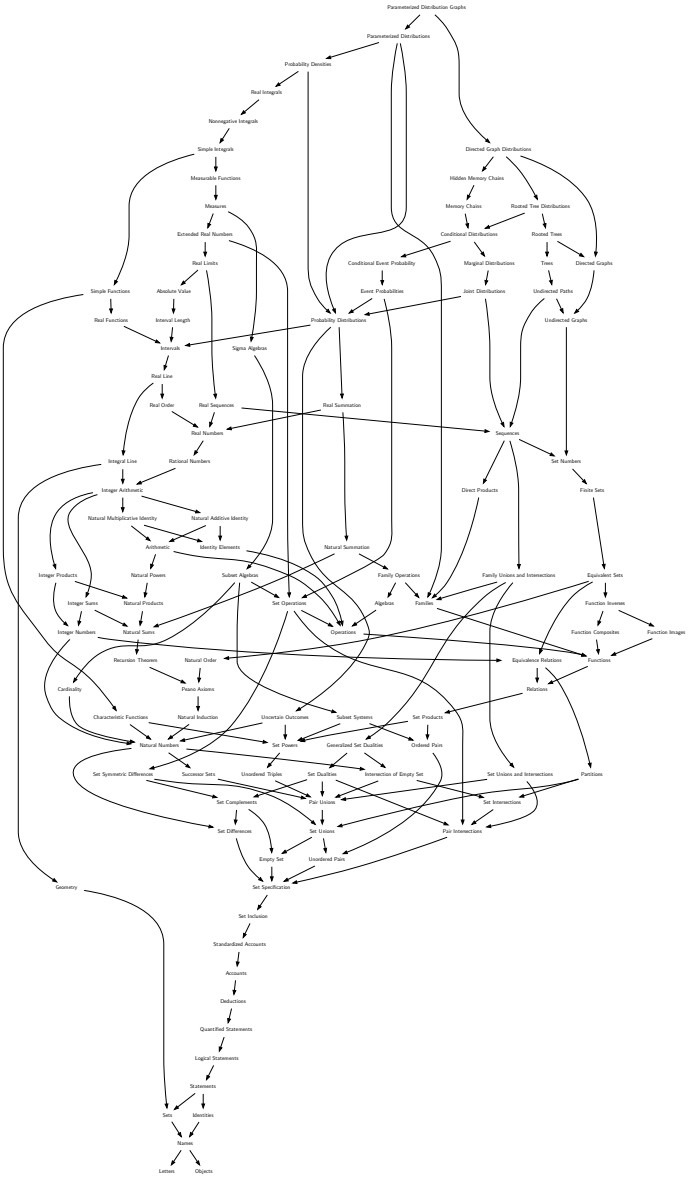
Definition

Let G be a directed graph on $\{1, \ldots, n\}$. A *parametric distribution network family* (or *parameteric conditional distribution network family*) is a family of conditional distribution networks $\{G, \{g_i^{(\theta)}\}_{i=1}^n\}_{\theta \in \Theta}$. We call the index set Θ the *parameter set*. G does not depend on the parameters.

In the case that $\text{pa}_i = \varnothing$ in G, $\{g_i^{(\theta)}\}_\theta$ is a parametric distribution family on A_i and in the case that $\text{pa}_i \neq \varnothing$, $\{g_i^{(\theta)}\}_\theta$ is a parametric conditional distribution family on A_i from $\prod_{j \in \text{pa}_i} A_j$ (for both these terms, see Parameterized Distributions).

A parametric distribution network family is *functionally* if each of the conditionals is functionally parameterizable (again, see Parameterized Distributions).

[1] Future editions will include.


Parameterized Distribution Graphs
Parameterized Distributions
Probability Densities
Real Integrals
Nonnegative Integrals
Simple Integrals
Measurable Functions
Measures
Extended Real Numbers
Real Limits
Simple Functions
Absolute Value
Real Functions
Interval Length
Intervals
Real Line
Real Order
Real Sequences
Real Numbers
Integral Line
Rational Numbers
Integer Arithmetic
Natural Multiplicative Identity
Natural Additive Identity
Arithmetic
Identity Elements
Integer Products
Natural Powers
Integer Sums
Natural Products
Integer Numbers
Natural Sums
Recursion Theorem
Natural Order
Cardinality
Peano Axioms
Characteristic Functions
Natural Induction
Natural Numbers
Set Symmetric Differences
Successor Sets
Set Complements
Set Differences
Geometry
Directed Graph Distributions
Hidden Memory Chains
Memory Chains
Rooted Tree Distributions
Conditional Distributions
Rooted Trees
Conditional Event Probability
Marginal Distributions
Trees
Directed Graphs
Event Probabilities
Joint Distributions
Undirected Paths
Probability Distributions
Undirected Graphs
Signed Algebras
Real Summation
Sequences
Set Numbers
Direct Products
Finite Sets
Natural Summation
Family Operations
Family Unions and Intersections
Equivalent Sets
Subset Algebras
Algebras
Families
Function Inverses
Set Operations
Operations
Function Composites
Function Images
Equivalence Relations
Functions
Relations
Uncertain Outcomes
Subset Systems
Set Products
Set Powers
Generalized Set Dualities
Ordered Pairs
Unordered Triples
Set Dualities
Intersection of Empty Set
Set Unions and Intersections
Partitions
Pair Unions
Set Intersections
Set Unions
Pair Intersections
Empty Set
Unordered Pairs
Set Specification
Set Inclusion
Standardized Accounts
Accounts
Deductions
Quantified Statements
Logical Statements
Statements
Sets
Identities
Names
Letters
Objects